

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

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**ORDER NO. R9-2022-0003
NPDES NO. CA0107492**

**WASTE DISCHARGE REQUIREMENTS
FOR THE PADRE DAM MUNICIPAL WATER DISTRICT, RAY STOYER WATER
RECYCLING FACILITY, DISCHARGE TO SYCAMORE CREEK,
SAN DIEGO COUNTY**

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

Discharger Padre Dam Municipal Water District
Name of Facility Ray Stoyer Water Recycling Facility
Facility Address 12001 North Fanita Parkway
Santee, CA 92072
San Diego County

Table 1. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Tertiary-treated wastewater	32° 50' 45" N	117° 00' 15" W	Sycamore Creek (Hydrologic Subarea 907.12)

This Order was adopted on: **February 9, 2022**
This Order shall become effective on: **April 1, 2022**
This Order shall expire on: **March 31, 2027**

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 (CCR), 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 U.S. Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, San Diego Region 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 California Regional Water Quality Control Board, San Diego Region, on the date indicated above.

David W. Gibson, Executive Officer

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1. Facility Information

Information describing the Ray Stoyer Water Recycling Facility 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 Padre Dam Municipal Water District's (Discharger) permit application.

2. Findings

The California Regional Water Quality Control Board, San Diego Region (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.

THEREFORE, IT IS HEREBY ORDERED, that this Order supersedes Order No. R9-2015-0002, as amended by Order Nos. R9-2016-0099 and R9-2018-0028 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. This action in no way prevents the San Diego Water Board from taking enforcement action for past violations of Order No. Order No. R9-2015-0002.

3. Discharge Prohibitions

- 3.1. The discharge of waste in a manner or to a location which has not been specifically authorized by this Order and for which valid waste discharge requirements are not in force is prohibited.
- 3.2. 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.
- 3.3. The discharge of oil, trash, or other solids directly to Sycamore Creek, a tributary of the San Diego River, or in any manner which may permit it to be washed into surface waters, is prohibited.
- 3.4. The discharge of municipal and industrial waste sludge and untreated sludge digester supernatant, centrate, or filtrate to Sycamore Creek, a tributary of the San Diego River, is prohibited.
- 3.5. The deposition of rubbish or refuse into surface waters or at any place where they would be eventually transported to Sycamore Creek, a tributary of the San Diego River, is prohibited.
- 3.6. The discharge of waste shall not cause surface erosion or scouring of aquatic substrates.
- 3.7. The discharge of any substances in concentrations toxic to human, animal, plant, or aquatic life is prohibited.
- 3.8. The discharge of wastes with a noticeable odor to Sycamore Creek, a tributary of the San Diego River, is prohibited.
- 3.9. The discharge of residual algaecides and aquatic herbicides to Sycamore Creek, a tributary of the San Diego River, is prohibited.
- 3.10. The discharge of residual algaecides and aquatic herbicides to the Discharger's ponds/lakes shall not create a condition of nuisance as defined in section 13050 of the California Water Code.

- 3.11. The discharge of residual algaecides and aquatic herbicides to the Discharger's ponds/lakes shall not cause, have a reasonable potential to cause, or contribute to an in-stream excursion in Sycamore Creek, a tributary of the San Diego River, above any applicable standard or criterion promulgated by USEPA pursuant to section 303 of the CWA, or water quality objective adopted by the State or San Diego Water Board.
- 3.12. The bypassing of untreated wastes is prohibited, except as allowed by federal law as described in Standard Provisions 1.7 or 1.8 of this Order (Attachment D).

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 at Discharge Point 001, with compliance measured at Monitoring Location EFF-001A, as described in the Monitoring and Reporting Program (MRP, Attachment E).

Table 2. Effluent Limitations at Monitoring Location EFF-001A^{1,2}

Parameter	Units	Average Monthly³	Average Weekly³	Maximum Daily³	Instantaneous Minimum	Instantaneous Maximum	Monthly Median
Aluminum	mg/L	--	--	0.2	--	--	--
Aluminum	lbs/day	--	--	3.3	--	--	--
Biochemical Oxygen Demand 5-day @ 20°C (BOD ₅)	milligram per liter (mg/L)	15	23	25	--	--	--
BOD ₅	pounds per day (lbs/day)	250	384	417	--	--	--
BOD ₅	% Removal	≥85	--	--	--	--	--

Parameter	Units	Average Monthly ³	Average Weekly ³	Maximum Daily ³	Instantaneous Minimum	Instantaneous Maximum	Monthly Median
Cadmium, Total Recoverable	µg/L	2.8	--	5.6	--	--	--
Cadmium, Total Recoverable	lbs/day	0.047	--	0.093	--	--	--
Chloride	mg/L	--	--	400	--	--	--
Chloride	lbs/day	--	--	6,672	--	--	--
Chronic Toxicity ^{4,5}	"Pass/Fail" and % effect	--	--	Pass and % effect less than 50 ⁶	--	--	See note 7
Dissolved Oxygen	mg/L	--	--	5.0 ⁸	--	--	--
Iron	mg/L	--	--	0.30	--	--	--

Parameter	Units	Average Monthly ³	Average Weekly ³	Maximum Daily ³	Instantaneous Minimum	Instantaneous Maximum	Monthly Median
Iron	lbs/day	--	--	5.0	--	--	--
Manganese, Total Recoverable	mg/L	--	--	0.05	--	--	--
Manganese, Total Recoverable	lbs/day	--	--	0.83	--	--	--
Mercury	µg/L	0.05 ⁹	--	0.10 ⁹	--	--	--
Mercury	lbs/day	8.34E-04 ⁹	--	1.67E-03 ⁹	--	--	--
Methyl tert-butyl ether (MTBE)	µg/L	--	--	5.0	--	--	--
MTBE	lbs/day	--	--	0.083	--	--	--

Parameter	Units	Average Monthly³	Average Weekly³	Maximum Daily³	Instantaneous Minimum	Instantaneous Maximum	Monthly Median
Oil and Grease	mg/L	5	--	7.5	--	--	--
Oil and Grease	lbs/day	83	--	125	--	--	--
pH	standard units	--	--	--	6.5	8.5	--
Selenium, Total Recoverable	µg/L	4.1	--	8.2	--	--	--
Selenium, Total Recoverable	lbs/day	0.0682	--	0.137	--	--	--
Total Dissolved Solids	mg/L	--	--	1,000	--	--	--
Total Dissolved Solids	lbs/day	--	--	16,680	--	--	--
Total Residual Chlorine	microgram per liter (µg/L)	2	8	18	--	--	--
Total Residual Chlorine	lbs/day	0.033	0.13	0.30	--	--	--
Total Suspended Solids (TSS)	mg/L	15	23	25	--	--	--

Parameter	Units	Average Monthly ³	Average Weekly ³	Maximum Daily ³	Instantaneous Minimum	Instantaneous Maximum	Monthly Median
TSS	lbs/day	250	384	417	--	--	--
TSS	% Removal	≥85	--	--	--	--	--
Total Trihalomethanes	µg/L	80.0	--	160	--	--	--
Total Trihalomethanes	lbs/day	1.33	--	2.68	--	--	--
Zinc, Total Recoverable	µg/L	54	--	169	--	--	--
Zinc, Total Recoverable	lbs/day	0.90	--	2.81	--	--	--

Notes for Table 2

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 x 10⁻² or 0.061, 6.1E+02 represents 6.1 x 10² or 610, and 6.1E+00 represents 6.1 x 10⁰ or 6.1.
3. 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 (2.0 MGD) and C is the concentration (mg/L).
4. As specified in section 7.15 of this Order and section 3.3 of the MRP (Attachment E).
5. No more than one chronic toxicity test initiated in a calendar month may result in a "Fail" at the in-stream waste concentration (IWC) for any endpoint.
6. The Maximum Daily Effluent Limitation is exceeded if a chronic toxicity test using the most sensitive species results in a "Fail" at the IWC for any sub-lethal endpoint measured in the test and a "Percent Effect" greater than or equal to 50

percent for the survival endpoint or the sub-lethal endpoint if there is no survival endpoint.

7. The Median Monthly Effluent Limitation is exceeded when two or more chronic toxicity tests using the most sensitive species initiated in a calendar month result in a "Fail" at the IWC for any endpoint (see section 3.3.3 of Attachment E).
8. Applied as a Daily Minimum.
9. The effluent limitations listed for mercury are interim limitations. Final annual average effluent limitations of 0.012 µg/L and 2.00 E-4 lbs/day for mercury will become effective as described in section 6.3.7 of this Order.

4.1.1.1.2. **Turbidity (Based on CCR Title 22 Criteria):** Effluent turbidity shall not exceed the following:

- 4.1.1.1.2.1. 2 Nephelometric Turbidity Units (NTU) as a daily average;
- 4.1.1.1.2.2. 5 NTU more than five percent of the time within a 24-hour period; and
- 4.1.1.1.2.3. 10 NTU at any time.

4.1.1.1.3. **Total Coliform Organisms (Based on CCR Title 22 Criteria):** The concentration of total coliform organisms in the effluent shall not exceed the following:

- 4.1.1.1.3.1. 2.2 Most Probable Number per 100 millimeters (MPN/100 mL) as a 7-day median based upon the last seven days;
- 4.1.1.1.3.2. 23 MPN/100 mL more than once in any 30-day period; and
- 4.1.1.1.3.3. 240 MPN/100 mL at any time.

4.1.1.1.4. **Fecal Coliform (Based on Basin Plan Water Quality Objectives):** The concentration of fecal coliform organisms in the effluent shall not exceed the following:

- 4.1.1.1.4.1. 200 MPN/100 mL as a geometric mean based on a minimum of not less than five samples for any 30-day period; and
- 4.1.1.1.4.2. 400 MPN/100 mL in more than 10 percent of total samples during any 30-day period.

4.1.1.1.5. **Enterococci (Based on State Water Board Bacteria Objectives):** The concentration of enterococci in the effluent shall not exceed the following:

- 4.1.1.1.5.1. 30 CFU/100 mL as a six-week geometric mean, calculated weekly; and
- 4.1.1.1.5.2. 110 CFU/100 mL as a statistical threshold value not to be exceeded by more than 10 percent of samples collected in a calendar month, calculated in a static manner.

4.1.1.1.6. **Escherichia coli (Based on Basin Plan Water Quality Objectives):** The concentration of Escherichia coli in the effluent shall not exceed the following:

4.1.1.1.6.1. 126 CFU/100 mL as a geometric mean based on all samples during a 30-day period; and

4.1.1.1.6.1. 235 CFU/100 mL at any time.

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

Table 3. Effluent Limitations at Monitoring Location EFF-001B^{1,2}

Parameter	Units	Average Monthly	Maximum Daily	12-Month Average
Ammonia, Un-ionized (as Nitrogen)	mg/L	--	0.025	--
Ammonia, Un-ionized (as Nitrogen)	lbs/day	--	0.42	--
Flow	MGD	2.0	--	--
Nitrate as NO ₃	mg/L	--	45	--
Nitrate as NO ₃	lbs/day	--	751	--
Total Nitrogen	lbs/day	--	--	17 ²
Total Phosphorus	lbs/day	--	--	1.7 ²

Notes for Table 3

1. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
2. Based on a running 12-month average.

4.1.3. 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 4. Performance goal parameters shall be monitored at Monitoring Location EFF-001A, as described in the MRP (Attachment E). The performance goals in Table 4 are not water quality-based effluent limitations (WQBELs) and are not enforceable, as such. However, the Discharger shall maintain, if not improve, the effluent quality to levels at or below the performance goal. The Discharger shall report all exceedances of performance goals in the cover letter of the monthly self-monitoring report (SMR). Any two consecutive exceedances of the performance goals shall trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring events, the Discharger shall submit a Performance Goal Exceedance Investigation Work Plan to the San Diego Water Board within 30 days of the Discharger becoming aware of the third successive exceedance. The Performance Goal Exceedance Investigation Work Plan shall outline the investigative steps being taken, whether outside technical expertise is being retained to assist in the investigation, and the proposed schedule for completing a Performance Goal Exceedance Report. The Performance Goal Exceedance Report shall include a description of the nature of the exceedance(s), the results of the investigation including the cause of the exceedance(s), the corrective actions taken, any proposed corrective measures, and a schedule for implementation, if necessary. The San Diego Water Board may reopen this Order to include effluent limitations for parameters that exceed performance goals.

Table 4. Performance Goals at Monitoring Location EFF-001A¹

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
1,1,1-trichloroethane	µg/L	2.00E+02	4.01E+02	--
1,1,1-trichloroethane	lbs/day	3.34E+00	6.69E+00	--
1,1,2,2-tetrachloroethane	µg/L	1.70E-01	3.42E-01	--
1,1,2,2-tetrachloroethane	lbs/day	2.84E-03	5.70E-03	--
1,1,2-trichloroethane	µg/L	6.00E-01	1.21E+00	--
1,1,2-trichloroethane	lbs/day	1.00E-02	2.01E-02	--
1,1-dichloroethane	µg/L	5.00E+00	1.01E+01	--
1,1-dichloroethane	lbs/day	8.34E-02	1.68E-01	--
1,1-dichloroethylene	µg/L	5.70E-02	1.14E-01	--
1,1-dichloroethylene	lbs/day	9.51E-04	1.91E-03	--
1,2,4-Trichlorobenzene	µg/L	5.00E+00	1.01E+01	--
1,2,4-Trichlorobenzene	lbs/day	8.34E-02	1.68E-01	--
1,2-Dichlorobenzene	µg/L	6.00E+02	1.20E+03	--
1,2-Dichlorobenzene	lbs/day	1.00E+01	2.01E+01	--
1,2-dichloroethane	µg/L	3.80E-01	7.62E-01	--
1,2-dichloroethane	lbs/day	6.34E-03	1.27E-02	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
1,2-dichloropropane	µg/L	5.20E-01	1.04E+00	--
1,2-dichloropropane	lbs/day	8.67E-03	1.74E-02	--
1,2-diphenylhydrazine	µg/L	4.00E-02	8.02E-02	--
1,2-diphenylhydrazine	lbs/day	6.67E-04	1.34E-03	--
1,2-Trans-Dichloroethylene	µg/L	1.00E+01	2.01E+01	--
1,2-Trans-Dichloroethylene	lbs/day	1.67E-01	3.35E-01	--
1,3-Dichlorobenzene	µg/L	4.00E+02	8.02E+02	--
1,3-Dichlorobenzene	lbs/day	6.67E+00	1.34E+01	--
1,3-dichloropropene	µg/L	5.00E-01	1.00E+00	--
1,3-dichloropropene	lbs/day	8.34E-03	1.67E-02	--
1,4-Dichlorobenzene	µg/L	5.00E+00	1.01E+01	--
1,4-Dichlorobenzene	lbs/day	8.34E-02	1.68E-01	--
2,4,6-trichlorophenol	µg/L	2.10E+00	4.22E+00	--
2,4,6-trichlorophenol	lbs/day	3.50E-02	7.04E-02	--
2,4-Dimethylphenol	µg/L	5.40E+02	1.09E+03	--
2,4-Dimethylphenol	lbs/day	9.01E+00	1.81E+01	--
2,4-dinitrophenol	µg/L	7.00E+01	1.40E+02	--
2,4-dinitrophenol	lbs/day	1.17E+00	2.34E+00	--
2,4-dinitrotoluene	µg/L	9.10E+00	1.83E+01	--
2,4-dinitrotoluene	lbs/day	1.52E-01	3.05E-01	--
2-4 Dichlorophenol	µg/L	9.30E+01	1.87E+02	--
2-4 Dichlorophenol	lbs/day	1.55E+00	3.12E+00	--
2-Chloronaphthalene	µg/L	1.70E+03	3.42E+03	--
2-Chloronaphthalene	lbs/day	2.84E+01	5.70E+01	--
2-Chlorophenol	µg/L	1.20E+02	2.41E+02	--
2-Chlorophenol	lbs/day	2.00E+00	4.02E+00	--
2-Methyl-4,6-Dinitrophenol	µg/L	1.34E+01	2.69E+01	--
2-Methyl-4,6-Dinitrophenol	lbs/day	2.24E-01	4.49E-01	--
3,3'-dichlorobenzidine	µg/L	4.00E-02	8.02E-02	--
3,3'-dichlorobenzidine	lbs/day	6.67E-04	1.34E-03	--
4,4'-DDD	µg/L	8.30E-04	1.67E-03	--
4,4'-DDD	lbs/day	1.38E-05	2.78E-05	--
4,4'-DDE	µg/L	5.90E-04	1.18E-03	--
4,4'-DDE	lbs/day	9.84E-06	1.97E-05	--
4,4'-DDT	µg/L	5.90E-04	1.18E-03	--
4,4'-DDT	lbs/day	9.84E-06	1.97E-05	--
4,6-dinitro-2-methylphenol	µg/L	1.34E+01	2.69E+01	--
4,6-dinitro-2-methylphenol	lbs/day	2.24E-01	4.48E-01	--
Acenaphthene	µg/L	1.20E+03	2.41E+03	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Acenaphthene	lbs/day	2.00E+01	4.02E+01	--
Acrolein	µg/L	3.20E+02	6.43E+02	--
Acrolein	lbs/day	5.34E+00	1.07E+01	--
Acrylonitrile	µg/L	5.90E-02	1.18E-01	--
Acrylonitrile	lbs/day	9.84E-04	1.97E-03	--
Aldrin	µg/L	1.30E-04	2.61E-04	--
Aldrin	lbs/day	2.17E-06	4.36E-06	--
Alpha Endosulfan	µg/L	4.57E-02	9.18E-02	--
Alpha Endosulfan	lbs/day	7.63E-04	1.53E-03	--
Alpha-BHC	µg/L	3.90E-03	7.84E-03	--
Alpha-BHC	lbs/day	6.51E-05	1.31E-04	--
Anthracene	µg/L	9.60E+03	1.93E+04	--
Anthracene	lbs/day	1.60E+02	3.22E+02	--
Antimony	µg/L	6.00E+00	1.20E+01	--
Antimony	lbs/day	1.00E-01	2.01E-01	--
Arsenic, Total Recoverable	µg/L	4.10E+00	1.00E+01	--
Arsenic, Total Recoverable	lbs/day	6.83E-02	1.67E-01	--
Asbestos	Million fibers per liter (MFL)	--	--	7.00E+00
Barium	µg/L	--	--	1.00E+03
Barium	lbs/day	--	--	1.67E+01
Benzene	µg/L	1.00E+00	2.01E+00	--
Benzene	lbs/day	1.67E-02	3.35E-02	--
Benzidine	µg/L	1.20E-04	2.41E-04	--
Benzidine	lbs/day	2.00E-06	4.02E-06	--
Benzo (a) Anthracene	µg/L	4.40E-03	8.84E-03	--
Benzo (a) Anthracene	lbs/day	7.34E-05	1.48E-04	--
Benzo (b) Fluranthene	µg/L	4.40E-03	8.84E-03	--
Benzo (b) Fluranthene	lbs/day	7.34E-05	1.48E-04	--
Benzo (k) Fluranthene	µg/L	4.40E-03	8.84E-03	--
Benzo (k) Fluranthene	lbs/day	7.34E-05	1.48E-04	--
Benzo(a)Pyrene	µg/L	4.40E-03	8.84E-03	--
Benzo(a)Pyrene	lbs/day	7.34E-05	1.48E-04	--
Beryllium	µg/L	4.00E+00	5.34E+00	--
Beryllium	lbs/day	6.67E-02	8.91E-01	--
Beta Endosulfan	µg/L	4.57E-02	9.18E-02	--
Beta Endosulfan	lbs/day	7.63E-04	1.53E-03	--
Beta-BHC	µg/L	1.40E-02	2.81E-02	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Beta-BHC	lbs/day	2.34E-04	4.69E-04	--
Bis(2-chloroethyl) Ether	µg/L	3.10E-02	6.22E-02	--
Bis(2-chloroethyl) Ether	lbs/day	5.17E-04	1.04E-03	--
Bis(2-chloroisopropyl)ether	µg/L	1.40E+03	2.81E+03	--
Bis(2-chloroisopropyl)ether	lbs/day	2.34E+01	4.69E+01	--
Bis(2-ethylhexyl)Phthalate	µg/L	1.80E+00	3.62E+00	--
Bis(2-ethylhexyl)Phthalate	lbs/day	3.00E-02	6.03E-02	--
Boron	µg/L	--	--	7.50E+02
Boron	lbs/day	--	--	1.25E+01
Bromoform	µg/L	3.60E+02	6.83E+02	--
Bromoform	lbs/day	6.00E+00	1.14E+01	--
Butbenzyl Phthalate	µg/L	3.00E+03	6.03E+03	--
Butbenzyl Phthalate	lbs/day	5.00E+01	1.01E+02	--
Carbon Tetrachloride	µg/L	2.50E-01	5.02E-01	--
Carbon Tetrachloride	lbs/day	4.17E-03	8.37E-03	--
Chlordane	µg/L	5.70E-04	1.14E-03	--
Chlordane	lbs/day	9.51E-06	1.91E-05	--
Chlorobenzene	µg/L	6.82E+02	1.37E+03	--
Chlorobenzene	lbs/day	1.13E+01	2.28E+01	--
Chlorodibromomethane	µg/L	4.01E-01	8.06E-01	--
Chlorodibromomethane	lbs/day	6.69E-03	1.34E-02	--
Chromium (VI), Total Recoverable ⁵	µg/L	7.11E+00	1.63E+01	--
Chromium (VI), Total Recoverable ⁵	lbs/day	1.19E-01	2.71E-01	--
Chrysene	µg/L	4.40E-03	8.84E-03	--
Chrysene	lbs/day	7.34E-05	1.48E-04	--
Color	AMDI Color Units	--	20	--
Cyanide, Total Recoverable	µg/L	4.25E+00	8.52E+00	--
Cyanide, Total Recoverable	lbs/day	7.09E-02	1.42E-01	--
Dibenzo(a,h)Anthracene	µg/L	4.40E-03	8.84E-03	--
Dibenzo(a,h)Anthracene	lbs/day	7.34E-05	1.48E-04	--
Dichlorobromomethane	µg/L	4.60E+01	6.10E+01	--
Dichlorobromomethane	lbs/day	7.67E-01	1.02E+00	--
Dieldrin	µg/L	1.40E-04	2.81E-04	--
Dieldrin	lbs/day	2.34E-06	4.68E-06	--
Diethyl Phthalate	µg/L	1.20E+05	2.41E+05	--
Diethyl Phthalate	lbs/day	2.00E+03	4.02E+03	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Dimethyl Phthalate	µg/L	2.90E+06	5.83E+06	--
Dimethyl Phthalate	lbs/day	4.84E+04	9.72E+04	--
Di-n-Butyl Phthalate	µg/L	1.20E+04	2.41E+04	--
Di-n-Butyl Phthalate	lbs/day	2.00E+02	4.02E+02	--
Endosulfan Sulfate	µg/L	1.10E+02	2.21E+02	--
Endosulfan Sulfate	lbs/day	1.83E+00	3.69E+00	--
Endrin	µg/L	2.94E-02	5.90E-02	--
Endrin	lbs/day	4.91E-04	9.84E-04	--
Endrin Aldehyde	µg/L	7.60E-01	1.52E+00	--
Endrin Aldehyde	lbs/day	1.27E-02	2.54E-02	--
Ethylbenzene	µg/L	3.00E+02	6.03E+02	--
Ethylbenzene	lbs/day	5.00E+00	1.01E+01	--
Fluoranthene	µg/L	3.00E+02	6.02E+02	--
Fluoranthene	lbs/day	5.00E+00	1.00E+01	--
Fluorene	µg/L	1.30E+03	2.61E+03	--
Fluorene	lbs/day	2.17E+01	4.36E+01	--
Fluoride	µg/L	--	--	1.00E+03
Fluoride	lbs/day	--	--	1.67E+01
Gamma-BHC	µg/L	1.90E-02	3.82E-02	--
Gamma-BHC	lbs/day	3.17E-04	6.37E-04	--
Heptachlor	µg/L	2.10E-04	4.21E-04	--
Heptachlor	lbs/day	3.50E-06	7.03E-06	--
Heptachlor Epoxide	µg/L	1.00E-04	2.01E-04	--
Heptachlor Epoxide	lbs/day	1.67E-06	3.35E-06	--
Hexachlorobenzene	µg/L	7.50E-04	1.51E-03	--
Hexachlorobenzene	lbs/day	1.25E-05	2.51E-05	--
Hexachlorobenzene	µg/L	7.50E-04	1.50E-03	--
Hexachlorobenzene	lbs/day	1.25E-05	2.51E-05	--
Hexachlorobutadiene	µg/L	4.40E-01	8.83E-01	--
Hexachlorobutadiene	lbs/day	7.34E-03	1.47E-02	--
Hexachlorocyclopentadiene	µg/L	5.00E+01	1.01E+02	--
Hexachlorocyclopentadiene	lbs/day	8.34E-01	1.68E+00	--
Hexachloroethane	µg/L	1.90E+00	3.81E+00	--
Hexachloroethane	lbs/day	3.17E-02	6.36E-02	--
Indeno(1,2,3-cd) Pyrene	µg/L	4.40E-03	8.84E-03	--
Indeno(1,2,3-cd) Pyrene	lbs/day	7.34E-05	1.48E-04	--
Isophorone	µg/L	8.40E+00	1.69E+01	--
Isophorone	lbs/day	1.40E-01	2.81E-01	--
Lead, Total Recoverable	µg/L	4.35E+00	8.74E+00	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Lead, Total Recoverable	lbs/day	7.26E-02	1.46E-01	--
Methyl Bromide	µg/L	4.80E+01	9.65E+01	--
Methyl Bromide	lbs/day	8.01E-01	1.61E+00	--
Methylene Blue Activated Substances	µg/L	--	--	5.00E+02
Methylene Blue Activated Substances	lbs/day	--	--	8.34E+00
Methylene Chloride (Dichloromethane)	µg/L	4.70E+00	9.43E+00	--
Methylene Chloride (Dichloromethane)	lbs/day	7.84E-02	1.57E-01	--
Nickel, Total Recoverable	µg/L	5.28E+01	1.35E+02	--
Nickel, Total Recoverable	lbs/day	8.81E-01	2.25E+00	--
Nitrobenzene	µg/L	1.70E+01	3.41E+01	--
Nitrobenzene	lbs/day	2.84E-01	5.69E-01	--
N-nitrosodimethylamine	µg/L	6.90E-04	1.38E-03	--
N-nitrosodimethylamine	lbs/day	1.15E-05	2.31E-05	--
N-nitrosodi-N-propylamine	µg/L	5.00E-03	1.00E-02	--
N-nitrosodi-N-propylamine	lbs/day	8.34E-05	1.67E-04	--
N-nitrosodiphenylamine	µg/L	1.60E+01	3.22E+01	--
N-nitrosodiphenylamine	lbs/day	2.67E-01	5.36E-01	--
Pentachlorophenol	µg/L	2.80E-01	5.63E-01	--
Pentachlorophenol	lbs/day	4.67E-03	9.39E-03	--
Percent Sodium	Percent	--	60	--
Perchlorate	µg/L	--	--	6.00E-03
Perchlorate	lbs/day	--	--	1.00E-04
Phenol	µg/L	2.10E+04	4.22E+04	--
Phenol	lbs/day	3.50E+02	7.04E+02	--
Polychlorinated Biphenyls (PCBs)	µg/L	1.70E-04	3.41E-04	--
Polychlorinated Biphenyls (PCBs)	lbs/day	2.84E-06	5.69E-06	--
Pyrene	µg/L	9.60E+02	1.93E+03	--
Pyrene	lbs/day	1.60E+01	3.22E+01	--
Radioactivity, Gross Alpha	picocuries per Liter (pCi/L)	--	--	15
Radium 226 and 228 (combined)	pCi/L	--	--	5
Silver, Total Recoverable	µg/L	4.06E+00	8.14E+00	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Silver, Total Recoverable	lbs/day	6.77E-02	1.36E-01	--
Sulfate	µg/L	--	--	5.00E+05
Sulfate	lbs/day	--	--	8.34E+03
TCDD Equivalent	µg/L	1.30E-08	2.61E-08	--
TCDD Equivalent	lbs/day	2.17E-10	4.35E-10	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	8.00E-01	1.61E+00	--
Tetrachloroethylene (Tetrachloroethene)	lbs/day	1.33E-02	2.68E-02	--
Thallium, Total Recoverable	µg/L	1.70E+00	3.42E+00	--
Thallium, Total Recoverable	lbs/day	2.84E-02	5.70E-02	--
Toluene	µg/L	1.50E+02	3.02E+02	--
Toluene	lbs/day	2.50E+00	5.03E+00	--
Toxaphene	µg/L	1.63E-04	3.28E-04	--
Toxaphene	lbs/day	2.73E-06	5.47E-06	--
Trichloroethylene (Trichloroethene)	µg/L	2.70E+00	5.43E+00	--
Trichloroethylene (Trichloroethene)	lbs/day	4.50E-02	9.05E-02	--
Vinyl Chloride	µg/L	5.00E-01	1.01E+00	--
Vinyl Chloride	lbs/day	8.34E-03	1.68E-02	--

Notes for Table 4

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 x 10⁻² or 0.061, 6.1E+02 represents 6.1 x 10² or 610, and 6.1E+00 represents 6.1 x 10⁰ 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 (2.0 MGD) and C is the concentration (mg/L).
4. Not to be exceeded more than 10 percent of the time during any one-year period.
5. Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

4.2. Land Discharge Specifications – Not Applicable

4.3. Recycling Specifications – Not Applicable

5. Receiving Water Limitations

5.1. Surface Water Limitation

The receiving water limitations set forth below for Sycamore Creek and the San Diego River are based on water quality standards contained in water quality control plans, policies, and federal regulations and are a required part of this Order. The discharges of waste shall not cause or contribute to violations of the receiving water limitations.

5.1.1. Bacterial Characteristics

5.1.1.1. Total Coliform Organisms (Based on Basin Plan Water Quality Objectives): The concentration of total coliform organisms shall not exceed the following:

5.1.1.1.1. 1,000 MPN/100 mL as a geometric mean, based on a minimum of not less than five samples for any 30-day period; and

5.1.1.1.2. 10,000 MPN/100 mL at any time.

5.1.1.2. Fecal Coliform (Based on Basin Plan Water Quality Objectives): The concentration of fecal coliform organisms shall not exceed the following:

5.1.1.2.1. 200 MPN/100 mL as a geometric mean based on a minimum of not less than five samples for any 30-day period; and

5.1.1.2.2. 400 MPN/100 mL in more than 10 percent of total samples during any 30-day period.

5.1.1.3. Enterococci (Based on State Water Board Bacteria Objectives): The concentration of enterococci in the effluent shall not exceed the following:

5.1.1.3.1. 30 CFU/100 mL as a six-week geometric mean, calculated weekly; and

5.1.1.3.2. 110 CFU/100 mL as a statistical threshold value not to be exceeded by more than 10 percent of samples collected in a calendar month, calculated in a static manner.

5.1.1.4. Escherichia coli (Based on Basin Plan Water Quality Objectives): The concentration of Escherichia coli shall not exceed the following:

5.1.1.4.1. 126 CFU/100 mL as a geometric mean based on all samples during a 30-day period; and

5.1.1.4.2. 235 CFU/100 mL at any time.

5.1.2. Physical Characteristics

5.1.2.1. Waters shall not contain floating material, including solids, liquids, foams, and scum in concentrations which cause nuisance or adversely affect beneficial uses.

- 5.1.2.2. Water shall be free of coloration that causes nuisance or adversely affects beneficial uses. The natural color of fish, shellfish, or other resources shall not be impaired.
- 5.1.2.3. Waters shall not contain oils, greases, waxes, or other materials in concentrations which result in a visible film or coating on the surface of the water or on objects in the water, or which cause nuisance or otherwise adversely affect beneficial uses.
- 5.1.2.4. The suspended sediment load and suspended sediment discharge rate of surface waters shall not be altered in such a manner as to cause nuisance or adversely affect beneficial uses.
- 5.1.2.5. Waters shall not contain suspended and settleable solids in concentrations of solids that cause nuisance or adversely affect beneficial uses.
- 5.1.2.6. Waters shall not contain taste or odor producing substances at concentrations which cause a nuisance or adversely affect beneficial uses.
- 5.1.2.7. The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the San Diego Water Board that such alteration in temperature does not adversely affect beneficial uses. At no time or place shall the temperature of any waters with designated cold freshwater habitat be increased more than 5°F above the natural receiving water temperature.
- 5.1.2.8. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses.
- 5.1.3. **Chemical Characteristics**
 - 5.1.3.1. The dissolved oxygen concentration shall not at any time be less than 5.0 mg/L. The annual mean dissolved oxygen concentration shall not be less than 7 mg/L more than ten percent of the time.
 - 5.1.3.2. Changes in normal ambient pH levels shall not exceed 0.5 units. The pH shall not be depressed below 6.5 nor raised above 8.5.
 - 5.1.3.3. Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth.
 - 5.1.3.4. The discharge of wastes shall not cause concentrations of un-ionized ammonia (NH₃) to exceed 0.025 mg/L as nitrogen.
 - 5.1.3.5. All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods, as specified by the San Diego Water Board.

5.1.4. **Biological Characteristics**

5.1.4.1. Aquatic communities and populations, including vertebrates, invertebrates, and nontarget plant species shall not be degraded.

5.1.5. **Radioactivity**

Radionuclides shall not be present in concentrations that are harmful/deleterious to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic 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. A copy of this Order shall be posted at a prominent location and 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.

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 to the San Diego Water Board shall be made to:

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

6.3. Special Provisions

6.3.1. Reopener Provisions

- 6.3.1.1. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity, monitoring requirements on internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data. (State Implementation Policy)
- 6.3.1.2. 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 4, of this Order, or contributes to an excursion above water quality objectives (WQOs) in Chapter 3 of the Basin Plan. (40 CFR section 122.44(d)(1))
- 6.3.1.3. 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).
- 6.3.1.4. 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:
 - 6.3.1.4.1. Violation of any terms or conditions of this Order. (Water Code section 13381(a));
 - 6.3.1.4.2. Obtaining this Order by misrepresentation or failure to disclose fully all relevant facts. (Water Code section 13381(b)); and
 - 6.3.1.4.3. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge. (Water Code section 13381(c)).
- 6.3.1.5. 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))

- 6.3.1.6. 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))
- 6.3.1.7. 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).)
- 6.3.1.8. This Order may be reopened and modified to revise effluent limitations as a result of future 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))
- 6.3.1.9. 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.
- 6.3.1.11. This Order may be reopened to add additional algaecide and aquatic herbicide active ingredients if new active ingredients are registered by USEPA and the Department of Pesticides Regulation (DPR).
- 6.3.1.12. This Order may be reopened to add numeric effluent limitations for the residual algaecide and aquatic herbicides exceeding the triggers if the additional investigation results show that to be necessary.
- 6.3.1.13. If USEPA develops biological opinions regarding algaecides and aquatic herbicides included in this Order, this Order may be re-opened to add or modify effluent limitations / monitoring requirements / monitoring triggers for aquatic herbicides and algaecides and their residues of concern, if necessary.
- 6.3.1.14. This Order will be reopened and modified to revise any and all of the chronic toxicity testing provisions and effluent limitations, to the extent necessary, to be consistent with any Toxicity Plan that is subsequently adopted by the State Water Board promptly after USEPA-approval of such Plan.

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 Prohibitions 3.1 and 3.2 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 6.3.5.2 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 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 and the County of San Diego Department of Environmental Health.

6.3.2.3. Watercourse Monitoring and Management Plan

The Discharger shall develop and submit an updated Watercourse Monitoring and Management Plan (WMMP) to the San Diego Water Board, via the State Water Board's California Integrated Water Quality System (CIWQS) website within 120 days of the effective date of this Order. The WMMP shall be consistent with the requirements in Basin Plan, *Chapter 4, Implementation, Control of Point Source Pollutants, Reclaimed Water Conformance with Water Quality Objectives* and shall include an implementation schedule. Monitoring and management activities shall be implemented according to the final implementation schedule specified in the WMMP. The WMMP shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board. Prior to the development and submittal of an updated WMMP, please continue to implement the previous WMMP.

6.3.2.4. Data Collection for the WMMP

The Discharger shall develop and submit a Data Collection Plan to the San Diego Water Board, via the State Water Board's CIWQS website within 120 days of the effective date of this Order. The Data Collection Plan shall describe the procedures to collect data in Sycamore Creek, Forrester Creek, and the San Diego River for the WMMP parameters listed below:

- 6.3.2.4.1. Vertical and diurnal oxygen profiles and BOD₅,
- 6.3.2.4.2. Corrected chlorophyll a and pheophyton a,
- 6.3.2.4.3. Diurnal and vertical temperature profiles,
- 6.3.2.4.4. The diversity and numbers of macroinvertebrates and fish,
- 6.3.2.4.5. The dynamics of the aquatic flora (macroalgae, phytoplankton, and emergent vegetation) and the related dissolved oxygen regime, substrate composition,
- 6.3.2.4.6. Frequency of nuisance conditions.

The Data Collection Plan shall include an implementation schedule. Monitoring activities must be implemented according to the final implementation schedule. The Data Collection Plan shall be subject to the approval of the San Diego Water Board and shall be modified as directed by the San Diego Water Board.

6.3.3. Best Management Practices and Pollution Prevention

6.3.3.1 Pesticide Application to Storage Ponds and/or Santee Lakes

6.3.3.3.1. If the following monitoring triggers below are exceeded at Discharge Point No. 001, as monitored at Monitoring Location EFF-001B, the Discharger shall perform the following actions: (1) initiate additional investigations for the cause of the exceedance; (2) implement additional BMPs to reduce the algaecide and aquatic herbicide residue concentration to be below the monitoring triggers in future applications; and (3) evaluate the appropriateness of using alternative products.

Table 5. Pesticide Monitoring Trigger Levels

Ingredient	Unit	Instantaneous Maximum Monitoring Trigger	Basis
Imazapyr	mg/L	11.2	USEPA Office of Pesticides <i>Ecotoxicity Database</i>
Triclopyr Triethylamine	mg/L	13.0	USEPA Office of Pesticides <i>Ecotoxicity Database</i>
Flumioxazin	mg/L	0.23	USEPA Office of Pesticides <i>Ecotoxicity Database</i>

6.3.3.1.2. The Discharger shall provide a phone number or other specific contact information to all persons who request the Discharger’s pesticide application schedule. The Discharger shall provide the requester with the most current pesticide application schedule and inform the requester if the schedule is subject to change. Information may be made available by electronic means, including posting prominently on a well-known website.

6.3.3.1.3. Every calendar year, at least 15 days prior to the first application of algaecide or aquatic herbicide, the Discharger shall notify potentially affected public agencies. The Discharger shall post the notification on its website if available. The notification shall include the following information:

6.3.3.1.1.1. A statement of the Discharger’s intent to apply algaecide or aquatic herbicide(s);

6.3.3.1.1.2. Name of algaecide and aquatic herbicide(s);

6.3.3.1.1.3. Purpose of use;

- 6.3.3.1.1.4. General time period and locations of expected use;
- 6.3.3.1.1.5. Any water use restrictions or precautions during treatment; and
- 6.3.3.1.1.6. A phone number that interested persons may call to obtain additional information from the Discharger.
- 6.3.3.1.4. The Discharger shall submit an Aquatic Pesticides Application Plan (APAP) at least 90 days before the expected day of pesticide discharge. The APAP shall contain, but not be limited to, the following elements sufficient to address each proposed treatment area:
 - 6.3.3.1.4.1. Description of the water system to which algaecides and aquatic herbicides are being applied;
 - 6.3.3.1.4.2. Description of the treatment area in the water system;
 - 6.3.3.1.4.3. Description of types of weed(s) and algae that are being controlled and why;
 - 6.3.3.1.4.4. Algaecide and aquatic herbicide products or types of algaecides and aquatic herbicides expected to be used and if known their degradation byproducts, the method in which they are applied, and if applicable, the adjuvants and surfactants used;
 - 6.3.3.1.4.5. Discussion of the factors influencing the decision to select algaecide and aquatic herbicide applications for algae and weed control;
 - 6.3.3.1.4.6. If applicable, list the gates or control structures to be used to control the extent of receiving waters potentially affected by algaecide and aquatic herbicide application and provide an inspection schedule of those gates or control structures to ensure they are not leaking;
 - 6.3.3.1.4.7. Description of monitoring program;
 - 6.3.3.1.4.8. Description of procedures used to prevent sample contamination from persons, equipment, and vehicles associated with algaecide and aquatic herbicide application;
 - 6.3.3.1.4.9. Description of the BMPs to be implemented. The BMPs shall include, at the minimum:
 - i. Measures to prevent algaecide and aquatic herbicide spill and for spill containment during the event of a spill;

- ii. Measures to ensure that only an appropriate rate of application consistent with product label requirements is applied for the targeted weeds or algae;
- iii. The Discharger's plan in educating its staff and algaecide and aquatic herbicide applicators on how to avoid any potential adverse effects from the algaecide and aquatic herbicide applications;
- iv. Discussion on planning and coordination with nearby farmers and agencies with water rights diversion so that beneficial uses of the water (irrigation, drinking water supply, domestic stock water, etc.) are not impacted during the treatment period; and
- v. A description of measures that will be used for preventing fish kill when algaecides and aquatic herbicides will be used for algae and aquatic weed controls.

6.3.3.1.4.10. Examination of Possible Alternatives. The Discharger should examine the alternatives to algaecide and aquatic herbicide use to reduce the need for applying algaecides and herbicides. Such methods include:

- i. Evaluating the following management options, in which the impact to water quality, impact to non-target organisms including plants, algaecide and aquatic herbicide resistance, feasibility, and cost effectiveness should be considered:
 - No action;
 - Prevention;
 - Mechanical or physical methods;
 - Cultural methods;
 - Biological control agents; and
 - Algaecides and aquatic herbicides;

If there are no alternatives to algaecides and aquatic herbicides, Dischargers shall use the minimum amount of algaecides and aquatic herbicides that is necessary to have an effective control program and is consistent with the algaecide and aquatic herbicide product label requirements.

- ii. Using the least intrusive method of algaecide and aquatic herbicide application; and
- iii. Applying a decision matrix concept to the choice of the most appropriate formulation.

- 6.3.3.1.4.11. The Discharger shall submit the APAP 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 APAP is readily available to Facility personnel at all times and that the Facility personnel are familiar with it.
- 6.3.3.1.4.12. The Discharger shall maintain a log for each algaecide and aquatic herbicide application. The application log shall contain, at a minimum, the following information:
- i. Date of application;
 - ii. Location of application;
 - iii. Name of applicator;
 - iv. Type and amount of algaecide and aquatic herbicide used;
 - v. Application details, such as flow and level of water body, time application started and stopped, algaecide and aquatic herbicide application rate and concentration;
 - vi. Visual monitoring assessment; and
 - vii. Certification that applicator(s) followed the APAP.

6.3.3.2. **Pollutant Minimization Program**

- 6.3.3.2.1. The Discharger shall develop and conduct a Pollutant Minimization Program (PMP) as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation is less than the MDL, sample results from analytical methods more sensitive than those methods required by this Order, presence of whole effluent toxicity, health advisories for fish consumption, results of benthic or aquatic organism tissue sampling) that a priority pollutant is present in the effluent above an effluent limitation and either:
- 6.3.3.2.1.1. A sample result is reported as DNQ and the effluent limitation is less than the Reporting Level (RL); or
 - 6.3.3.2.1.2. A sample result is reported as “Not-Detected” (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP section 10.2.4.
- 6.3.3.2.2. The PMP shall include, but not be limited to, the following actions and submittals acceptable to the San Diego Water Board:
- 6.3.3.2.2.1. An annual review and semi-annual monitoring of potential sources of the reportable pollutant(s), which may include fish tissue monitoring and other bio-uptake sampling;
 - 6.3.3.2.2.2. Quarterly monitoring for the reportable pollutant(s) in the influent to the wastewater treatment system;
 - 6.3.3.2.2.3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable pollutant(s) in the effluent at or below the effluent limitation;

- 6.3.3.2.2.4. Implementation of appropriate cost-effective control measures for the reportable pollutant(s), consistent with the control strategy; and
- 6.3.3.2.3. An annual status report that shall be sent to the San Diego Water Board including:
 - 6.3.3.2.3.1. All PMP monitoring results for the previous year;
 - 6.3.3.2.3.2. A list of potential sources of the reportable pollutant(s);
 - 6.3.3.2.3.3. A summary of all actions undertaken pursuant to the control strategy; and
 - 6.3.3.2.3.4. 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 monthly 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 Facility shall be protected against a 100-year peak stream flows as defined by the San Diego County Flood Control District (FCD).
- 6.3.4.3. The 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://www.nws.noaa.gov/oh/hdsc/index.html>
- 6.3.4.4. The Facility shall be protected against regional impacts due to climate change (such as flooding and other climate change related impacts).
- 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 Facilities are in compliance with the terms and conditions of this Order. In addition to a sufficient alternate power source(s), backup systems shall also include any necessary 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, 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. **Sludge (Biosolids) Disposal Requirements**
 - 6.3.5.1.1. The handling, treatment, use, management, and disposal of sludge and solids derived from wastewater treatment must comply with applicable provisions of section 405 of the CWA and USEPA regulations at 40 CFR parts 257, 258, 501, and 503, including all monitoring, recordkeeping, and reporting requirements.
 - 6.3.5.1.2. Sludge and wastewater solids must be disposed of in a municipal solid waste landfill, reused by land application, disposed of in a sludge-only landfill, or used in an application approved by the San Diego Water Board in accordance with 40 CFR parts 258 and 503 and title 23, chapter 15 of the CCR. If the Discharger desires to dispose of solids and/or sludge in a different manner, a request for permit modification must be submitted to the USEPA and to this San Diego Water Board at least 180 days prior to beginning the alternative means of disposal.
 - 6.3.5.1.3. Sludge that is disposed of in a municipal solid waste landfill must meet the requirements of 40 CFR part 258 pertaining to providing information to the public. In the annual self-monitoring report, the Discharger shall include the amount of sludge placed in the landfill as well as the landfill to which it was sent.

- 6.3.5.1.4. All requirements of 40 CFR part 503 and title 23, chapter 15 of the CCR are enforceable whether or not the requirements of those regulations are stated in an NPDES permit or any other permit issued to the Discharger.
- 6.3.5.1.5. The Discharger shall take all reasonable steps to prevent and minimize any sludge use or disposal in violation of this Order that has a likelihood of adversely affecting human health or the environment.
- 6.3.5.1.6. Solids and sludge treatment, storage, and disposal or reuse shall not create a nuisance, such as objectionable odors or flies, and shall not result in groundwater contamination.
- 6.3.5.1.7. The solids and sludge treatment and storage site shall have adequate facilities to divert surface water runoff from adjacent areas to protect the boundaries of the site from erosion, and to prevent drainage from the treatment and storage site. Adequate protection is defined as protection, at the minimum, from a 100-year 24-hour storm event, 100-year peak stream flows as defined by the San Diego County flood control agency, and protection from the highest possible tidal stage that may occur.
- 6.3.5.1.8. The discharge of sewage sludge and solids shall not cause waste material to be in position where it is, or can be, conveyed from the treatment and storage sites and deposited in waters of the state.
- 6.3.5.1.9. All sewage sludge/ biosolids generated at the Facility shall be returned to the sewer system for transport to the City of San Diego Point Loma Wastewater Treatment Plant. If the Discharger changes the method of disposal of sewage sludge/ biosolids generated at the Facility, the Discharger shall notify the San Diego Water Board at least 30 days before the change.

6.3.5.2. **Sewage Collection System**

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

Regardless of the coverage obtained under Order No. 2006-0003-DWQ or Order No. R9-2007-0005, the Discharger's collection system is part of the treatment system that is subject to this Order. As such, pursuant to federal regulations, the Discharger 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)].

6.3.6. Other Special Provisions – Not Applicable

6.3.7. Compliance Schedules

Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions (Mercury Provisions) establishes water quality objectives for mercury to protect the beneficial uses associated with the consumption of fish by both people and wildlife. The Mercury Provisions establish a sport fishing water quality objective/water column concentration of 12 nanograms per liter (or 0.012 µg/L) from which mercury effluent limitations can be derived for discharges to flowing inland surface water bodies such as Sycamore Creek whose beneficial uses include wildlife habitat. Pursuant to section IV.D.2.d.4 of the Mercury Provisions, regional water boards can include schedules in NPDES permits for dischargers to achieve compliance with mercury effluent limitations. As a result, the Discharger shall complete the following tasks no later than the specified compliance dates to attain compliance with final average annual effluent limitations of 0.012 µg/L and 2.00E-04 lbs/day for mercury at Monitoring Location EFF-001A:

Table 6. Compliance Schedule Tasks and Due Dates

Task	Compliance Date
Submit a workplan identifying proposed facilities or control measures necessary to achieve compliance with annual average effluent limitations of 0.012 µg/L and 2.00 E-04 lbs/day for mercury.	June 1, 2022
Complete 60 percent design of any required facilities and control measures.	September 1, 2022
Start construction of required facilities.	April 1, 2023
Complete 100 percent design of any required facilities and control measures.	September 1, 2023
Complete 30 percent of construction of required facilities.	April 1, 2024
Complete 60 percent of construction of required facilities.	March 30, 2025
Complete 100 percent of construction of required facilities.	March 29, 2026
Begin testing of facilities.	August 28, 2026
Complete startup, commissioning, and testing of facilities.	March 1, 2027
Start operation of facilities.	March 30, 2027

Notes for Table 6

1. Final annual average effluent limitations for mercury are 0.012 µg/L and 2.00 E-04 lbs/day.

The Discharger shall submit a written statement within 10 days after each compliance date in Table 6 above documenting compliance or noncompliance with the specified task. If the Discharger is delayed, interrupted, or prevented from meeting the provisions and time schedule due to a force majeure, the Discharger shall notify the San Diego Water Board in writing within ten days of the date the Discharger first knows of the force majeure. The Discharger shall demonstrate that timely compliance with any affected deadlines will be actually and necessarily delayed, and that it has taken measures to avoid or mitigate the delay by exercising all reasonable precautions and efforts, whether before or after the occurrence of the force majeure.

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 12-Month Average Effluent Limitation

The 12-month average shall consist of the average of all monitoring results for a given parameter within any 12-month period. If the 12-month average of daily discharges over any 365-day period exceeds the 12-month average 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 365-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 365-day period and the analytical result for that sample exceeds the 12-month average, the Discharger will be considered out of compliance for the 365-day period. For any 365-day period during which no sample is taken, no compliance determination can be made for the 12-month average limitation.

7.7. 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 Minimum Level (ML).

7.8. **Mass and Concentration Limitations**

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

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

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

$$\text{MER (lbs/day)} = 8.34 \times Q \times C$$

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.

7.10. **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**

When determining compliance with an AMEL or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND.

In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

- 7.11.1. 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.
- 7.11.2. 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.

7.12. **Percent Removal**

Compliance with percent removal requirements for average monthly percent removal of BOD₅ and TSS shall be determined for the Facility. The monthly average percent removal shall be calculated according to the following equation:

Average monthly percent removal = the average monthly influent concentration minus the average monthly effluent concentration, divided by the average monthly influent concentration, multiplied by 100.

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:

$$\text{Geometric Mean} = (C_1 \times C_2 \times \dots \times C_n)^{1/n}$$

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. For all bacterial analyses, sample dilutions shall 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 coliforms (total and fecal) 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 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 (H₀) for the TST statistical approach is:

Mean discharge “in-stream” waste concentration (IWC) response $\leq 0.75 \times$ Mean control response.

A test result that rejects this null hypothesis is reported as “Pass”. A test result that does not reject this null hypothesis is reported as “Fail”. 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 for chronic toxicity is exceeded when a chronic toxicity test, analyzed using the TST statistical approach, results in “Fail” for the sub-lethal endpoint and the “Percent Effect” is ≥ 0.50 for the survival endpoint or the sub-lethal endpoint if there is no survival endpoint. The MMEL for chronic toxicity is exceeded and a violation will be flagged when two or more toxicity tests initiated in a calendar month result in a “Fail” in accordance with the TST approach for any endpoint.

The MDEL and MMEL for chronic toxicity are set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach (“Pass” or “Fail,” “Percent Effect”). All NPDES effluent monitoring for the chronic toxicity effluent limitations shall be reported using the 100% effluent concentration and

negative control, expressed in units of the TST. The TST hypothesis (H_0) (see above) is statistically analyzed using the IWC and a negative control. Effluent toxicity tests shall be run using a multi-concentration test design when required by *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002).

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
AWEL	Average Weekly Effluent Limitation
AWP	Advanced Water Purification
Basin Plan	<i>Water Quality Control Plan for the San Diego Basin</i>
BOD ₅	Biochemical Oxygen Demand (5-Day @ 20°C)
BPJ	Best Professional Judgement
BRI	Benthic Response Index
°C	Degrees Celsius
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
CWA	Clean Water Act
DDT	Dichlorodiphenyltrichloroethane
Discharger	Padre Dam Municipal Water District
D _m	Minimum Initial Dilution Factor
DMR	Discharge Monitoring Report
DNQ	Detected, But Not Quantified
EC ₂₅	Effects Concentration at 25 Percent
ECA	Effluent Concentration Allowance
ELAP	Environmental Laboratory Accreditation Program
eSMR	Electronic Self-Monitoring Reports
°F	Degrees Fahrenheit
Facility	Ray Stoyer Water Recycling Facility
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

Abbreviation	Definition
LC ₅₀	Percent Waste Giving 50 Percent Survival of Test Organisms
MDEL	Maximum Daily Effluent Limitation
MDL	Method Detection Limit
MEC	Maximum Effluent Concentration
MER	Mass Emission Rate
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
MMEL	Monthly Median Effluent Limitation
MRP	Monitoring and Reporting Program
NAV	Navigation
ND	Not Detected
ng/kg	Nanogram per Kilogram
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
pCi/L	Picocuries per Liter
PMP	Pollutant Minimization Program
PMSD	Percent Minimum Significant Difference
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, <i>Waste Discharge Requirements for Sewage Collection Agencies in the San Diego Region</i>
RL	Reporting Level
ROWD	Report of Waste Discharge
RPA	Reasonable Potential Analysis

Abbreviation	Definition
San Diego Water Board	California Regional Water Quality Control Board, San Diego Region
SCCWRP	Southern California Coastal Water Research Project
SIC	Standard Industrial Classification
SIP	<i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California</i>
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, <i>Statewide General Waste Discharge Requirements for Sanitary Sewer Systems</i> and any subsequent amendment/reissuance order.
STV	Statistical Threshold Value
TAC	Test Acceptability Criteria
TBELs	Technology-Based Effluent Limitations
TCDD	Tetrachlorodibenzodioxin
TIE	Toxicity Identification Evaluation
TMDL	Total Maximum Daily Load
TRE	Toxicity Reduction Evaluation
TSD	Technical Support Document
TSS	Total Suspended Solids
TST	Test of Significant Toxicity
TUa	Toxic Units Acute
TUc	Toxic Units Chronic
µg	Microgram
µg/kg	Microgram per Kilogram
µg/L	Microgram per Liter
USEPA	United States Environmental Protection Agency
U.S.	United States
Water Code	California Water Code
WDRs	Waste Discharge Requirements
WET	Whole Effluent Toxicity
WILD	Wildlife Habitat
WRF	Water Recycling Facility
WQBELs	Water Quality-Based Effluent Limitations
WQOs	Water Quality Objectives

Part 2. – Definitions

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.

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)].

Bioaccumulative Pollutants

Those substances taken up by an organism through gill membranes, epithelial tissue, or from food and subsequently concentrated and retained in the body of the organism.

Bioassay

A test used to evaluate the relative potency of a chemical or a mixture of chemicals by comparing its effect on a living organism with the effect of a standard preparation on the same type of organism.

Biochemical Oxygen Demand (BOD)

A measurement of the amount of oxygen utilized by the decomposition of organic material, over a specified time period (usually 5 days, BOD₅) in a wastewater sample. It is used as a measurement of the readily decomposable organic content of a wastewater sample.

Biosolids

Sewage sludge that is used or disposed through land application, surface disposal, incineration, or disposal in a municipal solid waste landfill. Sewage sludge is defined as solid, semi-solid, or untreated residue generated during the treatment of domestic sewage in a treatment facility.

Bypass

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

Calendar Month(s)

For purpose of chronic toxicity testing, a period of time from a day of one month to the day before the corresponding day of the next month if the corresponding day exists, or if not to the last day of the next month (e.g., from January 1 to January 31, from June 15 to July 14, or from January 31 to February 28).

Calendar Quarter(s)

A period of time defined as three consecutive calendar months.

California Code of Regulations (CCR)

The official compilation and publication of the regulations adopted or repealed by state agencies pursuant to the Administrative Procedure Act (APA). Properly adopted regulations that have been filed with the Secretary of State have the force of law.

Carcinogenic

Pollutants are substances that are known to cause cancer in living organisms.

Chlordane

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

Chronic Toxicity

Chronic toxicity is the measure of the sub-lethal adverse response of aquatic organisms from exposure to chemical or physical agents, and/or their synergistic effects in effluent or receiving water. 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.

Clean Water Act (CWA)

An act passed by the U.S. Congress to control water pollution. It was formerly referred to as the Federal Water Pollution Control Act of 1972 or Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500), 33 U.S.C. 1251 et. Seq., as amended by: Public Law 96-483; Public Law 97-117; Public Laws 95-217, 97-117, 97-440, and 100-04.

Code of Federal Regulations (CFR)

The codification (arrangement of) the general and permanent rules published in the Federal Register by the executive departments and agencies of the Federal Government. Title 40 of the CFR contains the environmental regulations.

Coefficient of Variation (CV)

CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Composite Sample

Sample composed of two or more discrete samples of at least 100 milliliters collected at periodic intervals during the operating hours of a facility over a 24-hour period. The aggregate sample will reflect the average water quality covering the compositing or sample 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 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.

Conventional Pollutants

Pollutants typical of municipal sewage, and for which municipal secondary treatment plants are typically designed; defined at 40 CFR 401.16 as BOD, Total Suspended Solids (TSS), fecal coliform bacteria, oil and grease, and pH

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.

Dilution Credit

The amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

Discharge

When used without qualification means the discharge of a pollutant. Discharge of a pollutant means:

1. Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source," or
2. 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)

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.

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.

Effluent Concentration Allowance (ECA)

ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in USEPA guidance (Technical Support Document for Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

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

Ray Stoyer Water Recycling Facility.

Facilities

Collectively refers to the Ray Stoyer Water Recycling Facility and any associated structure or system used in the storage, treatment, and recycling of wastewater at the Ray Stoyer Water Reclamation Facility, or any structure or system used in conveyance of wastewater to or from the Ray Stoyer Water Recycling Facility.

Haloacetic Acids

The sum of monochloroacetic acid, dichloroacetic acid, trichloroacetic acid, monobromoacetic acid, and dibromoacetic acid.

HCH

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

Inland Surface Waters

All surface waters of the state that do not include the ocean, enclosed bays, or estuaries.

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.

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day. For the purposes of chronic and acute aquatic toxicity, an MDEL is an effluent limitation based on the outcome of the Test of Significant Toxicity (TST) approach and the resulting Percent Effect at the instream waste concentration (IWC).

Median

The middle measurement in a set of data. The median of a set of data is found by first arranging the measurements in order of magnitude (either increasing or decreasing order). If the number of measurements (n) is odd, then the median = $X_{(n+1)/2}$. If n is even, then the median = $(X_{n/2} + X_{(n/2)+1})/2$ (i.e., the midpoint between the $n/2$ and $n/2+1$).

Median Monthly Effluent Limitation (MMEL)

The highest allowable median discharge of a pollutant during a calendar month. For the purposes of chronic and acute aquatic toxicity, an MMEL is an effluent limitation based on a maximum of three independent toxicity tests, analyzed using the TST.

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.

Million Gallons Per Day (MGD)

A unit of flow commonly used for wastewater discharges. One MGD is equivalent to 1.547 cubic feet per second.

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.

Mixing Zone

Mixing Zone is a limited volume of receiving water that is allocated for mixing with a wastewater discharge where water quality criteria can be exceeded without causing adverse effects to the overall water body.

Not Detected (ND)

Those sample results less than the laboratory's MDL.

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 Effect

For the purposes of acute and chronic aquatic toxicity, the percent effect refers to the value that denotes the difference in response between the test concentration and the control, divided by the mean control response, and multiplied by 100.

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 priority 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

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 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. 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.

Secondary Treatment Standards

Technology-based requirements for direct discharging municipal sewage treatment facilities. Standards are based on a combination of physical and biological processes typical for the treatment of pollutants in municipal sewage. Standards are expressed as a minimum level of effluent quality in terms of: BOD5, TSS, and pH (except as provided for special considerations and treatment equivalent to secondary treatment).

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.

Source of Drinking Water

Any water designated as municipal or domestic supply (MUN) in a San Diego Water Board Basin Plan.

Standard Deviation (σ)

Standard Deviation is a measure of variability that is calculated as follows:

$$\text{Standard Deviation } (\sigma) = \frac{\sum(X-\mu)^2}{(n-1)^{0.5}}$$

where: x is the observed value; μ is the arithmetic mean of the observed values; and n is the number of samples.

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

Technology-Based Effluent Limitation (TBELs)

A permit limitation for a pollutant that is based on the capability of a treatment method to reduce the pollutant to a certain concentration.

Total Trihalomethanes

Total trihalomethanes equal the sum of the concentrations of chloroform, bromodichloromethane, dibromochloromethane, and bromoform.

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.

Test of Significant Toxicity (TST)

A statistical approach used to analyze aquatic toxicity test data, as described in Section IV.B.1.c of the Toxicity Provisions.

Toxicity Provisions

Refers to Section III.B and Section IV.B of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

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.

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.

Water Recycling

The treatment of wastewater to render it suitable for reuse, the transportation of treated wastewater to the place of use, and the actual use of treated wastewater for a direct beneficial use or controlled use that would not otherwise occur.

Whole Effluent Toxicity (WET)

The aggregate toxic effect of an effluent measured directly with a toxicity test.

ATTACHMENT B – MAPS

Figure B-1. Facility Location and Receiving Water Monitoring Stations

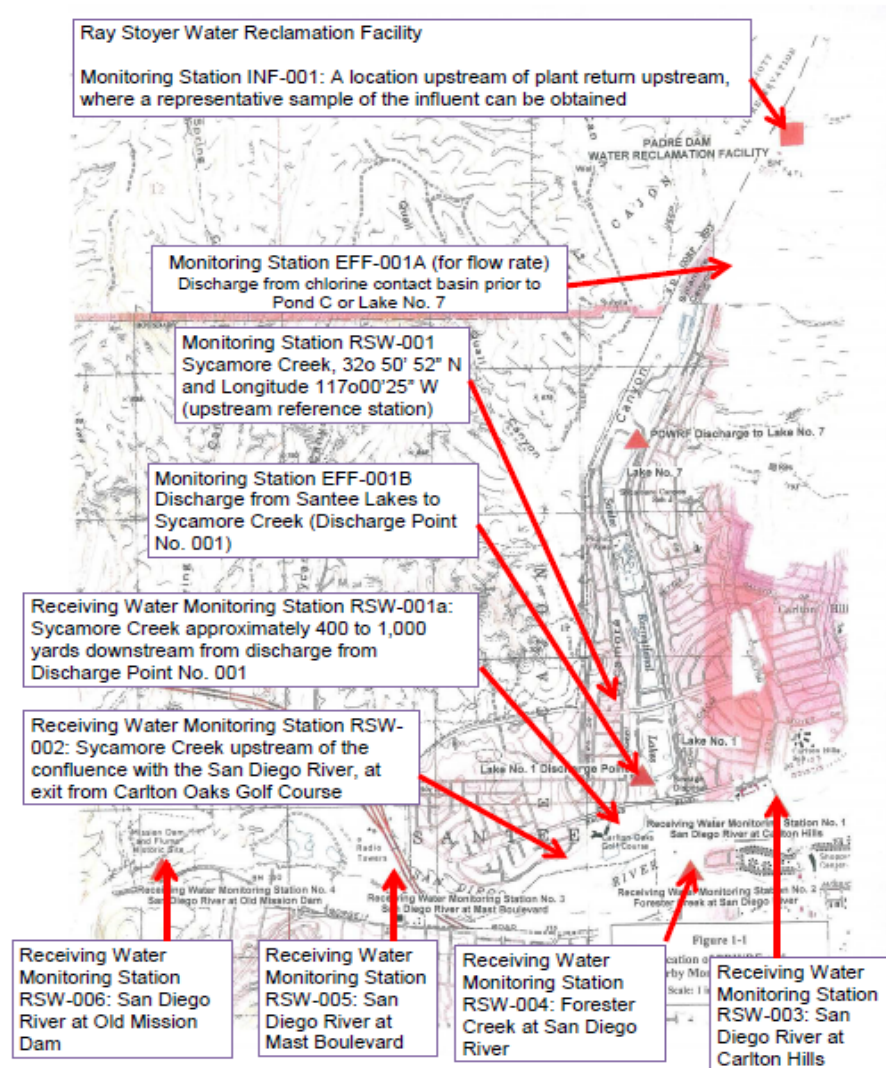
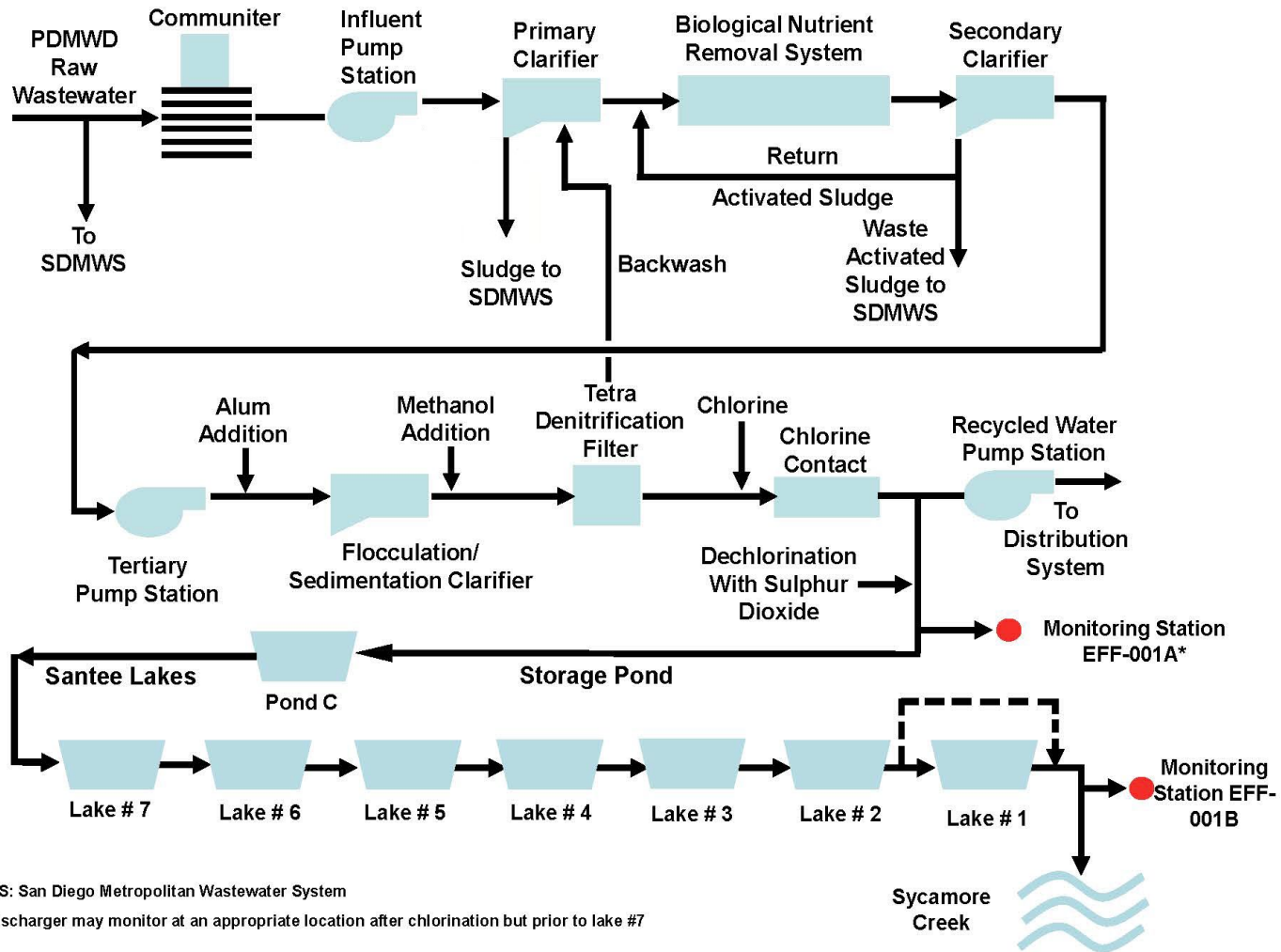


Figure B-2. Facility Location and Receiving Water Monitoring Stations



ATTACHMENT C-FLOW SCHEMATIC



SDMWS: San Diego Metropolitan Wastewater System

*The discharger may monitor at an appropriate location after chlorination but prior to lake #7

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 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 section 122.41(a); Water Code, sections 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
- 1.1.2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the 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 section 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

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

1.3. Duty to Mitigate

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

1.4. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. 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 section 122.41(e).)

1.5. Property Rights

- 1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR section 122.41(g).)
- 1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 CFR section 122.5(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 section 122.41(i); Water Code, sections 13267, 13383):

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

1.7. Bypass

1.7.1. Definitions

- 1.7.1.1. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 122.41(m)(1)(i).)
- 1.7.1.2. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR section 122.41(m)(1)(ii).)
- 1.7.2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance 1.7.3, 1.7.4, and 1.7.5 below. (40 CFR section 122.41(m)(2).)
- 1.7.3. Prohibition of bypass. Bypass is prohibited, and the San Diego Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR section 122.41(m)(4)(i)):
 - 1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR section 122.41(m)(4)(i)(A));

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

1.7.5. Notice

- 1.7.5.1. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass. The notice shall be sent to the San Diego Water Board. 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 section 122.41(m)(3)(i).)
- 1.7.5.2. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 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 section 122.41(m)(3)(ii).)

1.8. **Upset**

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

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

- 1.8.2. Conditions necessary for a demonstration of upset. 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 section 122.41(n)(3)):
- 1.8.2.1. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR section 122.41(n)(3)(i));
 - 1.8.2.2. The permitted facility was, at the time, being properly operated (40 CFR section 122.41(n)(3)(ii));
 - 1.8.2.3. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.2 below (24-hour notice) (40 CFR section 122.41(n)(3)(iii)); and
 - 1.8.2.4. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance 1.3 above. (40 CFR section 122.41(n)(3)(iv).)
- 1.8.3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR section 122.41(n)(4).)

2. **Standard Provisions – Permit Action**

2.1. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR section 122.41(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 section 122.41(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 section 122.41(j)(1).)
- 3.2. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. 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 section 122.41(j)(2).)
- 4.2. Records of monitoring information shall include:
 - 4.2.1. The date, exact place, and time of sampling or measurements (40 CFR section 122.41(j)(3)(i));
 - 4.2.2. The individual(s) who performed the sampling or measurements (40 CFR section 122.41(j)(3)(ii));
 - 4.2.3. The date(s) analyses were performed (40 CFR section 122.41(j)(3)(iii));
 - 4.2.4. The individual(s) who performed the analyses (40 CFR section 122.41(j)(3)(iv));
 - 4.2.5. The analytical techniques or methods used (40 CFR section 122.41(j)(3)(v)); and
 - 4.2.6. The results of such analyses. (40 CFR section 122.41(j)(3)(vi).)
- 4.3. Claims of confidentiality for the following information will be denied (40 CFR section 122.7(b)):
 - 4.3.1. The name and address of any permit applicant or Discharger (40 CFR section 122.7(b)(1)); and

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

5. **Standard Provisions – Reporting**

5.1. Duty to Provide Information

The Discharger shall furnish to the San Diego Water Board, State Water Board, or USEPA within a reasonable time, any information which the San Diego Water Board, State Water Board, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order 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 section 122.41(h); Water Code, sections 13267, 13383.)

5.2. Signatory and Certification Requirements

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

5.2.2. All permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 CFR section 122.22(a)(1).)

5.2.2. All permit applications shall be signed by a general partner or the proprietor, respectively. (40 CFR section 122.22(a)(2).)

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 section 122.22(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 section 122.22(b)(1));
- 5.2.3.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR section 122.22(b)(2)); and
- 5.2.3.3. The written authorization is submitted to the San Diego Water Board and State Water Board. (40 CFR section 122.22(b)(3).)
- 5.2.4. If an authorization under Standard Provisions – Reporting 5.2.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting 5.2.3 above must be submitted to the 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 section 122.22(c).)
- 5.2.5. Any person signing a document under Standard Provisions – Reporting 5.2.2 or 5.2.3 above shall make the following certification:

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 CFR section 122.22(d).)
- 5.2.6. Any person providing the electronic signature for documents described in Standard Provisions – 5.2.1, 5.2.2, or 5.2.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting 5.2, and shall ensure that all relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (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 section 122.41(l)(4).)
- 5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the San Diego Water Board or State Water Board. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR section 122.41(l)(4)(i).)
- 5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order 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 section 122.41(l)(4)(ii).)
- 5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR section 122.41(l)(4)(iii).)

5.4. Compliance Schedules

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

5.5. Twenty-Four Hour Reporting

- 5.5.1. The Discharger shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

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

As of December 21, 2025 or a USEPA-approved alternative date, 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 section 122.41(l)(6)(i).)

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

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

5.5.2.2. Any upset that exceeds any effluent limitation in this Order. (40 CFR section 122.41(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 section 122.41(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 section 122.41(l)(1)):

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

5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR section 122.41(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 section 122.41(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 section 122.41(l)(2).)

5.8. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting 5.3, 5.4, and 5.5 above at the time monitoring

reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting 5.5 above. For noncompliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting 5.5 and the applicable required data in appendix A to 40 CFR part 127. The San Diego Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR section 122.41(l)(7).)

5.9. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the San Diego Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR section 122.41(l)(8).)

5.10. Initial Recipient for Electronic Reporting Data

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

(40 CFR section 122.41(l)(9).)

6. **Standard Provisions – Enforcement**

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

7. **Additional Provisions – Notification Levels**

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

- 7.1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR section 122.42(b)(1)); and
- 7.2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR section 122.42(b)(2).)
- 7.3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR section 122.42(b)(3).)

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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 Padre Dam Municipal Water District (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: 1. core monitoring, 2. regional monitoring, and 3. 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 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 points specified in section 2, Table E-1 and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring points shall not be changed without notification to and the approval of the San Diego Water Board.
- 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 United States Environmental Protection Agency (USEPA) test procedures approved at 40 CFR part 136, *Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the CWA* as amended, or an alternative test procedure (ATP) approved by USEPA, or by the San Diego Water Board when there are no methods specified for a pollutant at 40 CFR part 136.
- 1.4. Data produced and reports submitted pursuant to this Order 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 an ATP approved by USEPA, or by the San Diego Water Board when there are no methods specified for a pollutant at 40 CFR part 136. The laboratory must include quality assurance/quality control data in all data reports required by this Order and submit electronic data as required by the San Diego Water Board. Data generated using field tests is exempt pursuant to California Water Code Section 13176. Additional information can be found on the ELAP website (https://www.waterboards.ca.gov/drinking_water/certlic/labs/index.html).

- 1.5. Records of monitoring information shall include information required under Standard Provision, 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 will 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 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 California Toxics Rule (CTR) shall be conducted in accordance with procedures described in the *Water Quality Control Plan for the San Diego Basin* (Basin Plan), the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), and this MRP.
- 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, or otherwise approved by USEPA and authorized by the San Diego Water Board. If no authorized ML value is below the effluent limitation, then the method must achieve an ML no greater than the lowest ML value provided in Appendix 4 of the SIP or 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

Discharge Point Name	Monitoring Location Name	Type of Monitoring Location	Monitoring Location Description¹
--	INF-001	Influent	A location upstream of plant return flows, where a representative sample of the influent can be obtained.
--	EFF-001A	Effluent	Discharge from chlorine contact basin prior to Pond C or Lake No. 7 Latitude: 32° 53'01.24" Longitude: 116° 59'48.45"
001	EFF-001B	Effluent	Discharge from Santee Lakes to Sycamore Creek Latitude: 32° 50' 45" Longitude: 117° 00' 15"
--	RSW-001	Receiving Water	Sycamore Creek (upstream reference station) Latitude: 32° 50' 52" Longitude: 117° 00' 25"
--	RSW-001a	Receiving Water	Approximately 400 to 1,000 yards downstream from Discharge Point No. 001 to Sycamore Creek
--	RSW-002	Receiving Water	Sycamore Creek, upstream of the confluence with the San Diego River, at exit from Carlton Oaks Golf Course
--	RSW-003	Receiving Water	San Diego River at Carlton Hills Boulevard in Santee (upstream reference station)
--	RSW-004	Receiving Water	Forrester Creek 50 feet upstream of confluence with the San Diego River
--	RSW-005	Receiving Water	San Diego River at Mast Boulevard
--	RSW-006	Receiving Water	San Diego River at the pond just downstream of Old Mission Dam

Notes for Table E-1

1. The North latitude and West longitude information in Table 1 are approximate for administrative purposes.

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 there need for a pretreatment program to control pollutant loads?
- (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 Ray Stoyer Water Recycling Facility (Facility), its treatment processes or operations?

- (4) Is the Facility complying with permit conditions including, but not limited to, biochemical oxygen demand (5-day @ 20 °C) (BOD₅) and total suspended solids (TSS) percent removal limitations?

3.1.1. The Discharger shall monitor the influent at Monitoring Locations INF-001 as follows:

Table E-2. Influent Monitoring at Monitoring Location INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	million gallons per day (MGD)	Recorder/ Totalizer	Continuous	--
BOD ₅	milligram per liter (mg/L)	24-hr composite	3/week	1
TSS	mg/L	24-hr composite	3/week	1
pH	standards units	grab	2/day	1
Total Dissolved Solids (TDS)	mg/L	24-hour composite	1/month	1

Notes for Table E-2

- As required under 40 CFR part 136.

3.2. Effluent Monitoring Requirements

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

Effluent monitoring is necessary to address the following questions:

- 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?
- What is the mass of constituents that are discharged daily, monthly, or annually?
- Is the effluent concentration or mass changing over time?
- Are the Facilities being properly operated and maintained to ensure compliance with the conditions of this Order?

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

Table E-3. Effluent Monitoring at Monitoring Location EFF-001A

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate ¹	MGD	recorder/ totalizer	continuous	2
pH	standard units	recorder	continuous	2
Turbidity	Nephelometri c Turbidity Units (NTU)	recorder	continuous	2
BOD ₅	mg/L	24-hour composite	3/week ^{3,4}	2
TSS	mg/L	24-hour composite	3/week ^{3,4}	2
Total Chlorine Residual	µg/L	grab	1/day ⁴	2
TDS	mg/L	24-hour composite	1/month ⁴	2
Total Hardness (as CaCO ₃)	mg/L	24-hour composite	1/quarter	2
Oil and Grease	mg/L	grab	1/quarter ⁴	2
Color	ADMI Color Units	24-hour composite	1/month	2
Total Organic Carbon	mg/L	24-hour composite	1/quarter	2
Dissolved Oxygen	mg/L	grab	1/week	2
Total Coliform	most probable number per 100 milliliters (MPN/100 mL)	grab	1/day ⁵	2
Fecal Coliform	MPN/100 mL	grab	1/week ^{5,6}	2
Enterococci	colony forming units per 100 milliliters (CFU/100 mL) ⁷	grab	1/week ⁵	2
<i>Escherichia coli</i> (<i>E. coli</i>)	CFU/100 mL ⁷	grab	1/week ⁵	2
Nitrate Nitrogen	mg/L	24-hour composite	1/month ⁴	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Nitrogen, Total (as N)	mg/L	24-hour composite	1/month ⁴	2
Phosphorous, Total (as P)	mg/L	24-hour composite	1/month ⁴	2
Ammonia, un-ionized (as N)	mg/L	24-hour composite	1/month ⁴	2
Percent Sodium	percent	24-hour composite	1/month	2
Bromoform	micrograms per liter (µg/L)	24-hour composite	1/quarter ⁴	2
Chlorodibromomethane (dibromochloromethane)	µg/L	24-hour composite	1/quarter ⁴	2
Chloroform	µg/L	24-hour composite	1/quarter ⁴	2
Dichlorobromomethane	µg/L	grab	1/quarter ⁴	2
Chloride	mg/L	24-hour composite	1/month ⁴	2
Aluminum, Total Recoverable	mg/L	24-hour composite	1/month ⁴	2
Cadmium, Total Recoverable	µg/L	24-hour composite	1/month ⁴	2
Iron, Total Recoverable	mg/L	24-hour composite	1/month ⁴	2
Manganese, Total Recoverable	mg/L	24-hour composite	1/month ⁴	2
Mercury, Total Recoverable	µg/L	24-hour composite	1/month ⁴	2
Selenium, Total Recoverable	µg/L	24-hour composite	1/month ⁴	2
Zinc, Total Recoverable	µg/L	24-hour composite	1/month ⁴	2
Total Trihalomethanes ⁸	µg/L	24-hour composite	1/month ⁴	2
Methyl-tert-butyl-ether (MTBE)	µg/L	grab	1/month ⁴	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chronic Toxicity	Pass/Fail, % effect (Test of Significant Toxicity)	24-hour composite	1/quarter	2,9
Boron	mg/L	24-hour composite	2/year ⁴	2
Fluoride	mg/L	24-hour composite	2/year ⁴	2
Methylene Blue Active Substances (MBAS)	mg/L	24-hour composite	2/year ⁴	2
Sulfate	mg/L	24-hour composite	2/year ⁴	2
Perchlorate	µg/L	24-hour composite	2/year ⁴	2
Antimony, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2
Arsenic, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2
Barium, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2
Beryllium, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2
Chromium (VI), Total Recoverable ¹⁰	µg/L	24-hour composite	2/year ⁴	2
Chromium (III), Total Recoverable ¹⁰	µg/L	24-hour composite	2/year ⁴	2
Copper, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2
Cyanide, Total	µg/L	24-hour composite	2/year ⁴	2
Lead, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2
Nickel, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2
Silver, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2
Thallium, Total Recoverable	µg/L	24-hour composite	2/year ⁴	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
TCDD Equivalents	µg/L	24-hour composite	2/year ⁴	2
Asbestos	million fibers per liter (MFL)	24-hour composite	2/year ⁴	2
Acrolein	µg/L	grab	2/year ⁴	2
Acrylonitrile	µg/L	grab	2/year ⁴	2
Benzene	µg/L	grab	2/year ⁴	2
Carbon Tetrachloride	µg/L	grab	2/year ⁴	2
Chlorobenzene	µg/L	grab	2/year ⁴	2
Chloroethane	µg/L	24-hour composite	2/year ⁴	2
2-Chloroethylvinyl Ether	µg/L	24-hour composite	2/year ⁴	2
1,1-Dichloroethane	µg/L	24-hour composite	2/year ⁴	2
1,2-Dichloroethane	µg/L	grab	2/year ⁴	2
1,1-Dichloroethylene	µg/L	grab	2/year ⁴	2
1,2-Dichloropropane	µg/L	24-hour composite	2/year ⁴	2
1,3-Dichloropropene	µg/L	grab	2/year ⁴	2
Ethylbenzene	µg/L	grab	2/year ⁴	2
Methyl Bromide	µg/L	24-hour composite	2/year ⁴	2
Methyl Chloride (Chloromethane)	µg/L	24-hour composite	2/year ⁴	2
Methylene Chloride (Dichloromethane)	µg/L	grab	2/year ⁴	2
1,1,2,2-Tetrachloroethane	µg/L	grab	2/year ⁴	2
Tetrachloroethylene (Tetrachloroethene)	µg/L	grab	2/year ⁴	2
Toluene	µg/L	grab	2/year ⁴	2
1,2-Trans-Dichloroethylene	µg/L	24-hour composite	2/year ⁴	2
1,1,1-Trichloroethane	µg/L	grab	2/year ⁴	2
1,1,2-Trichloroethane	µg/L	grab	2/year ⁴	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Trichloroethylene (Trichloroethene)	µg/L	grab	2/year ⁴	2
Vinyl Chloride	µg/L	grab	2/year ⁴	2
2-Chlorophenol	µg/L	24-hour composite	2/year ⁴	2
2,4-Dichlorophenol	µg/L	24-hour composite	2/year ⁴	2
2,4-Dimethylphenol	µg/L	24-hour composite	2/year ⁴	2
2-Methyl-4,6-Dinitrophenol	µg/L	24-hour composite	2/year ⁴	2
2,4-Dinitrophenol	µg/L	24-hour composite	2/year ⁴	2
2-Nitrophenol	µg/L	24-hour composite	2/year ⁴	2
4-Nitrophenol	µg/L	24-hour composite	2/year ⁴	2
3-Methyl-4-Chlorophenol	µg/L	24-hour composite	2/year ⁴	2
Pentachlorophenol	µg/L	24-hour composite	2/year ⁴	2
Phenol	µg/L	24-hour composite	2/year ⁴	2
2,4,6-Trichlorophenol	µg/L	24-hour composite	2/year ⁴	2
Acenaphthene	µg/L	24-hour composite	2/year ⁴	2
Acenaphthylene	µg/L	24-hour composite	2/year ⁴	2
Anthracene	µg/L	24-hour composite	2/year ⁴	2
Benzidine	µg/L	24-hour composite	2/year ⁴	2
Benzo(a)Anthracene	µg/L	24-hour composite	2/year ⁴	2
Benzo(a)Pyrene	µg/L	24-hour composite	2/year ⁴	2
Benzo(b)Fluoranthene	µg/L	24-hour composite	2/year ⁴	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Benzo(ghi)Perylene	µg/L	24-hour composite	2/year ⁴	2
Benzo(k)Fluoranthene	µg/L	24-hour composite	2/year ⁴	2
Bis(2-Chloroethoxy)Methane	µg/L	24-hour composite	2/year ⁴	2
Bis(2-Chloroethyl)Ether	µg/L	24-hour composite	2/year ⁴	2
Bis(2-Chloroisopropyl)Ether	µg/L	24-hour composite	2/year ⁴	2
Bis(2-Ethylhexyl)Phthalate	µg/L	24-hour composite	2/year ⁴	2
4-Bromophenyl Phenyl Ether	µg/L	24-hour composite	2/year ⁴	2
Butylbenzyl Phthalate	µg/L	24-hour composite	2/year ⁴	2
2-Chloronaphthalene	µg/L	24-hour composite	2/year ⁴	2
4-Chlorophenyl Phenyl Ether	µg/L	24-hour composite	2/year ⁴	2
Chrysene	µg/L	24-hour composite	2/year ⁴	2
Dibenzo(a,h)Anthracene	µg/L	24-hour composite	2/year ⁴	2
1,2-Dichlorobenzene	µg/L	grab	2/year ⁴	2
1,3-Dichlorobenzene	µg/L	24-hour composite	2/year ⁴	2
1,4-Dichlorobenzene	µg/L	grab	2/year ⁴	2
3,3'-Dichlorobenzidine	µg/L	24-hour composite	2/year ⁴	2
Diethyl Phthalate	µg/L	24-hour composite	2/year ⁴	2
Dimethyl Phthalate	µg/L	24-hour composite	2/year ⁴	2
Di-n-Butyl Phthalate	µg/L	24-hour composite	2/year ⁴	2
2,4-Dinitrotoluene	µg/L	24-hour composite	2/year ⁴	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
2,6-Dinitrotoluene	µg/L	24-hour composite	2/year ⁴	2
Di-n-Octyl Phthalate	µg/L	24-hour composite	2/year ⁴	2
1,2-Diphenylhydrazine	µg/L	24-hour composite	2/year ⁴	2
Fluoranthene	µg/L	24-hour composite	2/year ⁴	2
Fluorene	µg/L	24-hour composite	2/year ⁴	2
Hexachlorobenzene	µg/L	24-hour composite	2/year ⁴	2
Hexachlorobutadiene	µg/L	24-hour composite	2/year ⁴	2
Hexachlorocyclopentadiene	µg/L	24-hour composite	2/year ⁴	2
Hexachloroethane	µg/L	24-hour composite	2/year ⁴	2
Indeno(1,2,3-cd) Pyrene	µg/L	24-hour composite	2/year ⁴	2
Isophorone	µg/L	24-hour composite	2/year ⁴	2
Naphthalene	µg/L	24-hour composite	2/year ⁴	2
Nitrobenzene	µg/L	24-hour composite	2/year ⁴	2
N-Nitrosodimethylamine	µg/L	24-hour composite	2/year ⁴	2
N-Nitrosodi-n-Propylamine	µg/L	24-hour composite	2/year ⁴	2
N-Nitrosodiphenylamine	µg/L	24-hour composite	2/year ⁴	2
Phenanthrene	µg/L	24-hour composite	2/year ⁴	2
Pyrene	µg/L	24-hour composite	2/year ⁴	2
1,2,4-Trichlorobenzene	µg/L	24-hour composite	2/year ⁴	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Aldrin	µg/L	24-hour composite	2/year ⁴	2
alpha-BHC	µg/L	24-hour composite	2/year ⁴	2
beta-BHC	µg/L	24-hour composite	2/year ⁴	2
gamma-BHC	µg/L	24-hour composite	2/year ⁴	2
delta-BHC	µg/L	24-hour composite	2/year ⁴	2
Chlordane	µg/L	24-hour composite	2/year ⁴	2
4,4'-DDT	µg/L	24-hour composite	2/year ⁴	2
4,4'-DDE	µg/L	24-hour composite	2/year ⁴	2
4,4'-DDD	µg/L	24-hour composite	2/year ⁴	2
Dieldrin	µg/L	24-hour composite	2/year ⁴	2
alpha-Endosulfan	µg/L	24-hour composite	2/year ⁴	2
beta-Endosulfan	µg/L	24-hour composite	2/year ⁴	2
Endosulfan Sulfate	µg/L	24-hour composite	2/year ⁴	2
Endrin	µg/L	24-hour composite	2/year ⁴	2
Endrin Aldehyde	µg/L	24-hour composite	2/year ⁴	2
Heptachlor	µg/L	24-hour composite	2/year ⁴	2
Heptachlor Epoxide	µg/L	24-hour composite	2/year ⁴	2
Polychlorinated biphenyls (PCBs) ¹¹	µg/L	24-hour composite	2/year ⁴	2
Toxaphene	µg/L	24-hour composite	2/year ⁴	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Radioactivity, Gross Alpha	picocuries per Liter (pCi/L)	grab	2/year ⁴	2
Radium 226 and 228 (combined)	pCi/L	grab	2/year ⁴	2

Notes for Table E-3

1. Report the total daily effluent flow and the monthly average flow.
2. As required under 40 CFR part 136.
3. The Discharger shall calculate and report the monthly average percent removal for BOD₅ and TSS in accordance with section 7.12 of this Order.
4. The Discharger shall calculate and report the mass emission rate (MER) in accordance with section 7.9 of this Order.
5. To the extent possible, the Discharger shall monitor the effluent for *E. coli*, total coliform, fecal coliform, and enterococci on the same day these parameters are monitored in the receiving water.
6. The Discharger shall ensure, at minimum, five fecal coliform samples are collected and analyzed within a rolling 30-day period to evaluate compliance with the fecal coliform geometric mean effluent limitation.
7. The Discharger may report enterococci and *E. coli* in MPN in lieu of CFU. However, the effluent limitations for these parameters will be the same regardless of the reporting units.
8. Total trihalomethanes equal the sum of the concentrations of chloroform, bromodichloromethane, chlorodibromomethane (dibromochloromethane), and bromoform.
9. As specified in section 7.15 of this Order and section 3.3 of this MRP (Attachment E).
10. The Discharger may, at their option, monitor for total recoverable chromium in lieu of total recoverable chromium (III) and total recoverable chromium (VI).
11. 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.

3.2.2. The Discharger shall monitor the effluent at monitoring location EFF-001B as follows:

Table E-4. Effluent Monitoring at Monitoring Location EFF-001B

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	MGD	Recorder/totalizer	continuous	1
Total Coliform	MPN/100 mL	grab	1/week ²	1
Fecal Coliform	MPN/100 mL	grab	1/week ²	1
Enterococci	CFU/100 mL ³	grab	1/week ²	1
<i>E. coli</i>	CFU/100 mL ³	grab	1/week ²	1
Nitrogen series ⁴	mg/L	24-hr composite	1/month ⁵	1
Phosphorous series ⁶	mg/L	24-hr composite	1/month ⁵	1
TDS	mg/L	24-hr composite	1/month ⁵	1
Chronic Toxicity	Pass/Fail, % effect (Test of Significant Toxicity)	24-hour composite	1/quarter	1,7
Temperature	Degrees Fahrenheit (°F)	grab	1/quarter	1
pH	Standards Units	grab	1/quarter	1
Turbidity	NTU	grab	1/quarter	1
Active Ingredient ⁸	µg/L	grab	1/quarter ⁵	1
Nonylphenol ⁹	µg/L	grab	1/quarter ⁵	1
Hardness (if copper is monitored)	mg/L	grab	1/quarter	1
Dissolved Oxygen	mg/L	grab	1/quarter	1

Notes for Table E-4

1. As required under 40 CFR part 136.
2. If total coliform, fecal coliform, enterococci and/or *E. coli* exceed both the applicable receiving water limitation (as specified in section 5.1.1 of this Order) at Monitoring

Location RSW-001a and the applicable effluent limitation at Monitoring Location EFF-001A (as specified in sections 4.1.1.1.3, 4.1.1.1.4, 4.1.1.1.5, and 4.1.1.1.6 of this Order), the Discharger shall increase the effluent monitoring frequency for the parameter(s) from once a week to daily until the receiving water at Monitoring Location RSW-001a has demonstrated compliance with applicable receiving water limitations at Monitoring Location RSW-001a for a minimum of one week. Alternatively, the Discharger may demonstrate to the San Diego Water Board that Facility's effluent is not a contributing source of the downstream receiving water exceedance(s).

3. The Discharger may report enterococci and *E. coli* in MPN in lieu of CFU.
4. Includes: total nitrogen (as N), total organic nitrogen (as N), total nitrate (as N), total nitrite (as N), and ammonia, un-ionized (as N)
5. The Discharger shall calculate and report the MER in accordance with section 7.9 of this Order.
6. Includes: total phosphorus (as P) and total orthophosphate (as P).
7. As specified in section 7.15 of this Order and section 3.3 of this MRP (Attachment E).
8. 2,4-D, acrolein, dissolved copper, diquat, endothall, flumioxazin, fluridone, glyphosate, imazamox, imazapyr, penoxsulam, and triclopyr.
9. Monitoring is required only when a surfactant is used.

3.3. Whole Effluent Toxicity Testing Requirements

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 1) aggregate toxic effects of all chemicals in the effluent including additive, synergistic, or antagonistic toxicity effects; 2) the toxicity effects of unmeasured chemicals in the effluent; and 3) variability in bioavailability of the chemicals in the effluent.

Monitoring to assess the overall toxicity of the effluent is required to answer the following questions:

- (1) Does the effluent comply with effluent limitations for toxicity thereby ensuring that water quality standards are achieved in the receiving water?
- (2) If the effluent does not comply with effluent limitations for toxicity, are unmeasured pollutants causing risk to aquatic life?
- (3) If the effluent does not comply with effluent limitations for toxicity, are pollutants in combinations causing risk to aquatic life?

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

The Discharger shall conduct chronic toxicity monitoring once per quarter for Monitoring Locations EFF-001A and EFF-001B. The In-stream Waste Concentration (IWC) for this discharge is 100 percent effluent.

3.3.2. Most Sensitive Species

The test species used for chronic toxicity testing shall be the most sensitive species.

The San Diego Water Board may allow the temporary use of the next appropriate species as the most sensitive species when the Discharger submits documentation and the San Diego Water Board determines that the Discharger has encountered unresolvable test interference or cannot secure a reliable supply of test organisms. The “next appropriate species” is the species exhibiting the highest percent effect at the IWC tested in the last species sensitivity screening other than the most sensitive species.

3.3.3. Routine Chronic Toxicity Monitoring Frequency

For routine chronic toxicity monitoring, the Discharger shall conduct at least one chronic toxicity test using the most sensitive species each calendar quarter during which there is expected to be at least 15 days of discharge. For the purposes of chronic toxicity, the calendar quarter starts on January 1, April 1, July 1, and October 1 of each year, and the calendar month starts from the initiation of routine monitoring. The Discharger shall ensure there is sufficient time to perform the Median Monthly Effluent Limitation (MMEL) compliance testing within the defined calendar month and calendar quarter, should the initial toxicity test result in a “Fail”. If the Discharger is unable to sample within the calendar month or calendar quarter due to the availability of test organisms, contract laboratory scheduling issues, or some other reason outside of the Discharger’s control, the Discharger shall immediately notify the San Diego Water Board in writing. If the San Diego Water Board agrees that the failure to sample within the calendar month or calendar quarter was unavoidable, the San Diego Water Board will specify an alternative sampling window for the monitoring period.

The Discharger may request to reduce the monitoring frequency from once per calendar quarter to once per six months if all of the following conditions are met: 1) the toxicity requirements in this Order have been followed; and 2) there were no violations of the MMEL or Maximum Daily Effluent Limitation (MDEL) for chronic toxicity within the last five years. If a chronic toxicity test results in a “Fail” at the IWC during reduced monitoring, the frequency is automatically increased back to once per quarter for a period of five years.

3.3.4. Median Monthly Effluent Limitation Compliance Monitoring

If a chronic toxicity test conducted during routine monitoring results in a “Fail” at the IWC, the Discharger shall conduct a maximum of two chronic toxicity MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine chronic toxicity test was initiated that resulted in a “Fail” at the IWC. If the first chronic toxicity MMEL compliance test results in a “Fail” at the IWC, then the second chronic toxicity MMEL compliance test is not required.

3.3.5. 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. 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.

3.3.6. Chronic Freshwater Species and Test Methods

The Discharger shall conduct chronic toxicity tests on effluent samples, at the discharge IWC for the discharge, in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136)*. Approved tests methods for chronic toxicity are listed in Table E-5 below. In no case shall these species be substituted with another test species unless written authorization from the San Diego Water Board is received.

Table E-5. Approved Tests for Chronic Toxicity

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
Fathead Minnow, <i>Pimephales promelas</i> , Larval Survival and Growth Test Method 1000.0.	80% or greater survival in controls; average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg (Table 1 of the test method).
Daphnid, <i>Ceriodaphnia dubia</i> , Survival and Reproduction Test Method 1002.0.	80% or greater survival of all control organisms and an average of 15 or more young per surviving female in the control solutions. 60% of surviving control females must produce three broods (Table 3 of the test method).
Green Alga, <i>Selenastrum capricornutum</i> , Growth Toxicity Test Method 1003.0.	Mean cell density of at least 1 X 10 ⁶ cells/mL in the controls; and variability (CV%) among control replicates less than or equal to 20% (Table 3 of the test method).

3.3.7. Species Sensitivity Screening

The Discharger shall conduct four sets of species sensitivity screening during year four of the permit term, with one set of screenings conducted in each quarter of the year. The San Diego Water Board may waive the requirement to conduct a species sensitivity screening if the Discharger provides written notice that discharges from the Facility will be terminated by the end of the permit term. If required, for each set of species sensitivity screenings, the Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using the fish, invertebrate, and alga species referenced in Table E-5. This sample shall also be analyzed for the parameter(s) required on a monthly and quarterly frequency in Tables E-3 and E-4, during that given month. As allowed under the test method for the *Ceriodaphnia dubia* and the *Pimephales promelas*, a second and third sample shall be collected for use as

test solution renewal water as the seven-day toxicity test progresses. Samples for the species sensitivity screening shall be analyzed using the Test of Significant Toxicity (TST) approach.

After the fourth set of species sensitivity screening, the most sensitive species for routine chronic toxicity monitoring will be determined using the following hierarchal order:

- (1) The species exhibiting the most 'Fails'.
- (2) If all species result in a "Pass", the species exhibiting the highest percent effect.
- (3) If all species result in a "Pass" and there is no difference in percent effect, the species will be determined by San Diego Water Board.

During the calendar quarter, toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the MDEL and MMEL for chronic toxicity.

3.3.8. Quality Assurance (QA) and Additional Requirements

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

- 3.3.8.1. 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 (H_0) for the TST statistical approach is: Mean discharge IWC response $\leq 0.75 \times$ Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". 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: $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$.
- 3.3.8.1.1. The MDEL for chronic toxicity is exceeded and a violation will be flagged when a toxicity test during routine monitoring results in "Fail" for the sub-lethal endpoint in accordance with the TST approach and the "Percent Effect" is greater than or equal to 50 percent for the survival endpoint or the sub-lethal endpoint if there is no survival endpoint.
- 3.3.8.1.2. The MMEL for chronic toxicity is exceeded and a violation will be flagged when two or more toxicity tests in a calendar month result in a "Fail" in accordance with the TST approach for any endpoint.

- 3.3.8.1.3. 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 Freshwater Organisms* (U.S. EPA 2002, EPA-821-R-02-013) (see Table E-8, below), then the Discharger must resample and re-test within 14 days.
- 3.3.8.1.4. Dilution water and control water, including brine controls, shall be laboratory water prepared and used 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.
- 3.3.8.1.5. Monthly reference toxicant testing is sufficient if in accordance with *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (U.S. EPA 2002, EPA-821-R-02-013). All reference toxicant test results should be reviewed and reported using the effects concentration at 25 percent (EC25).
- 3.3.8.1.6. The Discharger shall perform toxicity tests on final effluent samples. Chlorine in the final effluent sample may be removed prior to conducting toxicity tests in order to simulate the dichlorination process at the Facility. Ammonia, however, 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).

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

The Discharger shall prepare and submit 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).

3.3.10. TRE Trigger

A Toxicity Reduction Evaluation (TRE) is required when the Discharger has any combination of two or more MDEL or MMEL violations within a single calendar month or within two successive calendar months. In addition, if other information indicated toxicity (e.g., results of additional monitoring, fish kills, intermittent recurring toxicity,

etc.), then the San Diego Water Board may require a TRE. Routine chronic toxicity monitoring shall resume during a TRE.

3.3.11. TRE Process

During the TRE Process, minimum effluent monitoring shall resume and TST results (“Pass” or “Fail” and percent effect) for chronic toxicity tests shall be used to determine effluent compliance for the chronic toxicity MDEL and MMEL.

3.3.11.1. 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.

3.3.11.2. 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); and *Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I* (EPA/600/6-91/005, 1991). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

3.3.11.3. 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.

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

3.3.11.5. 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 the final TRE/TIE report. The final TRE/TIE report shall be submitted to the San Diego Water Board within 30 days of report completion.

- 3.3.11.6. 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.
- 3.3.11.7. The San Diego Water Board may consider the results of any TRE/TIE studies in an enforcement action.

3.3.12. 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 in section 10, Report Preparation¹, and shall include:

- 3.3.12.1. 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.
- 3.3.12.2. Summary water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, hardness, salinity, chlorine, ammonia).
- 3.3.12.3. 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.
- 3.3.12.4. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.
- 3.3.12.5. Tabular data and 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.
- 3.3.12.6. Any additional quality assurance/quality control (QA/QC) documentation or any additional chronic toxicity-related information, upon written request from the San Diego Water Board.

¹ Section 10 of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, October 2002, EPA-821-R-02-013, https://www.epa.gov/sites/production/files/2015-08/documents/short-term-chronic-freshwater-wet-manual_2002.pdf

3.4. Land Discharge Monitoring Requirements – Not Applicable

3.5. Recycling Monitoring Requirements – Not Applicable

4. Receiving Water Monitoring Requirements

The receiving water monitoring requirements set forth below are designed to measure the effects of the Facility discharge on the receiving waters. 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 discharge to pollution in the receiving water?
- (4) What are the effects of the discharge on the receiving waters?

This program is intended to document conditions upstream and downstream of the discharge. 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 and rationale for any reductions in or other changes to these monitoring requirements that it considers to be appropriate to the San Diego Water Board for approval.

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. 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. Sycamore Creek at Monitoring Locations RSW-001 and RSW-001a

The Discharger shall monitor Sycamore Creek at Monitoring Locations RSW-001 and RSW-001a as specified below.

Table E-6. Receiving Water Monitoring Requirements (RSW-001 and RSW-001a)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	cfs	cross-sect. velocity/area	1/month ¹	--
Dissolved Oxygen	mg/L	grab	1/month ¹	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	Standard units	grab	1/month ¹	2
Fecal Coliform	MPN/100 mL	grab	1/month ^{1,3}	2
Total Coliform	MPN/100 mL	grab	1/month ^{1,3}	2
Enterococci	CFU/100 mL ⁴	grab	1/month ^{1,3}	2
<i>E. coli</i>	CFU/100 mL ⁴	grab	1/month ^{1,3}	2
TDS	mg/L	grab	1/month ¹	2
Turbidity	NTU	grab	1/month ¹	2
Methyl Tert-Butyl Ether	µg/L	grab	1/month ¹	2
Nitrogen Series ⁵	mg/L	grab	1/month ¹	2
Phosphorous Series ⁶	mg/L	grab	1/month ¹	2
Sediment Phosphorous Series ⁷	milligrams per kilogram (mg/kg)	grab	1/quarter ¹	2
Temperature	°F	grab	1/month ¹	2
Chloride	mg/L	grab	1/quarter ¹	2
Chlorophyll-a	mg/cubic meter	grab	1/quarter ¹	2
Iron, Total Recoverable	mg/L	grab	1/quarter ¹	2
Manganese, Total Recoverable	mg/L	grab	1/quarter ¹	2
Total Hardness (as CaCO ₃)	mg/L	grab	1/quarter ¹	2
Total Organic Carbon	mg/L	grab	1/year ¹	2
Boron	mg/L	grab	1/year ¹	2
Methylene Blue Active Substances	mg/L	grab	1/year ¹	2
Sulfate	mg/L	grab	1/year ¹	2
Antimony, Total Recoverable	µg/L	grab	1/year ¹	2
Arsenic, Total Recoverable	µg/L	grab	1/year ¹	2
Beryllium, Total Recoverable	µg/L	grab	1/year ¹	2
Cadmium, Total Recoverable	µg/L	grab	1/year ¹	2
Chromium (VI), Total Recoverable ⁸	µg/L	grab	1/year ¹	2
Chromium (III), Total Recoverable ⁸	µg/L	grab	1/year ¹	2
Copper, Total Recoverable	µg/L	grab	1/year ¹	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Lead, Total Recoverable	µg/L	grab	1/year ¹	2
Mercury, Total Recoverable	µg/L	grab	1/year ¹	2
Nickel, Total Recoverable	µg/L	grab	1/year ¹	2
Selenium, Total Recoverable	µg/L	grab	1/year ¹	2
Silver, Total Recoverable	µg/L	grab	1/year ¹	2
Cyanide, Total	µg/L	grab	1/year ¹	2
Thallium, Total Recoverable	µg/L	grab	1/year ¹	2
Zinc, Total Recoverable	µg/L	grab	1/year ¹	2
TCDD Equivalents	µg/L	grab	1/year ¹	2
Asbestos	MFL	grab	1/year ¹	2
Acrolein	µg/L	grab	1/year ¹	2
Acrylonitrile	µg/L	grab	1/year ¹	2
Benzene	µg/L	grab	1/year ¹	2
Carbon Tetrachloride	µg/L	grab	1/year ¹	2
Chlorobenzene	µg/L	grab	1/year ¹	2
Chlorodibromomethane (dibromochloromethane)	µg/L	grab	1/year ¹	2
Chloroethane	µg/L	grab	1/year ¹	2
2-Chloroethylvinyl Ether	µg/L	grab	1/year ¹	2
Chloroform	µg/L	grab	1/year ¹	2
Dichlorobromomethane	µg/L	grab	1/year ¹	2
1,1-Dichloroethane	µg/L	grab	1/year ¹	2
1,2-Dichloroethane	µg/L	grab	1/year ¹	2
1,1-Dichloroethylene	µg/L	grab	1/year ¹	2
1,2-Dichloropropane	µg/L	grab	1/year ¹	2
1,3-Dichloropropylene	µg/L	grab	1/year ¹	2
Ethylbenzene	µg/L	grab	1/year ¹	2
Methyl Bromide	µg/L	grab	1/year ¹	2
Methyl Chloride (Chloromethane)	µg/L	grab	1/year ¹	2
Methylene Chloride (Dichloromethane)	µg/L	grab	1/year ¹	2
1,1,2,2-Tetrachloroethane	µg/L	grab	1/year ¹	2
Tetrachloroethylene (Tetrachloroethene)	µg/L	grab	1/year ¹	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Toluene	µg/L	grab	1/year ¹	2
1,2-Trans-Dichloroethylene	µg/L	grab	1/year ¹	2
1,1,1-Trichloroethane	µg/L	grab	1/year ¹	2
1,1,2-Trichloroethane	µg/L	grab	1/year ¹	2
Trichloroethylene	µg/L	grab	1/year ¹	2
Vinyl Chloride	µg/L	grab	1/year ¹	2
2-Chlorophenol	µg/L	grab	1/year ¹	2
2,4-Dichlorophenol	µg/L	grab	1/year ¹	2
2,4-Dimethylphenol	µg/L	grab	1/year ¹	2
2-Methyl-4,6-Dinitrophenol	µg/L	grab	1/year ¹	2
2,4-Dinitrophenol	µg/L	grab	1/year ¹	2
2-Nitrophenol	µg/L	grab	1/year ¹	2
4-Nitrophenol	µg/L	grab	1/year ¹	2
3-Methyl-4-Chlorophenol	µg/L	grab	1/year ¹	2
Pentachlorophenol	µg/L	grab	1/year ¹	2
Phenol	µg/L	grab	1/year ¹	2
2,4,6-Trichlorophenol	µg/L	grab	1/year ¹	2
Acenaphthene	µg/L	grab	1/year ¹	2
Acenaphthylene	µg/L	grab	1/year ¹	2
Anthracene	µg/L	grab	1/year ¹	2
Benzidine	µg/L	grab	1/year ¹	2
Benzo(a)Anthracene	µg/L	grab	1/year ¹	2
Benzo(a)Pyrene	µg/L	grab	1/year ¹	2
Benzo(b)Fluoranthene	µg/L	grab	1/year ¹	2
Benzo(ghi)Perylene	µg/L	grab	1/year ¹	2
Benzo(k)Fluoranthene	µg/L	grab	1/year ¹	2
Bis(2-Chloroethoxy)Methane	µg/L	grab	1/year ¹	2
Bis(2-Chloroethyl)Ether	µg/L	grab	1/year ¹	2
Bis(2-Chloroisopropyl)Ether	µg/L	grab	1/year ¹	2
Bis(2-Ethylhexyl)Phthalate	µg/L	grab	1/year ¹	2
4-Bromophenyl Phenyl Ether	µg/L	grab	1/year ¹	2
Butylbenzyl Phthalate	µg/L	grab	1/year ¹	2
2-Chloronaphthalene	µg/L	grab	1/year ¹	2
4-Chlorophenyl Phenyl Ether	µg/L	grab	1/year ¹	2
Chrysene	µg/L	grab	1/year ¹	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Dibenzo(a,h)Anthracene	µg/L	grab	1/year ¹	2
1,2 Dichlorobenzene	µg/L	grab	1/year ¹	2
1,3 Dichlorobenzene	µg/L	grab	1/year ¹	2
1,4 Dichlorobenzene	µg/L	grab	1/year ¹	2
3,3'-Dichlorobenzidine	µg/L	grab	1/year ¹	2
Diethyl Phthalate	µg/L	grab	1/year ¹	2
Dimethyl Phthalate	µg/L	grab	1/year ¹	2
Di-n-Butyl Phthalate	µg/L	grab	1/year ¹	2
2,4-Dinitrotoluene	µg/L	grab	1/year ¹	2
2,6-Dinitrotoluene	µg/L	grab	1/year ¹	2
Di-n-Octyl Phthalate	µg/L	grab	1/year ¹	2
1,2-Diphenylhydrazine	µg/L	grab	1/year ¹	2
Fluoranthene	µg/L	grab	1/year ¹	2
Fluorene	µg/L	grab	1/year ¹	2
Hexachlorobenzene	µg/L	grab	1/year ¹	2
Hexachlorobutadiene	µg/L	grab	1/year ¹	2
Hexachlorocyclopentadiene	µg/L	grab	1/year ¹	2
Hexachloroethane	µg/L	grab	1/year ¹	2
Indeno(1,2,3-cd) Pyrene	µg/L	grab	1/year ¹	2
Isophorone	µg/L	grab	1/year ¹	2
Naphthalene	µg/L	grab	1/year ¹	2
Nitrobenzene	µg/L	grab	1/year ¹	2
N-Nitrosodimethylamine	µg/L	grab	1/year ¹	2
N-Nitrosodi-n-Propylamine	µg/L	grab	1/year ¹	2
N-Nitrosodiphenylamine	µg/L	grab	1/year ¹	2
Phenanthrene	µg/L	grab	1/year ¹	2
Pyrene	µg/L	grab	1/year ¹	2
1,2,4-Trichlorobenzene	µg/L	grab	1/year ¹	2
Aldrin	µg/L	grab	1/year ¹	2
alpha-BHC	µg/L	grab	1/year ¹	2
beta-BHC	µg/L	grab	1/year ¹	2
gamma-BHC	µg/L	grab	1/year ¹	2
delta-BHC	µg/L	grab	1/year ¹	2
Chlordane	µg/L	grab	1/year ¹	2
4,4'-DDT	µg/L	grab	1/year ¹	2

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
4,4'-DDE	µg/L	grab	1/year ¹	2
4,4'-DDD	µg/L	grab	1/year ¹	2
Dieldrin	µg/L	grab	1/year ¹	2
alpha-Endosulfan	µg/L	grab	1/year ¹	2
beta-Endosulfan	µg/L	grab	1/year ¹	2
Endosulfan Sulfate	µg/L	grab	1/year ¹	2
Endrin	µg/L	grab	1/year ¹	2
Endrin Aldehyde	µg/L	grab	1/year ¹	2
Heptachlor	µg/L	grab	1/year ¹	2
Heptachlor Epoxide	µg/L	grab	1/year ¹	2
PCBs ⁹	µg/L	grab	1/year ¹	2
Toxaphene	µg/L	grab	1/year ¹	2

Notes for Table E-6:

1. If no discharge occurred from Discharge Point No. 001 as monitored at Monitoring Location EFF-001B between the last sampling event for this parameter and the end of the monitoring period for this parameter, the Discharger is not required to monitor for this parameter during that monitoring period
2. Consistent with the requirements of 40 CFR part 136.
3. If total coliform, fecal coliform, enterococci and/or *E. coli* exceed both the applicable receiving water limitation (as specified in section 5.1.1 of this Order) at Monitoring Location RSW-001a and the applicable effluent limitation at Monitoring Location EFF-001A (as specified in sections 4.1.1.1.3, 4.1.1.1.4, 4.1.1.1.5, and 4.1.1.1.6 of this Order), the Discharger shall increase the receiving water monitoring frequency at Monitoring Locations RSW-001 and RSW-001a for the parameter(s) to three times per week until the receiving water has demonstrated compliance with applicable receiving water limitations at Monitoring Location RSW-001a for a minimum of one week. Alternatively, the Discharger may demonstrate to the San Diego Water Board that the Facility's effluent is not a contributing source of the downstream receiving water exceedance(s).
4. The Discharger may report enterococci and *E. coli* in MPN in lieu of CFU. However, the receiving water limitations for these parameters will be the same regardless of the reporting units.
5. Includes: total nitrogen (as N), total organic nitrogen (as N), total nitrate (as N), total nitrite (as N), and ammonia, un-ionized (as N)
6. Includes: total phosphorus (as P) and dissolved orthophosphate (as P).
7. Includes: total phosphorus (as P) and total orthophosphate (as P).

8. The Discharger may, at their option, monitor for total recoverable chromium in lieu of total recoverable chromium (III) or total recoverable chromium (VI).
9. 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.

4.2. Receiving Water Monitoring at Monitoring Locations RSW-002 through RSW-006

The Discharger shall monitor the San Diego River at Monitoring Locations RSW-002 through RSW-006 as specified below.

Table E-7. Receiving Water Monitoring Requirements (RSW-002 through RSW-006)

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow Rate	cfs	cross-sect. velocity/area	1/month ¹	--
Dissolved Oxygen ²	mg/L	grab	1/month ¹	3
pH	Standard units	grab	1/month ¹	3
Fecal Coliform	MPN/100 mL	grab	1/month ¹	3
Total Coliform	MPN/100 mL	grab	1/month ¹	3
Enterococci	CFU/100 mL ⁴	grab	1/month ¹	3
<i>E. Coli</i>	CFU/100 mL ⁴	grab	1/month ¹	3
Total Dissolved Solids	mg/L	grab	1/month ¹	3
Turbidity	NTU	grab	1/month ¹	3
Nitrogen Series ⁵	mg/L	grab	1/month ¹	3
Phosphorous Series ⁶	mg/L	grab	1/month ¹	3
Temperature	°F	grab	1/month ¹	3
Chlorophyll-a	mg/cubic meter	grab	1/quarter ¹	3
Sediment Phosphorous Series ⁷	mg/kg	grab	1/quarter ¹	3

Notes for Table E-7:

1. If no discharge occurred from Discharge Point No. 001 as monitored at Monitoring Location EFF-001B between the last sampling event for this parameter and the end of the monitoring period for this parameter, the Discharger is not required to monitor for this parameter during that monitoring period.

2. If only one measurement is collected for dissolved oxygen, it shall be determined at the earliest time possible. For each measurement reported, the Discharger shall also report the percent saturation (calculated based on temperature).
3. Consistent with the requirements of 40 CFR part 136.
4. The Discharger may report enterococci and *E. coli* in MPN in lieu of CFU. However, the receiving water limitations for these parameters will be the same regardless of the reporting units.
5. Includes: total nitrogen (as N), total organic nitrogen (as N), total nitrate (as N), total nitrite (as N), and ammonia, un-ionized (as N)
6. Includes: total phosphorus (as P) and dissolved orthophosphate (as P).
7. Includes: total phosphorus (as P) and total orthophosphate (as P).

4.3. Monitoring Surveys

4.3.1. Monitoring surveys conducted to meet receiving water monitoring requirements of this MRP (sections 4.1 and 4.2 of this MRP) shall include, as a minimum, the following information:

- 4.3.1.1. A description of climatic and receiving water characteristics at the time of sampling [e.g. observations of wind (direction and speed); weather (e.g. cloudy, sunny, rainy, etc.; observations of water color or discoloration (percent algal cover at surface and bottom); oil and grease; turbidity; odor, and materials of sewage origin in the water or on the river banks; time of sampling; air temperature (°F); water temperature (°F); etc.].
- 4.3.1.2. A description of sampling stations including a description of characteristics unique to each station [e.g. GPS coordinates for station location, photo documentation; sediment characteristics, rocks, river flow (contiguous or terminated), and estuary mouth conditions (i.e., open or closed due to sand deposition), etc.]
- 4.3.1.3. An annual in-depth discussion of the survey results. The discussion shall compare data with the reference station(s) with data from the stations located in the area of the discharge. All tabulations and computations shall be explained.

4.3.2. Whenever possible, samples shall be collected from the Monitoring Locations RSW-001, RSW-001A, and RSW -002 through RSW-006 on the same days samples are collected at Monitoring Location EFF-001B for the same constituents. Sample methods, preservation, and analyses, when not specified, shall be approved by the San Diego Water Board.

4.4. Biological Monitoring in Sycamore Creek

4.4.1. Stream Bioassessments. The Discharger shall conduct benthic stream bioassessments in Sycamore Creek at Monitoring Locations RSW-001a and RSW-001 in May and October of each year. The sampling locations shall be within ½ mile upstream or downstream of RSW-001a and RSW-001. In lieu of conducting stream bioassessments at RSW-001a and RSW-001 in October each year, the Discharger may conduct bioassessments at an alternative site determined by the Stormwater

Monitoring Coalition Sampling Plan for the San Diego River Watershed and Assessment Program.

The sampling of benthic macroinvertebrates and algae must be conducted in accordance with the latest State of California Surface Water Ambient Monitoring Program (SWAMP) Standard Operating Procedures (SOPs) for Wadeable Streams (SWAMP; Ode et al. 2016b)². Sampling shall also conduct, concurrently with benthic organism collection, the “Full” suite of physical habitat characterization measurements as specified in the SOP.

Field sampling for bioassessment must be conducted by properly trained personnel and in adherence to the latest State of California SOPs in an unbiased manner representative of stream reach condition. Field sampling must be consistent with the SWAMP Quality Assurance Program Plan (SWAMP QAPrP) guidelines and requirements or must have a project-specific Quality Assurance Project Plan (QAPP) that meets these minimum guidelines and requirements, such as the *Southern California Regional Watershed Monitoring Program Bioassessment Quality Assurance Project Plan*, 2009.

Laboratory analysis of benthic macroinvertebrates for taxonomic identifications must be conducted at a Southwest Association of Freshwater Invertebrate Taxonomists (SAFIT) level of II or IIa level (midges to subfamily) in accordance with the most recent *State of California Standard Operating Procedures for Laboratory Processing and Identification of Benthic Macroinvertebrates in California* (Woodward et al. 2012)³. Laboratory identification and quantification of specimens in the benthic stream algal communities sampled for IBI calculations must follow the latest SWAMP *Standard Operating Procedures for Laboratory Processing, Identification, and Enumeration of Stream Algae* (Stancheva et al. 2015)⁴, which prescribes methods for separate analysis of 1) diatoms and 2) soft algae (including cyanobacteria). Though not developed at this time, future laboratory identification using genetic methods may be used if consistent with laboratory results and conducted using methods approved by the State of California SWAMP and the San Diego Water Board Executive Officer.

² Ode, P.R., A.E., Fetscher, and L.B. Busse. 2016. *Standard Operating Procedures (SOP) for the Collection of Field Data for Bioassessments of California Wadeable Streams: Benthic Macroinvertebrates, Algae, and Physical Habitat*. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) SOP-SB-2016-0001.

³ Woodard, M.E., J. Slusark, and P.R. Ode. 2012. *Standard Operating Procedures for Laboratory Processing and Identification of Benthic Macroinvertebrates in California*. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) Bioassessment SOP 003.

⁴ Stancheva, R., Busse, L., Kociolek, J. P., and Sheath, R. G., 2015. *Standard Operating Procedures for Laboratory Processing, Identification, and Enumeration of Stream Algae*. California State Water Resources Control Board Surface Water Ambient Monitoring Program (SWAMP) SOP-2015-0003.

Benthic macroinvertebrate data collected and identified to SAFIT Level II or IIa must be used for calculating California Stream Condition Index scores on a per sample basis (one reach, one sampling event). Scores are calculated using the most recent SWAMP SOP (current version: SWAMP-SOP-2020-0001)⁵.

Benthic Algal Stream Condition Index (ASCI) scores (Theroux et al. 2020)⁶ must be calculated using the most recent SWAMP SOP (current version: SOP-2020-0001). An alternate genetic-based algal stream condition index may be used if conducted using methods approved by the San Diego Water Board Executive Officer.

Benthic macroinvertebrate, algae, and physical habitat data shall be submitted to the California Environmental Data Exchange Network (CEDEN) or an equivalent database that is linked to CEDEN within one (1) year of sample collection.

4.4.2. Fish Tissue Monitoring. The Discharger shall monitor fish tissue from any of the seven Santee Lakes once per year, and at Monitoring Location RSW-001a twice per year. Tissue of fish shall be collected and analyzed according to the latest criteria of Toxic Substances Monitoring Program. Sampling at Monitoring Location RSW-001a must take place at the same time as benthic macroinvertebrate analysis. Fish tissue monitoring results shall be submitted to the California Environmental Data Exchange Network (CEDEN) or an equivalent database that is linked to CEDEN within one (1) year of sample collection.

5. Regional Watershed Monitoring

The Discharger shall participate in the San Diego Water Board coordination of other monitoring in the San Diego River Watershed, such as monitoring conducted by municipal separate storm water system (MS4) dischargers and monitoring conducted as part of the Surface Water Ambient Monitoring Program (SWAMP). The Discharger shall also participate and coordinate with state and local agencies and other dischargers within the San Diego Region in the development and implementation of a regional watershed monitoring program for the San Diego River Watershed as directed by the San Diego Water Board. The intent of a regional watershed monitoring program is to maximize efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled scientific resources of the region. During a coordinated watershed sampling effort, the Discharger's sampling and analytical effort may be reallocated to provide a regional assessment of the condition of the watershed. In that event, the San Diego Water Board shall notify the Discharger in writing that the requirement to perform the receiving water sampling and analytical effort defined in section 4 of this MRP is suspended for the duration of the reallocation.

⁵ Boyle, T., R. D. Mazor, A. C. Rehn, S. Theroux, M. Beck, M. Sigala, C. Yang, P.R. Ode. 2020. Instructions for calculating bioassessment indices and other tools for evaluating wadeable streams in California: The California Stream Condition Index (CSCI), Algal Stream Condition Index (ASCI) and Index of Physical Integrity (IPI). SWAMP-SOP-2020- 0001.

⁶ Theroux, S., R.D. Mazor, M.W. Beck, P.R. Ode, E.D. Stein, and M. Sutula. 2020. *Predictive biological indices for algae populations in diverse stream environments, Ecological Indicators.*

6. Special Studies Requirements

6.1. Downstream Bacteria Evaluation and Action Plan

If effluent monitoring at Monitoring Location EFF-001A and downstream monitoring at Monitoring Location RSW-001a (as defined in the MRP) indicates an exceedance of the effluent limitation and receiving water limitation for *E. coli*, total coliform, fecal coliform, and/or enterococci specified in sections 4.1.1.1.3, 4.1.1.1.4, 4.1.1.1.5, and 5.1.1 of this Order, the Discharger shall conduct accelerated receiving water monitoring as specified in section 4.1 of this MRP for the specific bacterial parameter(s) exceeded. If effluent data at Monitoring Location EFF-001A and receiving water data at Monitoring Locations RSW-001 and RSW-001a indicate the Discharger is causing or contributing to the downstream exceedance of receiving water limitations for *E. coli*, enterococci, total coliform, and/or fecal coliform at Monitoring Location RSW-001a, the Discharger shall develop an Action Plan to minimize the discharge of *E. coli*, enterococci, fecal coliform, and/or fecal coliform to comply with receiving water limitations. The Action Plan shall detail the causes of the exceedances and operational changes to minimize the impact of these causes. An Action Plan shall be implemented and submitted to the San Diego Water Board within six months of the first determination that the Facility is causing or contributing to downstream exceedances of receiving water limitations for bacterial characteristics at Monitoring Location RSW-001a.

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](https://www.waterboards.ca.gov/water_issues/programs/ciwqs/) (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 4. The Discharger shall submit SMRs including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant

more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.

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.
Monthly	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling.
Quarterly	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

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	August 1 February 1
Annually	January 1 following (or on) the permit effective date.	January 1 through December 31	March 1

7.2.4. Reporting Protocols. The Discharger shall report with each sample result the applicable reported Minimum Level (reported ML, also known as the Reporting Level, or RL) and the current Method Detection Limit (MDL), as 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 (\pm 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 and/or exceedances of performance goals; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7.2.7.3. The Discharger shall add all violations of this Order in 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 Self-Monitoring Reports (eSMR) module eSMR 2.5 or any upgraded version. Electronic DMRs submittal shall be in addition to eSMR submittal. Information about electronic DMRs submittal is available at the DMR website

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

7.4. Other Reports

The following reports are required under page 1 of the Order, Special Provisions (sections 6.1 and 6.3 of this Order), sections 1, 3, 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 1 of the Order	No later than 180 days before the Order expiration date ¹
Performance Goal Exceedance Investigation Work Plan	Section 4.1.3	30 days after the third successive exceedance of a performance goal
Performance Goal Exceedance Report	Section 4.1.3	As specified in the Performance Goal Exceedance Investigation Work Plan
Monthly Summary of Spills	Section 6.3.2.2.4 of the Order	Submit with monthly SMR.
Watercourse Monitoring and Management Plan (WMMP)	Section 6.3.2.3 of the Order	Within 120 days of the effective date of the Order
Data Collection Plan for WMMP	Section 6.3.2.4 of the Order	Within 120 days of the effective date of the Order
Aquatic Pesticides Application Plan	Section 6.3.3.1.4 of this Order	90 days before expected day of pesticide discharge
Pollutant Minimization Program	Section 6.3.3.2.1 of the Order	As specified in section 6.3.3.2.1 of the Order
Compliance Schedule Written Statements	Section 6.3.7, Table 6 of the Order	Due within 10 days of completing each compliance schedule task
DMR-QA Study	Section 1.7 of this MRP	Annually no later than December 31 ²
Initial Investigation TRE Work Plan	Section 3.3.8 of this MRP	Within 90 days of the effective date of the Order
Toxicity Reduction and Evaluation Workplan and Report	Section 3.3.10.1 of this MRP	As specified is sections section 3.3.10.1 of this MRP
Downstream Bacteria Evaluation and Action Plan	Section 6.1 of this MRP	As specified in section 6.1 of this MRP

Notes for Table E-8

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 California. 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 000000053
Discharger	Padre Dam Municipal Water District
Facility and Facility Address	Ray Stoyer Water Recycling Facility 12001 North Fanita Parkway Santee, CA 92071 San Diego County
Facility Contact, Title and Phone	Robert Northcote, Plant Manager, (619) 258-4697
Authorized Person to Sign and Submit Reports	Same as Facility Contact
Mailing Address	P.O. Box 719003 Santee, CA 92072
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	No
Recycling Requirements	Producer and distributor (regulated under separate waste discharge requirements (WDRs))
Facility Permitted Flow	2.0 million gallons per day (MGD)
Facility Design Flow	2.0 MGD
Watershed	Sycamore Creek (within Sycamore Canyon)
Receiving Water	Inland Surface Water

- 1.1. Padre Dam Municipal Water District (Discharger) is the owner and operator of the Ray Stoyer Water Recycling Facility (Facility). The Facility is a POTW.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and State laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

- 1.2. The Facility discharges wastewater to Sycamore Creek, a water of the U.S. that is tributary to the San Diego River within the San Diego River watershed. The Discharger was previously regulated by Order No. R9-2015-0032, which was adopted on May 13, 2015, and which expired on June 30, 2020. In accordance with the Code of Federal Regulations, title 40 (40 CFR), section 122.6 and title 23, division 3, chapter 9, article 3, section 2235.4 of the California Code of Regulations (CCR), the terms of Order No. R9-2015-0032 were administratively extended and continued in effect after the permit expiration date until the adoption of this Order. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the Discharger must file a petition with the State Water Board, Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.1.3.

- 1.3. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on December 27, 2019. The application was deemed complete on January 28, 2020. A site visit was conducted on June 12, 2020 to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.
- 1.4. Regulations specified in 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 produces up to 2.0 MGD of recycled water at the Facility, by directing and treating a portion of the raw wastewater from the San Diego Metropolitan Sewerage System. The raw wastewater is primarily residential and commercial collected from the City of Santee, the City of El Cajon, and the unincorporated community of Lakeside. The remaining raw wastewater continues through the San Diego Metropolitan Sewerage System, operated by the City of San

Diego Public Utilities Department, for treatment and disposal under separate waste discharge requirements.⁷

The treatment process at the Facility consists of primary sedimentation; a five-stage Bardenpho process; secondary sedimentation; chemical phosphorus removal by alum and polymer addition, flocculation, sedimentation; denitrifying filtration; chlorine disinfection; dechlorination; a holding pond and lakes that serve to stabilize the quality of the effluent discharge to Sycamore Creek by reducing the total nitrogen concentrations. Biosolids and waste sludge from clarification are sent to the San Diego Metropolitan Sewerage System for treatment and disposal.

Disinfected tertiary recycled water produced from the Facility is sent to the Discharger's recycled water distribution system and is used primarily for landscape irrigation at use sites in the Santee and El Cajon Hydrologic subareas (HSAs). The reuse of disinfected tertiary recycled water from the Facility is regulated under separate waste discharge requirements.⁸ Between July 2015 and May 2021, a total volume of approximately 1,496 million gallons (MG) of disinfected tertiary recycled water from the Facility was distributed to use sites in Santee and El Cajon HSAs primarily for landscape irrigation.

Tertiary treated effluent not sent to the Discharger's recycled water distribution system is dechlorinated and released into a holding pond and seven lakes (Santee Lakes) before being discharged to Sycamore Creek. Approximately 54 percent of the tertiary effluent was discharged to Lake 7 at Santee Lakes from July 2018 through June 2019. The holding pond and Santee Lakes are considered a continuation of the treatment system and are not considered waters of the U.S. By letter dated September 6, 2005, the U.S. Corps of Engineers stated, "the manmade Facility pond and Santee Lakes are part of a waste treatment system designed to meet the requirements of the Clean Water Act and therefore are not waters of the United States (33 CFR 328.3 (a)(8))."⁹ The lakes serve to stabilize the quality of the effluent discharge to Sycamore Creek by reducing the total nitrogen concentrations before discharging to Sycamore Creek.

Prior to October 2020, the Facility had three holding ponds with a total volume of 38.0 MG, which flowed in series and discharged to the Santee Lakes. Two of the holding ponds have been taken out of service and new treatment facilities will be

⁷ Order No. R9-2017-0007, *NPDES Permit No. CA0107409, Waste Discharge Requirements and National Pollutant Discharge Elimination System Permit for the City of San Diego E.W. Blom Point Loma Metropolitan Wastewater Treatment Plant Discharge to the Pacific Ocean through the Point Loma Ocean Outfall, San Diego County.*

⁸ Order No. 97-49, *Waste Discharge and Water Recycling Requirements for the Production and Purveyance of Recycled water for Padre Dam Municipal Water District, San Diego County.*

⁹ Letter from the Mark Durham, Chief, South Coast Section, Regulatory Branch, Department of the Army, Los Angeles District, Corps of Engineers, San Diego Field Office to Mary Ellis-Lindquist, Padre Dam Municipal Water District, dated September 6, 2005.

constructed on the footprint of the preexisting ponds (see section 2.5 of this Fact Sheet). The Santee Lakes consist of seven lakes with a total volume of 131.5 MG, which flow in series beginning with Lake No. 7 and ending with Lake No. 1. Lake No. 1 ultimately discharges to Sycamore Creek, a tributary to the San Diego River. Due to the variable demand for tertiary effluent for use as irrigation water and due to evaporation from the holding pond and lakes (approximately 12 percent of total effluent for one year), flow from Lake No. 1 to Sycamore Creek varies from less than 0.1 MGD to 2.1 MGD (approximately 35-36 percent of total effluent for one year).

Between July 2015 and May 2021, a total volume of approximately 1,765 MG of tertiary treated effluent (approximately 54 percent of tertiary treated effluent produced) was discharged to the holding ponds and to Santee Lakes. During the same time period, approximately 1,325 MG tertiary effluent (approximately 41 percent of effluent produced) was discharged to Sycamore Creek.

The Discharger applies algaecide and herbicide to the its holding pond and Santee Lakes to control algae and weeds. The primary application is typically in the summer, when there is typically minimal to no discharge from Lakes Nos. 1 and 2 to Sycamore Creek at Monitoring Location EFF-001B. Monitoring results at Monitoring location EFF-001B for the previous permit term were reported as non-detect or detected, but not quantified (DNQ) for residual algaecide and herbicide.

Figures B-1 and B-2 of Attachment B are maps showing the location of the Facility and the receiving water monitoring stations. Attachment C provides a flow schematic of the Facility.

The Discharger plans to construct a new 15 MGD Water Recycling Facility (WRF) and an Advanced Water Purification (AWP) Facility as part of the East County Advanced Water Purification Program.¹⁰ The new WRF will replace the existing Ray Stoyer WRF (Facility). Tertiary treated recycled water from the new WRF will serve as the source water for the AWP. In addition, the new WRF will continue to provide recycled water to the Discharger's recycled water customers and discharge excess highly treated recycled water from the AWP to Santee Lakes. The new WRF and AWP Facility are expected to be operational in the summer of 2025. The Discharge plans to submit a new ROWD at least 180 days prior to operation and discharge from the new WRF and AWP.

2.2. Discharge Points and Receiving Waters

The Facility discharges treated wastewater from Lake No. 1 into Sycamore Creek, approximately 1,000 feet north of Carlton Oaks Drive (Latitude 32° 50' 45"; Longitude 117° 00' 15"). Sycamore Creek flows through decorative ponds within the Carlton Oaks Country Club golf course for approximately one mile before entering the San Diego River.

¹⁰Additional information on the East County Advanced Water Purification Program is available at: <https://eastcountyawp.com/>

The Lower San Diego River is a 20-mile urban waterway in the San Diego River Watershed of the San Diego Region with year-round flow. The San Diego River originates in East County, passing through Lakeside, Santee, and Mission Trails Regional Park, and then runs parallel to Interstate 8 all the way to the Pacific Ocean coastline where it discharges near Ocean Beach. The lower portion of the river begins just north of Lake Jennings, near the town of Lakeside.

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

2.3.1. Effluent limitations contained in the existing Order (Order No. R9-2015-0002) for discharges from the facility and representative monitoring data obtained at Monitoring Location EFF-001A (Discharge Point No. 001) are as follows:

Table F-2. Historical Effluent Limitations and Monitoring Data at Monitoring Location EFF-001A¹

Parameter	Units	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Maximum Daily Effluent Limitation	Highest Average Monthly Discharge	Highest Average Weekly	Highest Daily Maximum
Aluminum	mg/L	--	--	0.2	--	--	0.22
Aluminum	lbs/day ²	--	--	3.3	--	--	3.57
Biochemical Oxygen Demand 5-day @ 20 degrees Celsius (°C) (BOD ₅)	mg/L	15	23	25	3.73	5.1	6.4
BOD ₅	lbs/day ²	250	384	417	59.57	78.58	94.81
BOD ₅ percent removal	percent	85 ³	--	--	99.42	--	99.71
Bis(2-Ethylhexyl) Phthalate	micrograms per liter (µg/L)	1.8	--	3.6	ND	ND	ND
Bis(2-Ethylhexyl) Phthalate	lbs/day	0.03	--	0.06	ND	ND	ND
Chloride	mg/L	--	--	400	--	--	230
Chloride	lbs/day ²	--	--	6,672	--	--	3283
Dissolved Oxygen	mg/L	--	--	5.0 ³	--	--	5 ⁴
Iron, Total Recoverable	mg/L	--	--	0.3	--	--	0.299

Parameter	Units	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Maximum Daily Effluent Limitation	Highest Average Monthly Discharge	Highest Average Weekly	Highest Daily Maximum
Iron, Total Recoverable	lbs/day ²	--	--	5	--	--	4.62
Manganese, Total Recoverable	mg/L	--	--	0.05	--	--	0.048
Manganese, Total Recoverable	lbs/day ²	--	--	0.83	--	--	0.77
Oil and Grease	mg/L	5	--	7.5	--	--	2.3
Oil and Grease	lbs/day ²	83	--	125	--	--	37.4
pH	Standard units	--	--	6.5-8.5 ⁵	--	--	6.03-7.88 ⁵
Total Coliform Organisms	Most Probable Number per 100 milliliters (MPN/ 100 mL)	--	--	See note 6	--	--	2.2
Total Dissolved Solids (TDS)	mg/L	--	--	1,000	--	--	928
TDS	lbs/day ²			16,680	--	--	13,779
Total Residual Chlorine	µg/L	2	8	18	ND	ND	ND
Total Residual Chlorine	lbs/day ²	0.033	0.13	0.3	ND	ND	ND
Total Suspended Solids (TSS)	mg/L	15	23	25	2.9	4.26	14.8
TSS	lbs/day ²	250	384	417	44.12	61.79	218
TSS percent removal	percent	853	--	--	99.76	--	99.96
Total Trihalomethanes	µg/L	80	--	160	90.1	--	102
Total Trihalomethanes	lbs/day ²	1.33	--	2.68	1.3	--	1.55

Parameter	Units	Average Monthly Effluent Limitation	Average Weekly Effluent Limitation	Maximum Daily Effluent Limitation	Highest Average Monthly Discharge	Highest Average Weekly	Highest Daily Maximum
Turbidity	Nephelometric Turbidity Units (NTU)	--	--	See note 7	--	--	3.25
Zinc	µg/L	115	--	230	652	--	652
Zinc	lbs/day ²	1.91	--	3.84	10.27	--	10.27

Notes for Table F-2

- Monitoring data from July 2015 to April 2021.
- Mass emission rate (MER) effluent limitations are based on the permitted flow rate for the Facility (2.0 MGD).
- Instantaneous maximum and minimum.
- Minimum daily average.
- Minimum instantaneous value.
- 2.2 MPN/100 mL as a 7-day median based on the last seven days; 23 MPN/100 mL more than once in any 30-day period; and 240 MPN/100 mL at any time.
- 2 NTU as a daily average; 5 NTU more than five percent of the time within a 24 hour period; and 10 NTU at any time.

2.3.2. Effluent limitations contained in the existing Order (Order No. R9-2015-0002) for discharges from the facility and representative monitoring data obtained at Monitoring Location EFF-001B (Discharge Point No. 001) are as follows:

Table F-3. Historic Effluent Limitations and Monitoring Data-EFF-001B¹

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	12 Month Average Effluent Limitation	Highest Average Monthly Discharge	Highest Daily Maximum Discharge	Highest 12 Month Average Discharge
Flow	MGD	2.0	--	--	--	7.38	--
Ammonia, Un-ionized (as Nitrogen)	mg/L	--	0.025	--	--	ND	--
Ammonia, Un-ionized (as Nitrogen)	lbs/day ²	--	0.42	--	--	--	--

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation	12 Month Average Effluent Limitation	Highest Average Monthly Discharge	Highest Daily Maximum Discharge	Highest 12 Month Average Discharge
Nitrate Nitrogen (as N)	mg/L	--	45 (as NO ₃)	--	--	0.205 (as N)	--
Nitrate (as N)	lbs/day ²	--	751 (as NO ₃)	--	--	1.91 (as N)	--
Nitrogen, Total (as N)	lbs/day ²	--	--	17	--	--	12.58
Phosphorous, Total (as P)	lbs/day ²	--	--	1.7	--	--	0.62

Notes for Table F-3

1. Monitoring data from July 2015 to April 2021.
2. MER effluent limitations are based on the permitted flow rate for the Facility (2.0 MGD).

2.4. Compliance Summary

The following violations of Order No. R9-2015-0002 were identified between July 2015 and April 2021:

- 2.4.1. The Discharger failed to report results of effluent samples collected at monitoring location EFF-001A between July 17 and 20, 2015 due to a laboratory error. Section B.1 of Attachment E of Order No. R9-2015-0002 requires analysis of effluent samples at monitoring location EFF-001A for BOD₅ at least 3 times a week.
- 2.4.2. The Discharger reported that the effluent enterococci concentration at EFF-001A on July 7, 2015 was 1046.2 MPN/100 mL which exceeded the instantaneous effluent enterococci limit of 61 MPN/100 mL. The Discharger submit a request to invalidate the sample result on July 28, 2015 and reported that the exceedance was due to cross contamination of the effluent sample.
- 2.4.3. The Discharger reported on January 8, 2016 that the BOD₅ test failed to meet the laboratory criteria for dissolved oxygen at Monitoring Location No. INF-001 due to diluted sewage from a rain event.
- 2.4.4. The Discharger reported a Minimum Level for acrolein of 25 µg/L in its June-December 2015 semiannual monitoring report which exceeds the minimum level (ML) of 10 µg/L specified in 40 CFR part 136 analysis methods for acrolein. Section I.J of Attachment E to Order No. R9-2015-0002 specifies that the Discharger shall not use a ML that is greater than the applicable effluent

- limitation and are consistent with the requirements of 40 CFR part 136 or otherwise approved by USEPA and authorized by the San Diego Water Board.
- 2.4.5. Effluent analyses results for nitrate, total phosphorous, and unionized ammonia for samples collected at monitoring location EFF-001A collected in June 2016 did not have the accompanying QA/QC data.
 - 2.4.6. Results of the three chronic toxicity tests conducted in November 2016 were reported as “fail” which is a violation of the Median Monthly Effluent Limitation (MMEL) for chronic toxicity. The MMEL for chronic toxicity is exceeded when the median of three chronic toxicity tests in a calendar month results in “fail”.
 - 2.4.7. The BOD₅ result for the effluent sample collected at monitoring location EFF-001A on January 19, 2018 was invalid because the lab analyst read the result after three days instead of the required five-day incubation period. The effluent Chemical Oxygen Demand (COD) concentration on the same day was reported as 25.0 mg/L. As a result, it was determined that the average monthly, average weekly, and maximum daily BOD₅ effluent limitations could not have been exceeded.
 - 2.4.8. The effluent zinc concentration at monitoring location EFF-001A was reported as 652 µg/L on May 30, 2018 which exceeded the average monthly effluent limitation for zinc, which is 115 µg/L, and also exceeded the maximum daily effluent limitation for zinc, which is 230 µg/L.
 - 2.4.9. The Discharger did not report effluent COD results at monitoring location EFF-001A on March 20, 2019. The Discharger reported that the COD sample was accidentally spilt for the sample taken on March 20, 2019 from monitoring location EFF-001A. As a result, COD was not analyzed a minimum of three times a week between March 17 and 23, 2019 as required by Section III.B.1 of Attachment E of Order No. R9-2015-0002.
 - 2.4.10. The Discharger reported that the effluent Total Trihalomethanes concentrations at monitoring location EFF-001A were reported as 90.1 µg/L and 82.7 µg/L on May 5, 2020 and June 30, 2019 respectively. Both concentrations exceeded the average monthly effluent limitation for Total Trihalomethanes of 80 µg/L.
 - 2.4.11. Receiving water monitoring results for receiving water monitoring station RSW-001 were not provided in the November 2020 monthly monitoring report. Section IV.A.1 of Attachment E of Order No. R9-2015-0002 requires monthly monitoring for several parameters at receiving water monitoring station RSW-001. The Discharger reported that there was no flow at receiving water monitoring station RSW-001 when receiving water monitoring sampling was conducted on November 3, 2020, and that some of the receiving water samples were unintentionally not collected after flow resumed.
 - 2.4.12. The effluent aluminum concentration at monitoring location EFF-001A was reported as 0.22 mg/L on April 6, 2021 which exceeded the maximum daily effluent limitation for aluminum, which is 0.2 mg/L.

2.5. **Planned Changes**

The Discharger plans to construct a new 15 MGD Water Recycling Facility (WRF) and an Advanced Water Purification (AWP) Facility as part of the East County Advanced Water Purification Program. The new WRF will replace the existing Ray Stoyer Water Recycling Facility. Tertiary treated recycled water from the new Water Recycling Facility will serve as the source water for the AWP. In addition, the new WRF will continue to provide recycled water to the Discharger's recycled water customers and discharge excess highly treated recycled water from the AWP to Santee Lakes. The new WRF and AWP Facility are expected to be operational in the summer of 2025. The Discharge plans to submit a new ROWD at least 180 days prior to operation and discharge from the new WRF and AWP.

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 U. S. Environmental Protection Agency (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 all 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 Resources Control Board (State Water Board). In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Sycamore Creek (located within Sycamore Canyon) is identified within the Basin Plan as having an exception from the municipal or domestic supply beneficial use; however, groundwater uses for the hydrologic subarea include municipal and domestic supply. Beneficial uses applicable to Sycamore Creek are as follows:

Table F-4. Beneficial Uses of Sycamore Creek and the Santee Hydrologic Area

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Sycamore Creek (within Sycamore Canyon watershed)	<u>Existing surface waters beneficial uses:</u> <ul style="list-style-type: none"> • Agricultural Supply (AGR); • Industrial Service Supply (IND); • Contact Water Recreation (REC-1); • Non-Contact Water Recreation (REC-2); • Warm Freshwater Habitat (WARM); • Wildlife Habitat (WILD); and • Preservation of Rare, Threatened or Endangered Species (RARE)
001	Santee Hydrologic Subarea (907.12)	<u>Existing ground waters beneficial uses:</u> <ul style="list-style-type: none"> • Municipal and Domestic Supply (MUN); • Industrial Service Supply (IND); • Industrial Process Supply (PROC); and • Agricultural Supply (AGR)

3.3.2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, and later amended it on May 4, 1995 and November 9, 1999. About forty criteria in the NTR applied in California. On May 18, 2000, USEPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on February 13, 2001. These rules contain federal water quality criteria for priority pollutants.

3.3.3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the San Diego Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

3.3.4. **ISWEBE Plan and Toxicity Provisions.** The State Water Board adopted the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (ISWEBE Plan) and Toxicity Provisions on December 1, 2020. The ISWEBE Plan establishes provisions for water quality and sediment quality that apply to all inland surface waters, enclosed bays, estuaries, and coastal lagoons of the State, including both waters of the United States and

waters of the State. The Toxicity Provisions establish statewide numeric water quality objectives for both acute and chronic toxicity and a program of implementation to control toxicity. The Toxicity Provisions also provide consistent protection of aquatic life beneficial uses in inland surface waters, enclosed bays, and estuaries throughout the State, and protect aquatic habitats and life from the effects of known and unknown toxicants. The Toxicity Provisions will take effect upon adoption by the California Office of Administrative Law (OAL) and USEPA.

The State Water Board adopted Resolution No. 2018-0038 establishing *Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays and Estuaries of California -Bacteria Provisions and a Water Quality Standards Variance Policy* (Part 3 of the ISWEBE Plan) on August 7, 2018, which became effective upon approval by the OAL on February 4, 2019, and approval by the USEPA on March 22, 2019. Part 3 of the ISWEBE Plan established new statewide bacteria water quality objectives for the protection of surface waters designated for the contact recreation beneficial use (REC-1), and also established implementation options to protect recreational users from the effects of pathogens in surface waters.

The ISWEBE Plan will be a single planning document that includes all the water quality control plan provisions adopted by the State Water Board that relate to surface waters other than open bays and the ocean. The State Water Board plans to incorporate the SIP, part 3 of the ISWEBE Plan, and other components into the ISWEBE Plan as nonregulatory amendments to the ISWEBE Plan in the near future.

- 3.3.5. **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.
- 3.3.6. **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.

- 3.3.7. **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.
- 3.3.8. **Title 22 of the CCR, Water Recycling Criteria.** Title 22, division 4, chapter 3 of the CCR (title 22) establishes water recycling criteria governing treatment and beneficial reuse of municipal wastewater. This Order includes effluent limitations for total coliform and turbidity based on title 22 requirements for disinfected tertiary recycled water.
- 3.3.9. **Mercury Provisions.** The State Water Board adopted Resolution 2017-0027 on May 2, 2017, which approved *Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions* (Mercury Provisions). The Mercury Provisions provide a consistent regulatory approach throughout the State by setting mercury limits to protect the beneficial uses associated with the consumption of fish by both people and wildlife.

The Mercury Provisions establish a fish-tissue based sport fishing water quality objective which applies to inland water bodies with designated beneficial uses that include WILD. A water body must also contain trophic level 4 fish within 200-500 millimeters in total length for the sport fishing water quality objective to be applied (see Attachment C of the Mercury Provisions for a list of common trophic level 4 fish species). The sport fishing water quality objective can be applied to Sycamore Creek because beneficial uses of Sycamore Creek include WILD, and largemouth bass, a trophic level 4 fish species have been caught from receiving water monitoring RSW-001a over the course of the previous permit term. The Mercury Provisions translate the fish-tissue based sport fishing into a water column concentration/water quality objective of 12 nanograms per liter (or 0.012 µg/L).

This Order includes a schedule for the Discharger to achieve compliance with final annual average effluent limitations of 0.012 µg/L and 2.00E-04 lbs/day for mercury pursuant to section IV.D.2.d.4 of the Mercury Provisions. This Order also establishes interim effluent limitations for mercury based on the CTR human health criterion for mercury.

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

Under section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On June 9, 2021 the USEPA approved California's 2018 section 303(d) List of Impaired Waters (303 (d) list). The 303(d) list includes listings for the Lower San Diego River for indicator bacteria, low dissolved oxygen, cadmium, benthic community effects, nitrogen, phosphorus, total dissolved solids, and toxicity.

The State Water Board released the proposed 2020-2022 California Integrated Report on June 4, 2021 which includes the draft Statewide 2020-2022 303 (d) list. The State Water Board is proposing to adopt the 2020-2022 303 (d) list in January 2022. The draft 2020-2022 303 (d) lists includes existing listings for the Lower San Diego River for indicator bacteria, low dissolved oxygen, benthic community effects, nitrogen, phosphorus, total dissolved solids, and toxicity; and includes proposed listings for bifenthrin, chlordane, chloride, color, cyfluthrin, cypermethrin, permethrin, pyrethroids, and turbidity.

On February 10, 2010 the San Diego Water Board adopted Resolution No. R9-2010-0001¹¹, *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)* (The Bacteria TMDL). The Bacteria TMDL was subsequently approved by the State Water Board on December 14, 2010, the Office of Administrative Law (OAL) on April 4, 2011, and the USEPA on June 22, 2011. The Bacteria TMDL establishes waste load allocations (WLAs) for bacteria for the Facility based on REC-1 WQOs in the Basin Plan. The requirements of the Bacteria TMDL have been incorporated into this Order.

TMDLs for the remaining 303(d) listed parameters have not been developed. Effluent limitations based on applicable WQOs have been established for the following parameters on the 303 (d) list: cadmium, dissolved oxygen, nitrogen, phosphorus, total dissolved solids, and chronic toxicity.

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.

¹¹ California Regional Water Quality Control Board, San Diego Region, Resolution No. R9-2010-0001, *A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Revised Total Maximum Daily Loads for Indicator Bacteria, Project I – Twenty Beaches and Creeks in the San Diego Region (Including Tecolote Creek)*, adopted February 10, 2010.

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.

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), which requires that permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d), which 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 Order No. R9-2015-0002 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. R9-2015-0002 contained Discharge Prohibition III.A, which required the Discharger to comply with Waste Discharge Prohibitions in the Basin Plan. This prohibition has been retained in this Order as Discharge Prohibition 3.1.
- 4.1.2. Order No. R9-2015-002 contained Discharge Prohibition III.B which prohibited the discharge of wastes in a manner or to a location which have not been specifically authorized by the Order and for which valid WDRs are not in force are prohibited. This prohibition is based on 40 CFR section 122.21(a) and Water Code section 13260, which require filing an application and ROWD before a discharge can occur. Discharges not described in the application and ROWD, and subsequently in this Order, or other WDRs, are prohibited. This prohibition

is retained from Order No. R9-2015-0002 and included in this Order as Discharge Prohibition 3.2.

- 4.1.3. Discharge Prohibition 3.3 prohibits the discharge of oil, trash, or other solids to Sycamore Creek or surface waters. This prohibition is retained from Order No. R9-2015-0002.
- 4.1.4. Discharge Prohibition 3.4 prohibits the discharge of waste sludge and untreated digester supernatant, centrate, or filtrate. This prohibition is based on the requirements of the Basin Plan and is retained from Order No. R9-2015-0002.
- 4.1.5. Discharge prohibition 3.5 prohibits the deposition of rubbish or refuse into surface waters. This prohibition is based on the requirements of the Basin Plan and is retained from Order No. R9-2015-0002.
- 4.1.6. Discharge Prohibition 3.6 prohibits the discharge of waste causing surface erosion or scouring of aquatic substrates. This requirement is retained from Order No. R9-2015-0002.
- 4.1.7. Discharge Prohibition 3.7 prohibits the discharge of toxic substances. This requirement is based on the requirements of the Basin Plan and is retained from Order No. R9-2015-0002.
- 4.1.8. Discharge Prohibition 3.8 prohibits the discharge of wastes with a noticeable odor to the Sycamore Creek, a tributary of the San Diego River. This requirement is based on Table 3-2 of the Basin Plan and has been carried over from Order No. R9- 2015-0002.
- 4.1.9. Discharge Prohibition 3.9 prohibits the discharge of residual algaecides and aquatic herbicides to Sycamore Creek, a tributary of the San Diego River. This prohibition is based on 40 C.F.R. 122.21(a), "Duty to Apply," and California Water Code section 13260, which requires filing a Report of Waste Discharge before discharges can occur. Discharges not described in the ROWD, and subsequently not discharged in the manner permitted by this Order, are prohibited.
- 4.1.10. Discharge Prohibition 3.10 prohibits the discharge of residual algaecides and aquatic herbicides to the Discharger's ponds/lakes from creating a condition of nuisance as defined in section 13050 of the California Water Code. This prohibition is based on California Water Code section 13050 for water quality control for achieving water quality objectives.
- 4.1.11. Discharge Prohibition 3.11 prohibits the discharge of residual algaecides and aquatic herbicides to the Discharger's ponds/lakes which cause, or have a reasonable potential to cause, or contribute to an in-stream excursion in Sycamore Creek, a tributary of the San Diego River, above any applicable standard or criterion promulgated by USEPA pursuant to section 303 of the CWA, or water quality objective adopted by the State or San Diego Water Board. This prohibition is based on CWA section 301 and the California Water Code.

4.2. Technology-Based Effluent Limitations (TBELs)

4.2.1. Scope and Authority

Section 301(b) of the CWA and implementing USEPA permit regulations specified in 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 specified in 40 CFR part 133.

Regulations promulgated in 40 CFR section 125.3(a)(1) require TBELs for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The CWA established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that Act 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:
 $\text{lbs/day} = \text{flow (MGD)} \times \text{pollutant concentration (mg/L)} \times 8.34$

4.2.2. Applicable Technology-Based Effluent Limitations

4.2.2.1. Federal Regulations. 40 CFR part 133 establishes secondary treatment standards for BOD₅, TSS, and pH which are summarized in the Table F-5:

Table F-5. Secondary Treatment Standards

Parameter	Unit	30-day Average	Average Weekly
BOD ₅	mg/L	30	45
BOD ₅	% Removal	≥85	--
TSS	mg/L	30	45

Parameter	Unit	30-day Average	Average Weekly
TSS	% Removal	≥85	--
pH	standard units	See note 1	See note 1

Notes for Table F-5

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

4.2.2.2. TBELs Established in Order for Conventional Pollutants. The Facility utilizes tertiary treatment processes. Consistent with antibacksliding requirements, this Order retains the average monthly and average weekly effluent limitations for BOD₅ and TSS which are more stringent than secondary treatment standards specified in 40 CFR part 133, and requires the Facility to achieve at least 85 percent removal for BOD₅ and TSS based on secondary treatment standards specified in 40 CFR part 133.

Consistent with antibacksliding requirements, this Order also retains the TBELs for oil and grease and pH established in Order No. R9-2015-0002. The effluent limits established in the Order for pH are also based on Basin Plan water quality objectives, which are more stringent than secondary treatment standards for pH.

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 established in this Order are summarized in Table F-6, applying AMELs in lieu of 30-day average and AWELs in lieu of 7-day average.

Table F-6. Summary of Applicable TBELs¹

Parameter	Unit	Average Monthly	Average Weekly	Daily Maximum	Instantaneous Minimum	Instantaneous Maximum
BOD ₅	mg/L	15	23	25	--	--
BOD ₅ ²	lbs/day	250	384	417	--	--
BOD ₅	% Removal	≥85	--	--	--	--
TSS	mg/L	15	23	25	--	--
TSS ²	lbs/day	250	384	417	--	--
TSS	% Removal	≥85	--	--	--	--
Oil and Grease	mg/L	5	--	7.5	7.5	

Parameter	Unit	Average Monthly	Average Weekly	Daily Maximum	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease ²	lbs/day	83	--	125	125	
pH	standard units	--	--	--	6.5	8.5

Notes for Table F-6

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 pounds per day, were calculated based on the following equation: $MER (lb/day) = 8.34 \times Q \times C$, where Q is the maximum allowable flow rate (in million gallons per day (MGD)) and C is the concentration (in mg/L).

4.2.2.3. Flow. This Order retains the AMEL for flow of 2.0 MGD from Order No. R9-2015-0002. The AMEL for flow of 2.0 MGD is based on the Facility design flow, considers the treatment capacity of the pond and lakes prior to discharge, and accommodates natural fluctuations in the Facility’s treatment pond and lakes due to seasonal wet weather events. Pursuant to 40 CFR 122.45(d)(2) effluent limitations for continuous discharges from POTWs are calculated on an average monthly or average weekly discharge. The effluent flow limitation is a component of this Order to ensure proper operation and maintenance of treatment processes and systems. Proper operation includes ensuring wastewater effluent flows stay within the design capacity of the process treatment units.¹² 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.¹³ 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.

¹² See 40 CFR section 122.41 (e).

¹³ 40 CFR section 122.45 (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 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 CTR and NTR.

4.3.2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes WQOs, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan. The beneficial uses applicable to Sycamore Creek and groundwater are summarized in Table F-3 of this Fact Sheet. The Basin Plan includes both narrative and numeric WQOs applicable to the receiving waters.

4.3.2.1. **BOD₅**. The Lower San Diego River is 303(d) listed for dissolved oxygen. The discharge of BOD₅ contributes to lower dissolved oxygen concentrations in the receiving water. Thus, this Order establishes TBELs for BOD₅ which are more stringent than 40 CFR part 133 secondary treatment standards. The effluent limitations for BOD₅ are necessary for protection of water quality. The rationale for the BOD₅ effluent limitations is described in section 4.2.2.2 of this Fact Sheet.

4.3.2.2. **TSS**. The Lower San Diego River is 303(d) listed for dissolved oxygen. The discharge of organic material contributes to lower dissolved oxygen concentration in the receiving water. Thus, this Order establishes TBELs for TSS which are more stringent than 40 CFR part 133 secondary treatment standards. The effluent limitations for TSS are necessary for protection of water quality. The rationale for the TSS effluent limitations is described in section 4.2.2.2 of this Fact Sheet.

4.3.2.3. **pH.** As discussed in section 4.2.2.2 of this Fact Sheet, this Order establishes effluent limitations for pH based on Basin Plan WQOs for pH, which are more stringent than the secondary treatment standards. The Basin Plan states that the pH in inland surface waters the pH shall not be depressed below 6.5 nor raised above 8.5. Consistent with anti-backsliding requirements, the effluent limitations for pH have been carried over from Order No. R9-2015-0002.

4.3.2.4. **Bacteria.** This Order contains effluent limitations for the following indicator bacteria:

- Total coliform (based on CCR title 22 criteria for tertiary recycled water.
- Fecal coliform and *Escherichia coli* (*E. coli*) (based on Bacteria TMDL WLAs derived from Basin Plan WQOs for surface waters with the REC-1 beneficial use)
- Enterococci (based on State Water Board WQOs for bacteria from part 3 of the ISWEBE Plan).

The State Water Board WQOs for bacteria supersede the Basin Plan WQOs, however the State Water Board WQOs for bacteria do not supersede the Bacteria TMDL WLAs which is why effluent limitations based on the bacteria TMDL WLAs are included in this Order.

This Order also contains receiving water limitations for the following indicator bacteria:

- Total coliform, fecal coliform, and *E. coli* (based on Basin Plan WQOs for surface waters with the REC-1 beneficial use)
- Enterococci (based on State Water Board WQOs for bacteria from part 3 of the ISWEBE Plan).

The Bacteria TMDL establishes bacteria WLAs for the Facility based on the effluent limitations for bacteria derived from the Basin Plan WQOs for surface waters with the REC-1 beneficial use. The San Diego Water Board Technical Report for the Bacteria TMDL (Bacteria TMDL Technical Report) provides that, “Padre Dam’s bacterial discharges do not contribute to the San Diego River’s bacterial impairment because Padre Dam’s effluent meets the REC-1 water quality standard.” Additionally, the data sources, methodology, wet weather modeling configuration, dry weather model configuration, and assumptions specified in the Bacteria TMDL Technical Report do not reference Padre Dam’s effluent as a contributing source to the receiving water impairment in the San Diego River. Based on facts presented in the Bacteria TMDL Technical Report, it appears that the TMDL assumed that if the Discharger complied with REC-1 water quality standards for bacteria, the Discharger would not be a contributing source of impairment.

Further, to ensure the discharge from the Facility is consistent with the assumption made in the Bacteria TMDL Technical Report that discharges from the Facility do not contribute to the bacterial impairment in the San Diego River, the Discharger is required to conduct additional monitoring in response to receiving water exceedances for bacteria immediately downstream of

Discharge Point No. 001 at Monitoring Location RSW-001a. If both the receiving water and effluent are determined to exceed applicable WLAs for bacteria, the Discharger shall be required to take immediate action to minimize the impact to the receiving water. The requirements of the Bacteria TMDL have been incorporated into this Order.

This Order includes effluent and receiving limitations for enterococci based on State Water Board WQOs established in part 3 of the ISWEBE Plan. Part 3 of the ISWEBE Plan contains WQOs for enterococci and *E. coli*. The enterococci WQOs apply to surface waters with the REC-1 beneficial use where the salinity is greater than one part per thousand (ppt) more than 5 percent of the time (one ppt is equivalent to a TDS concentration of 1,000 mg/L). These enterococci WQOs apply to the receiving water (Sycamore Creek and the downstream San Diego River) since TDS concentrations exceeded 1,000 mg/L in about 41 percent of receiving water samples collected between July 2015 and April 2021 at monitoring location RSW-001, the upstream reference station; and exceeded 1,000 mg/L in about 59 percent of all samples collected at all receiving water monitoring stations (RSW-001 through RSW-006). The enterococci effluent and receiving water limitations in the previous Order based on Basin Plan WQOs, however, have been replaced with enterococci limitations based on the State Water Board WQOs from part 3 of the ISWEBE Plan.

In addition, this Order establishes total coliform effluent limitations based on CCR, title 22 criteria for tertiary treated recycled water. In consultation with the USEPA, it was determined that implementation of the title 22 based total coliform effluent limitations which are more stringent than the Basin Plan bacteria WQOs, along with effluent and receiving water limitations based on Basin Plan bacteria WQOs for surface waters with the REC-1 beneficial use will be consistent with the intent of the Bacteria TMDL and protective of water quality.

- 4.3.2.5. **Turbidity.** Order No. R9-2015-0002 contained effluent limitations for turbidity based on title 22 criteria for tertiary treated recycled water. These effluent limitations are more stringent than the WQOs for turbidity contained in Tables 3-2 and 3-3 of the Basin Plan, thus remain protective of beneficial uses. The limitations for turbidity have been carried over from Order No. R9-2015-0002.
- 4.3.2.6. **Pollutants with Primary or Secondary MCLs.** The Basin Plan specifies WQOs for surface waters within the Sycamore Canyon hydrologic unit (907.12) and for groundwater within the Santee Hydrologic Subarea (HSA) 7.12. The Santee HSA has a designated MUN beneficial use. The Basin Plan incorporates Maximum Contaminant Levels (MCLs) by reference as WQOs for hydrologic areas with the MUN beneficial use. As a result, the following MCLs are applied as WQOs for the Santee HSA (shown in table F-7):
- Primary MCLs for Organic Chemicals (specified in Table 64444-A of section 64444 of title 22 of the CCR.

- Primary MCLs for Inorganic Chemicals (specified in Table 64431-A of section 64431 of title 22 of the CCR).
- Secondary MCLs (specified in Table 64449-A of section 64449 of title 22 of the CCR)
- Radionuclides in tables 64442 and 64443 of title 22 of the CCR.

This Order only establishes effluent limitations for Basin Plan constituents that were determined to have reasonable potential to cause exceedance of WQOs for surface waters and groundwater within the Santee HSA (907.12). Due to the potential to impact groundwater quality once the effluent is discharged into Sycamore Creek, the MUN beneficial use was considered in the RPA (see section 4.3.3 of this Fact Sheet).

Table F-7. Summary of Basin Plan Water Quality Objectives/Criteria

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
Chloride	mg/L	400 ¹	400 ¹ (Basin Plan), 250-500 (secondary MCL range)	Secondary MCL and Basin Plan Tables 3-2 and 3-3,
Total Dissolved Solids	mg/L	1000 ¹	1,000 ¹ (Basin Plan), 500-1000 (secondary MCL range)	Secondary MCL and Basin Plan Tables 3-2 and 3-3,
Sulfate	mg/L	500 ¹	500 ¹ (Basin Plan), 250-500 (secondary MCL range)	Secondary MCL and Basin Plan Tables 3-2 and 3-3,
Boron	mg/L	1.0 ¹	0.75 ¹	Basin Plan Tables 3-2 and 3-3
Percent Sodium	%	60 ¹	60 ¹	Basin Plan Tables 3-2 and 3-3
Odor	none	None ¹	None ¹	Basin Plan Tables 3-2 and 3-3
pH	standard units	6.5 – 8.5	6.5 – 8.5	Basin Plan Page 3-26

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
Total Residual Chlorine	µg/L	11 (chronic criterion), 19 (acute criterion)	--	Interpretation of narrative Basin Plan criteria based on EPA's National Recommended Water Quality Criteria for the protection of aquatic life
Total Trihalomethanes	mg/L	--	0.08	Primary MCL and Basin Plan Page 3-34 ¹
Total Phosphorus	mg/L	0.1 ^{1,2}	--	Basin Plan Table 3-2
Total Nitrogen	mg/L	See note 2	--	Basin Plan Table 3-2
Ammonia, un-ionized	mg/L	--	0.025	Basin Plan Page 3-6
Fluoride	mg/L	--	1.0 ¹	Basin Plan Table 3-2
Iron, Total Recoverable	mg/L	1.0 ¹	0.3 ¹	Secondary MCL and Basin Plan Tables 3-2 and 3-3
Manganese	mg/L	1.00	0.05 ¹	Secondary MCL and Basin Plan Tables 3-2 and 3-3
Methylene Blue Active Substances (MBAS)	mg/L	0.5 ¹	0.5 ¹	Secondary MCL and Basin Plan Tables 3-2 and 3-3
Dissolved Oxygen	mg/L	5.0	--	Basin Plan Page 3-25
Antimony	mg/L	--	0.006	Primary MCL and Basin Plan Table 3-4 ³

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
Arsenic	mg/L	--	0.05	Primary MCL and Basin Plan Table 3-4 ³
Asbestos	million fibers per liter	--	7	Primary MCL and Basin Plan Table 3-4 ³
Barium	mg/L	--	1	Primary MCL and Basin Plan Table 3-4 ³
Beryllium	mg/L	--	0.004	Primary MCL and Basin Plan Table 3-4 ³
Cadmium	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-4 ³
Chromium	mg/L	--	0.05	Primary MCL and Basin Plan Table 3-4 ³
Cyanide	mg/L	--	0.15	Primary MCL and Basin Plan Table 3-4 ³
Fluoride	mg/L	--	1.0 (Basin Plan), 2.0 (Primary MCL)	Primary MCL and Basin Plan Tables 3-3 and 3-4 ³
Mercury	mg/L	--	0.002	Primary MCL and Basin Plan Table 3-4 ³
Nickel	mg/L	--	0.1	Primary MCL and Basin Plan Table 3-4 ³
Nitrate (as NO ₃)	mg/L	--	45.0	Primary MCL and Basin Plan Tables 3-3 and 3-4 ³

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
Nitrate + Nitrite (sum as nitrogen)	mg/L	--	10.0	Primary MCL and Basin Plan Table 3-4 ³
Nitrite (as nitrogen)	mg/L	--	1.0	Primary MCL and Basin Plan Table 3-4 ³
Selenium	mg/L	--	0.05	Primary MCL and Basin Plan Table 3-4 ³
Thallium	mg/L	--	0.002	Primary MCL and Basin Plan Table 3-4 ³
Benzene	mg/L	--	0.001	Primary MCL and Basin Plan Table 3-5 ⁴
Carbon Tetrachloride	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-5 ⁴
1,2-Dichlorobenzene	mg/L	--	0.6	Primary MCL and Basin Plan Table 3-5 ⁴
1,4-Dichlorobenzene	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-5 ⁴
1,1-Dichloroethane	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-5 ⁴
1,2-Dichloroethane	mg/L	--	0.0005	Primary MCL and Basin Plan Table 3-5 ⁴
cis-1,2-Dichloroethylene	mg/L	--	0.006	Primary MCL and Basin Plan Table 3-5 ⁴
trans-1,2-Dichloroethylene	mg/L	--	0.01	Primary MCL and Basin Plan Table 3-5 ⁴

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
1,2-Dichloropropane	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-5 ⁴
1,3-Dichloropropene	mg/L	--	0.0005	Primary MCL and Basin Plan Table 3-5 ⁴
Ethylbenzene	mg/L	--	0.3	Primary MCL and Basin Plan Table 3-5 ⁴
Methyl-tert-butyl ether	mg/L	--	0.013	Primary MCL and Basin Plan Table 3-5 ⁴
Monochlorobenzene	mg/L	--	0.07	Primary MCL and Basin Plan Table 3-5 ⁴
Styrene	mg/L	--	0.1	Primary MCL and Basin Plan Table 3-5 ⁴
1,1,2,2-Tetrachloroethane	mg/L	--	0.001	Primary MCL and Basin Plan Table 3-5 ⁴
Tetrachloroethylene	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-5 ⁴
Toluene	mg/L	--	0.15	Primary MCL and Basin Plan Table 3-5 ⁴
1,2,4-Trichlorobenzene	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-5 ⁴
1,1,1-Trichloroethane	mg/L	--	0.200	Primary MCL and Basin Plan Table 3-5 ⁴
1,1,2-Trichloroethane	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-5 ⁴

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
Trichloroethylene	mg/L	--	0.005	Primary MCL and Basin Plan Table 3-5 ⁴
Trichlorofluoromethane	mg/L	--	0.15	Primary MCL and Basin Plan Table 3-5 ⁴
1,1,2-Trichloro-1,2,2-Trifluoroethane	mg/L	--	1.2	Primary MCL and Basin Plan Table 3-5 ⁴
Vinyl Chloride	mg/L	--	0.0005	Primary MCL and Basin Plan Table 3-5 ⁴
Xylenes	mg/L	--	1.750*	Primary MCL and Basin Plan Table 3-5 ⁴
Alachlor	mg/L	--	0.002	Primary MCL and Basin Plan Table 3-5 ⁴
Atrazine	mg/L	--	0.001	Primary MCL and Basin Plan Table 3-5 ⁴
Bentazon	mg/L	--	0.018	Primary MCL and Basin Plan Table 3-5 ⁴
Benzo(a)pyrene	mg/L	--	0.0002	Primary MCL and Basin Plan Table 3-5 ⁴
Carbofuran	mg/L	--	0.018	Primary MCL and Basin Plan Table 3-5 ⁴
Chlordane	mg/L	--	0.0001	Primary MCL and Basin Plan Table 3-5 ⁴
2,4,D	mg/L	--	0.07	Primary MCL and Basin Plan Table 3-5 ⁴

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
Dalapon	mg/L	--	0.2	Primary MCL and Basin Plan Table 3-5 ⁴
Dibromochloropropane	mg/L	--	0.0002	Primary MCL and Basin Plan Table 3-5 ⁴
Di(2-ethylhexyl)adipate	mg/L	--	0.4	Primary MCL and Basin Plan Table 3-5 ⁴
Di(2-ethylhexyl)phthalate	mg/L	--	0.004	Primary MCL and Basin Plan Table 3-5 ⁴
Dinoseb	mg/L	--	0.007	Primary MCL and Basin Plan Table 3-5 ⁴
Diquat	mg/L	--	0.02	Primary MCL and Basin Plan Table 3-5 ⁴
Endothall	mg/L	--	0.1	Primary MCL and Basin Plan Table 3-5 ⁴
Endrin	mg/L	--	0.002	Primary MCL and Basin Plan Table 3-5 ⁴
Ethylene Dibromide	mg/L	--	0.00005	Primary MCL and Basin Plan Table 3-5 ⁴
Glyphosate	mg/L	--	0.7	Primary MCL and Basin Plan Table 3-5 ⁴
Heptachlor	mg/L	--	0.00001	Primary MCL and Basin Plan Table 3-5 ⁴
Heptachlor Epoxide	mg/L	--	0.00001	Primary MCL and Basin Plan Table 3-5 ⁴

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
Hexachlorobenzene	mg/L	--	0.001	Primary MCL and Basin Plan Table 3-5 ⁴
Hexachlorocyclopentadiene	mg/L	--	0.05	Primary MCL and Basin Plan Table 3-5 ⁴
Lindane	mg/L	--	0.0002	Primary MCL and Basin Plan Table 3-5 ⁴
Methoxychlor	mg/L	--	0.03	Primary MCL and Basin Plan Table 3-5 ⁴
Molinate	mg/L	--	0.02	Primary MCL and Basin Plan Table 3-5 ⁴
Oxamyl	mg/L	--	0.05	Primary MCL and Basin Plan Table 3-5 ⁴
Pentachlorophenol	mg/L	--	0.001	Primary MCL and Basin Plan Table 3-5 ⁴
Picloram	mg/L	--	0.5	Primary MCL and Basin Plan Table 3-5 ⁴
Polychlorinated Biphenyls	mg/L	--	0.0005	Primary MCL and Basin Plan Table 3-5 ⁴
Simazine	mg/L	--	0.004	Primary MCL and Basin Plan Table 3-5 ⁴
Thiobencrab	mg/L	--	0.07	Primary MCL and Basin Plan Table 3-5 ⁴
Toxaphene	mg/L	--	0.003	Primary MCL and Basin Plan Table 3-5 ⁴

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
2,3,7,8-TCDD (Dioxin)	mg/L	--	3E-08	Primary MCL and Basin Plan Table 3-5 ⁴
2,3,5-TP (Silvex)	mg/L	--	0.05	Primary MCL and Basin Plan Table 3-5 ⁴
Aluminum	mg/L	--	0.2	Secondary MCL and Table 3-6 of Basin Plan ⁵
Color	mg/L	20	15	Secondary MCL and Tables 3,2,3,3, and 3-6 of Basin Plan ⁵
Copper	mg/L	--	1.0	Secondary MCL and Table 3-6 of Basin Plan ⁵
Corrosivity	mg/L	--	Noncorrosive	Secondary MCL and Table 3-6 of Basin Plan ⁵
Methyl-tert-butyl ether	mg/L	--	0.005	Secondary MCL and Table 3-6 of Basin Plan ⁵
Silver	mg/L	--	0.1	Secondary MCL and Table 3-6 of Basin Plan ⁵
Thiobencarb	mg/L	--	0.001	Secondary MCL and Table 3-6 of Basin Plan ⁵
Turbidity	mg/L	--	5	Secondary MCL and Table 3-6 of Basin Plan ⁵
Zinc	mg/L	--	5	Secondary MCL and Table 3-6 of Basin Plan ⁵
Phenolic compounds	µg/L	--	1.0	Basin Plan Page 3-30

Parameter	Units	Surface Water (Non-MUN)	Groundwater (MUN)	Source of Criteria
Gross Alpha Particle Activity (Excluding Radon and Uranium)	picocuries per liter (pCi/L)	--	15	Primary MCL and Basin Plan Page 3-31 ⁶
Combined Radium 226 and 228	pCi/L	--	5	Primary MCL and Basin Plan Page 3-31 ⁶

Notes for Table F-7

1. Not to be exceeded more than 10% of the time.
2. Based on footnote a of Table 3-2 of Basin Plan which states: *“Concentrations of nitrogen and phosphorus, by themselves or in combination with other nutrients, shall be maintained at levels below those which stimulate algae and emergent plant growth. Threshold total Phosphorus (P) concentrations shall not exceed 0.05 mg/l in any stream at the point where it enters any standing body of water, nor 0.025 mg/l in any standing body of water. A desired goal in order to prevent plant nuisances in streams and other flowing waters appears to be 0.1 mg/l total P. These values are not to be exceeded more than 10% of the time unless studies of the specific body in question clearly show that water quality objective changes are permissible and changes are approved by the Regional Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of N: P=10:1 shall be used. Note - Certain exceptions to the above WQOs are described in Chapter 4 in the sections titled Discharges to Coastal Lagoons from Pilot Water Reclamation Projects and Discharges to Surface Waters”.*
3. Waters designated for use as domestic or municipal supply shall not contain concentrations of inorganic chemicals in excess of the MCLs set forth in Table 64431-A of title 22 of the CCR.
4. Waters designated for use as domestic or municipal supply shall not contain concentrations of organic chemicals in excess of the MCLs set forth in Table 64444-A of title 22 of the CCR.
5. Waters designated for use as domestic or municipal supply shall not contain concentrations of chemical constituents in excess of the MCLs set forth in Table 64449-A of title 22 of the CCR.
6. Waters designated for use as domestic or municipal supply shall not contain concentrations of radionuclides in excess of MCLs set forth in Table 64442 of title 22 of the CCR.
7. Waters designated for use as domestic or municipal supply shall not contain concentrations of radionuclides in excess of MCLs set forth in Table 64443 of title 22 of the CCR.

4.3.2.7. **NTR and CTR Parameters.** The NTR and CTR establish freshwater and saltwater aquatic life criteria for priority toxic pollutants, and human health criteria for priority toxic pollutants. These criteria apply to inland surface waters, enclosed bays, and estuaries. Some of the NTR and CTR human health criteria are for consumption of “water and organisms” and others are for consumption of “organisms only.”

Applicable NTR and CTR criteria for Discharge Point No. 001 are summarized in Attachment H of this Order. In conducting a reasonable potential analysis (RPA) to determine which priority toxic pollutants would require effluent limitations, the most stringent out of NTR and CTR criteria for freshwater aquatic life and human health for each parameter was compared to the effluent and receiving water data.

Freshwater ambient hardness data collected at Monitoring Location RSW-001 between July 2015 and April 2021 was used to calculate freshwater criteria for metals that are hardness dependent. Monitoring Location RSW-001 is located at Sycamore Creek upstream from Discharge Point No. 001. Receiving water hardness values at monitoring location RSW-001 ranged from 61-2,100 mg/L. A hardness value of 150 mg/L as CaCO₃, which is the 90th percentile lowest hardness was used to determine the applicable freshwater criteria for hardness dependent metals. The lowest receiving water hardness at monitoring location RSW-001 was used in calculating effluent limitations for hardness dependent metals in previous iterations of the permit. Use of lower hardness values results in lower effluent limitation values for hardness dependent metals (more stringent effluent limitations). However, the use of the lowest receiving water hardness could result in overly stringent effluent limitations for metals and may not be representative of actual receiving water conditions in Sycamore Creek with respect to hardness. Another approach used by regulatory agencies has been to use effluent hardness values in calculating effluent limitations for metals. For this discharge, using the 90th percentile lowest receiving water hardness (150 mg/L) will result in more stringent effluent limitations than using effluent hardness values since effluent hardness concentrations range from 160-369 mg/L.

Saltwater criteria were not used in the RPA for determining effluent limitations because Sycamore Creek is more than 10 miles from the coast and dominated by freshwater species.

4.3.2.8. **Total Residual Chlorine.** USEPA has established numeric national water quality criteria for total residual chlorine for protection of aquatic organisms in freshwater. The USEPA water quality criteria for total residual chlorine consists of a chronic 4-day average continuous concentration of 11 µg/L, and an acute 1-hour average maximum concentration of 19 µg/L. Consistent with antibacksliding requirements, this Order retains the effluent limitations for total residual chlorine. The effluent limitations for total residual chlorine in Order No. R9-2015-0002 were carried over from Order No. R9-2009-0037, a previous iteration of the NPDES permit for the discharge. These effluent limitations are

derived from the USEPA water quality criteria for total residual chlorine and were calculated using the SIP methodology for calculating WQBELs.

4.2.3.9. **Mercury.** Based on results of a reasonable potential analysis (RPA) conducted in accordance with section 1.3 of the SIP, this Order includes interim effluent limitations for mercury based on CTR human health criterion for mercury (see sections 4.3.3 and 4.3.4 of this Fact Sheet. Attachment F). The State Board's Mercury Provisions establish a water column concentration/water quality objective of 0.012 µg/L which is more stringent than CTR human health criterion for mercury. As a result, a RPA was also conducted to evaluate whether the discharge has reasonable potential to exceed the 0.012 µg/L water quality objective. Based on the RPA procedure outlined in the Mercury Provisions, an effluent limitation is to be established for the discharge if the highest observed annual effluent concentration exceeds 0.012 µg/L (see step 6 of section IV.D.2.c.1 of the Mercury Provisions). The highest observed annual effluent concentration for mercury between July 2015 and April 2021 was 0.37 µg/L in the 2020 calendar year, which exceeded 0.012 µg/L. As a result, this Order includes a schedule for the Discharger to achieve compliance with final annual average effluent limitations of 0.012 µg/L and 2.00E-04 lbs/day for mercury pursuant to section IV.D.2.d.4 of the Mercury Provisions.

4.3.3. **Determining the Need for WQBELs**

The need for WQBELs was evaluated in accordance with 40 CFR section 122.44(d) and guidance for statistically determining the "reasonable potential" for a discharged pollutant to cause or contribute to an exceedance of WQOs.

The San Diego Water Board conducted a RPA consistent with section 1.3 of the SIP. Although the SIP applies directly to the implementation of CTR priority pollutants, the State Water Board has held that San Diego Water Boards may use the SIP as guidance for all water quality-based toxics control¹⁴. The SIP states in the introduction: "The goal of this Policy is to establish a standardized approach for permitting discharges of toxic pollutants to non-ocean surface waters in a manner that promotes statewide consistency."

Therefore, in this Order the RPA procedures from the SIP were used to evaluate reasonable potential for both CTR and non-CTR toxic constituents. Effluent and upstream receiving water data from July 2015 through April 2021 were used in the analyses. The data was obtained from the Discharger's monitoring reports, ROWD, and from supplemental information submitted by the Discharger as part of its permit application.

The following steps outlined in section 1.3 of the SIP were followed in conducting the RPA:

Step 1: The lowest/most stringent water quality criteria (C) for each priority pollutant was identified from applicable water quality criteria specified in the CTR or NTR, Basin Plan, and from MCLs specified in Title 22 of the CCR.

¹⁴ See Order WQO 2001-16 (Napa) and Order WQO 2004-0013 (Yuba City).

Step 2: Effluent data from July 2015 to April 2021 from samples collected at effluent monitoring stations EFF-001A and EFF-001B was compiled.

Step 3: The maximum effluent concentration (MEC) at effluent monitoring stations EFF-001A and EFF-001B from July 2015 to April 2021 was identified. For pollutants that were not detected the lowest method detection limit (MDL) was used as the MEC in the RPA.

Step 4: The MEC was compared to C for each priority pollutant. For any pollutant in which the MEC was greater than or equal to the C, the pollutant was determined to have reasonable potential and an effluent limitation was established.

Step 5: The maximum background concentration (B) for each priority pollutant for which data was available was determined. Monitoring data collected from monitoring station RSW-001 from July 2015 to April 2021 was used in determining the B.

Step 6: Pollutants for which the B was greater than the C, and which were also detected in the effluent were determined to have reasonable potential, and effluent limitations were established.

Table I of Attachment I contains a summary of the RPA data and results. The CTR and NTR parameters that were determined to have reasonable potential to cause or contribute to an exceedance of water quality criteria were mercury, zinc, selenium, and cadmium.

Section 1.4.2 of the SIP establishes procedures for granting mixing zones and the assimilative capacity of the receiving water. The Discharger has not requested dilution nor provided the necessary dilution analysis to grant dilution. Therefore, no dilution has been granted.

The need for nutrient limitations was based on the alternative method of conformance in the Basin Plan, as discussed in section 4.3.4.1 of this Fact Sheet. The need for effluent limitations for bacteria is based on the requirements of the Bacteria TMDL.

Due to the potential to impact groundwater quality once the effluent is discharged into Sycamore Creek, the municipal water use beneficial use has been considered in the RPA.

A summary of the RPA results for parameters with Basin Plan WQOs which are not listed in the NTR or CTR is provided in Table F-8. The Basin Plan incorporates MCLs by reference as WQOs for the Santee HSA since the Santee HSA is designated for the MUN beneficial use.

Table F-8. Summary of RPA Results for Basin Plan Parameters

Parameter	Units	Maximum Effluent Concentration (MEC)	Maximum Background Concentration (B)	Surface Water WQO	Groundwater WQO	Reasonable Potential (Yes or No)
Aluminum	mg/L	0.2	--	--	0.2	Yes, MEC=C
Barium	mg/L	0.07	--	--	1.0	No
Ammonia, Un-ionized	mg/L	Non-Detect (ND)	0.368	0.025	--	Limit established because San Diego River is listed as impaired for nitrogen on the 303(d) listing of water quality limited segments ⁵
Chloride	mg/L	210	620	400 ¹	400 ¹	Yes, B>C and parameter detected in effluent
Iron, Total Recoverable	mg/L	0.299	5.52	1.0 ¹	0.3 ¹	Yes, B>C and parameter detected in effluent
Manganese	mg/L	0.048	2.54	1.00 ¹	0.05 ¹	Yes, B>C and parameter detected in effluent

Parameter	Units	Maximum Effluent Concentration (MEC)	Maximum Background Concentration (B)	Surface Water WQO	Groundwater WQO	Reasonable Potential (Yes or No)
Methylene Blue-Activated Substances (MBAS)	mg/L	0.11	0.2 (DNQ)	0.5 ¹	0.5 ¹	No
Total Dissolved Solids (TDS)	mg/L	1,710	1,490	1,000 ¹	1,000 ¹	Yes, MEC and B > C, and San Diego River listed as impaired for TDS on the 303 (d) list ⁵
Sulfate	mg/L	347	373	500 ¹	500 ¹	No
Boron	mg/L	0.57	0.68	1.0 ¹	0.75 ¹	No
Fluoride	mg/L	0.778	--	--	1.0 ¹	No
Percent Sodium	%	61.1	--	60 ¹	60 ¹	Yes, MEC>C
pH	standard units	7.69-10.09	7.2-8.23	6.5-8.5	6.5-8.5	Yes, MEC>upper limit of C
Phosphorus, Total (as P)	mg/L	0.66	0.529	0.1 ²	--	Yes, MEC>C
Nitrate (as N)	mg/L	7.46	9.47	--	10 ¹	Limit established because the San Diego River is listed as

Parameter	Units	Maximum Effluent Concentration (MEC)	Maximum Background Concentration (B)	Surface Water WQO	Groundwater WQO	Reasonable Potential (Yes or No)
						impaired for nitrogen on the 303(d) listing of water quality limited segments ⁵
Nitrogen, Total (as N)	mg/L	11.36	10.1	1.0 ²	--	Yes, MEC and B > C, and San Diego River listed as impaired for nitrogen on the 303(d) listing of water quality limited segments ⁵
Color	ADMI Units	13	--	20	15	No
Dissolved Oxygen	mg/L	5 ³	0.85 ³	5.0	--	Yes, MEC and B < C, and San Diego River listed as impaired for dissolved oxygen on the 303 (d) list
Total Trihalomethanes ⁴	µg/L	102	--	--	80	Yes, MEC > C

Parameter	Units	Maximum Effluent Concentration (MEC)	Maximum Background Concentration (B)	Surface Water WQO	Groundwater WQO	Reasonable Potential (Yes or No)
Methyl-tert-butyl-ether	µg/L	40	1.5	--	5	Yes, MEC > C
Total Residual Chlorine	µg/L	ND	--	11 ^{6,7}	--	Limit established based on type of discharge

Notes for Table F-8

1. Concentrations not to be exceeded more than 10 percent of the time during any one-year period.
2. Based on footnote a of Table 3-2 of the Basin Plan, The Basin Plan does not establish analogous concentration values for total nitrogen but establishes that natural ratios of nitrogen to phosphorus (N:P) are to be identified through monitoring and upheld. If data is lacking, a N:P ratio of 10:1 shall be used .
3. Applied as a minimum concentration.
4. See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
5. Pursuant to step 7 of section 1.3 of the SIP, effluent limitations can be established for a pollutant based on information such as a 303 (d) listing for that pollutant; regardless of results of numeric RPA conducted as described in steps 1-6 of the SIP.
6. The Basin Plan does not establish numeric WQOs for total residual chlorine, however, the lowest applicable water quality criteria for total chlorine residual is a chronic 4-day average continuous concentration of 11 µg/L established by USEPA.
7. Although all total chlorine residual values were ND, effluent limitations were established for total residual chlorine based on the type of the discharge and potential toxic impact of residual chlorine on aquatic organisms in the receiving water. Pursuant to step 7 of section 1.3 of the SIP, effluent limitations can be established for a pollutant based on information such as facility type, discharge type, potential toxic impact of the discharge; regardless of results of numeric RPA conducted as described in steps 1-6 of the SIP.

4.3.4. **RPA Results**

Final RPA results demonstrate that WQBELs are required for total phosphorus, ammonia, total nitrogen, selenium, mercury, zinc, cadmium, methyl tert-butyl ether (MTBE), chloride, percent sodium, manganese, total chlorine residual, pH, total dissolved solids, total trihalomethanes, and dissolved oxygen at Discharge Point No. 001.

4.3.4.1. **Nutrients.**

The Basin Plan objective for phosphorus in streams is 0.1 mg/L, not to be exceeded more than 10 percent of the time unless studies of the specific water body in question clearly shows that WQO changes are permissible and changes are approved by the San Diego Water Board. Analogous threshold values have not been set for nitrogen compounds; however, natural ratios of nitrogen to phosphorus are to be determined by surveillance and monitoring and upheld. If data are lacking, a ratio of nitrogen to phosphorus of 10:1, on a weight to weight basis, shall be used. Chapter 4 of the Basin Plan allows for the San Diego Water Board to establish an alternative method for conformance with the nitrogen and phosphorus water quality objectives in waste discharge requirements for discharges of recycled water to surface waters. The San Diego Water Board utilized the alternative method for conformance with nitrogen and phosphorus water quality objectives in Order No. 98-60, and subsequent versions of the NPDES permit for the discharge to Sycamore Creek (including Order No. R9-2015-0002, the previous version of the permit) in establishing effluent limitations for nitrogen and phosphorus for the discharge. This Order establishes effluent limitations for nitrogen and phosphorus based on RPA results. The effluent limitations for nitrate nitrogen are established at Monitoring Location EFF-001, while the effluent limitations for nitrogen and phosphorus are established at Monitoring Location EFF-001B, to protect the MUN beneficial use of the Santee HSA, where surface waters are hydrologically connected to groundwater.

Chapter 4 of the Basin Plan specifies that the San Diego Water Board may determine compliance with the narrative objective for biostimulatory substances based on the following four factors:

- Measurement of ambient concentrations of nitrogen and phosphorus;
- The dissolved oxygen requirements of downstream beneficial uses;
- Use of best available technology (BAT) economically feasible for the removal of nutrients; and
- The development and implementation of a watercourse monitoring management plan.

Order No. R9-2015-0002 used the alternative conformance method as modified to comply with the phosphorus and nitrogen Basin Plan WQOs, using an average annual mass loading effluent limitation instead of a concentration effluent limitation. Order No. R9-2015-0002 also established an effluent limitation of 45 mg/L for nitrate nitrogen, based on MUN beneficial use. Consistent with anti-backsliding requirements, effluent limitations for nutrients have been carried over from Order No. R9-2015-0002 and the conditions of the alternative conformance method have been applied. Effluent limitations for nitrate nitrogen, based on MUN beneficial use, are established at Monitoring Location EFF-001B, where surface waters are hydrologically connected to groundwater and where the MUN beneficial use applies.

4.3.4.1.1. Measurement of Ambient Concentrations of Nitrogen and Phosphorus.

Order No. R9-2015-0002 requires the Discharger to monitor Sycamore Creek, Forrester Creek, and the San Diego River for total nitrogen and total phosphorus at seven locations to assess ambient conditions upstream and downstream of the discharge.

4.3.4.1.2. Dissolved Oxygen Requirements of Downstream Beneficial Uses.

The Basin Plan states that dissolved oxygen shall not be less than 5.0 mg/L in inland surface waters with designated marine habitat or warm freshwater habitat beneficial uses. The annual mean dissolved oxygen concentration shall not be less than 7.0 mg/L more than 10 percent of the time. Results of dissolved oxygen monitoring in Sycamore Creek, Forrester Creek, and the San Diego River from July 2015 through May 2020 are shown in Table F-9:

Table F-9. Receiving Water Dissolved Oxygen Analysis

Monitoring Location	Minimum Concentration (mg/L)	Maximum Concentration (mg/L)	Average Concentration (mg/L)	Median Concentration (mg/L)	90 th Percentile Concentration (mg/L)
RSW-001	0.85	10.83	6.29	6.15	9.29
RSW-001a	1.6	10.54	6.37	6.60	8.67
RSW-002	1.15	10.18	6.03	5.94	8.25
RSW-003	0.8	6.27	3.31	3.19	5.01
RSW-004	1.08	12.70	6.63	6.73	9.67
RSW-005	2.67	8.68	6.10	5.89	8.34
RSW-006	3.15	9.82	7.51	7.68	8.72

The Discharger concluded in its ROWD based on data from January 2015 through December 2019 that contributions of total nitrogen to the San Diego River from the discharge to Santee Lakes from the Facility are approximately three percent, while total phosphorus contributions to the San Diego River were approximately four percent. These contributions to the receiving waters are significantly less than the contributions from all other upstream sources evaluated. Until the data and biological processes are better understood, applicable effluent limitations have been carried forward unchanged.

4.3.4.1.5. Use of BAT Economically Feasible for the Removal of Nutrients.

The Facility’s treatment system currently includes a 5-stage Bardenpho biological nutrient removal system as well as advanced treatment via chemical

phosphorus removal by ferric/alum addition, flocculation and sedimentation, and denitrifying filtration. This technology has not changed since the San Diego Water Board adopted Order No. R9-2003-0179, a previous version of the permit, and determined this level of treatment met the minimum standards for BAT.

- 4.3.4.1.5. **The Development and Implementation of a Watercourse Monitoring and Management Plan (WMMP).** The Basin Plan states that, “The implementation of the WMMP will often require close coordination between many different public and private entities. The San Diego Water Board shall recognize an agency to implement the WMMP and such recognition shall be made part of the provisions of appropriate waste discharge requirements for the discharge.”

On June 13, 1995, the Discharger submitted a “Middle San Diego River Monitoring and Management Program.” Consistent with the requirements of Order No. R9-2009-0037, on September 29, 2009, the Discharger submitted a revised WMMP to address five additional “corrective items” specified in the Basin Plan that had not been previously addressed.

As a condition of the alternative conformance method, this Order requires the Discharger to update the WMMP and collect additional monitoring data as specified in the Basin Plan. If, upon review of the submitted data, the San Diego Water Board determines that impacts to water quality may occur, this Order may be reopened to include concentration-based limitations for nitrogen and phosphorus equal to the Basin Plan WQOs.

4.3.5. **Effluent Limitation Calculations for CTR/NTR Parameters**

- 4.3.5.1. If it is determined that a pollutant has reasonable potential to cause or contribute to an exceedance of a WQO or water quality criterion, then a WQBEL must be established in accordance with one or more of the three procedures contained in section 1.4 of the SIP. These procedures include:
- If applicable and available, use the WLA established as part of a TMDL;
 - Use of a steady-state model to derive maximum daily effluent limitations (MDELs) and average monthly effluent limitations (AMELs); and
 - Where sufficient effluent and receiving water data exist, use of a dynamic model, which has been approved by the San Diego Water Board.
- 4.3.5.2. This Order has established performance goals using the same procedures. The performance goals are summarized in section 4.3.7 of this Fact Sheet.
- 4.3.5.3. The NTR or CTR constituents that were found to have reasonable potential to cause or contribute to an exceedance of water quality criteria based on the data provided between July 2015 and April 2021 were selenium, zinc, cadmium, and mercury. WQBELs for selenium, zinc, cadmium, and mercury were calculated following the procedures in section 1.4 of the SIP.

4.3.5.4. The most stringent NTR or CTR criteria for zinc, selenium, and cadmium are the freshwater aquatic life criteria, while the most stringent NTR or CTR criteria for mercury is the human health criterion for consumption of organisms.

4.3.5.5. Example WQBEL and Performance Goal Calculations

Using cadmium (effluent limitations) and nickel (performance goals) as examples, the following demonstrates how WQBELs and performance goals were established for this Order.

The process for developing these limitations and performance goals is consistent with section 1.4 of the SIP.

4.3.5.5.1. **Example aquatic life AMEL and MDEL Calculations**

Step 1: For each constituent requiring an effluent limitation, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the following steady state equation:

$ECA = C + D(C-B)$ when $C > B$, and

$ECA = C$ when $C \leq B$,

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH, and translators. For discharges from the Facility, criteria for saltwater are independent of hardness and pH.

D= The dilution credit

B = The ambient background concentration

As discussed above $D=0$; therefore:

$ECA = C$

For cadmium, the applicable water quality criteria is from the CTR. Thus for cadmium:

$ECA_{acute} = 7.14 \mu\text{g/L}$

$ECA_{chronic} = 3.38 \mu\text{g/L}$

$ECA_{humanhealth} = \text{no criteria}$

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average (LTA) discharge condition by multiplying the ECA by a factor (multiplier). The multiplier is a statistically-based factor that adjusts the ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP.

$$LTA = ECA \times \text{Multiplier}_{99}$$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80 percent of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6. If the data set is greater than 10 samples or at least 80 percent of the samples in the data set are reported as non-detected, then the CV is calculated by dividing the standard deviation of the data set by the mean of the data set.

For cadmium, at least 80 percent of the samples in the data set were reported as non-detected. Thus, the CV was set equal to 0.6.

For cadmium, the following data was used in this Order to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP.

Based on Table 1 of the SIP:

$$ECA \text{ Acute Multiplier} = 0.321$$

$$ECA \text{ Chronic Multiplier} = 0.527$$

LTA calculations:

$$LTA_{\text{acute}} = 7.14 \mu\text{g/L} \times 0.321 = 2.29 \mu\text{g/L}$$

$$LTA_{\text{chronic}} = 3.38 \mu\text{g/L} \times 0.527 = 1.78 \mu\text{g/L}$$

Step 3: Select the most limiting (lowest) of the LTA.

For cadmium, the most limiting LTA is the $LTA_{\text{chronic}} = 1.78 \mu\text{g/L}$

Step 4: Calculate the WQBELs by multiplying the LTA by a factor (multiplier). WQBELs are expressed as AMEL and MDEL. The multiplier is a statistically-based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples (for AMEL) and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP.

$$AMEL_{\text{aquatic life}} = LTA \times AMEL_{\text{multiplier}95}$$

$$MDEL_{\text{aquatic life}} = LTA \times MDEL_{\text{multiplier}99}$$

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four, the default number of samples to be used is four.

For cadmium, the following data were used to develop the AMEL and MDEL for using equations provided in section 1.4, Step 5 of the SIP:

Table F-10. Data Used for Calculating Effluent Limitations for Cadmium

Number of Samples Per Month	CV	AMEL_{multiplier95}	MDEL_{multiplier99}	Ratio
4	0.6	1.55	3.11	2.01

$AMEL_{\text{aquatic life}} = 1.78 \mu\text{g/L} \times 1.55 = 2.76 \mu\text{g/L}$

$MDEL_{\text{aquatic life}} = 1.78 \mu\text{g/L} \times 3.11 = 5.54 \mu\text{g/L}$

If the parameter has human health criteria, calculate the ECA based on human health and calculate the AMEL and MDEL as described in section 1.4, step 6 of the SIP, and then select the lower of the AMEL and MDEL based on aquatic life; and the AMEL and MDEL based on human health. Since cadmium does not have human health criteria the AMEL and MDEL based on aquatic life were selected and included in the Order.

A summary of the applicable NTR or CTR based effluent limitations is provided in Table F-11:

Table F-11. Summary of NTR or CTR Based Effluent Limitations

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation
Selenium, Total Recoverable	µg/L	4.1	8.2
Selenium, Total Recoverable	lbs/day	0.0682	0.137
Zinc, Total Recoverable	µg/L	54	169
Zinc, Total Recoverable	lbs/day	0.90	2.81
Cadmium, Total Recoverable	µg/L	2.8	5.6
Cadmium, Total Recoverable	lbs/day	0.047	0.093

Parameter	Units	Average Monthly Effluent Limitation	Maximum Daily Effluent Limitation
Mercury, Total Recoverable	µg/L	0.05 ¹	0.10 ¹
Mercury, Total Recoverable	lbs/day	8.34E-04 ¹	1.67E-03 ¹

Notes for Table F-11

1. The effluent limitations listed for mercury are interim limitations. Final annual average effluent limitations for mercury are 0.012 µg/L and 2.00 E-4 lbs/day.

4.3.5.5.2. **Example Performance Goal Calculations**

Step 1: For each constituent requiring a performance goal, identify the applicable water quality criteria or objective. For each criterion, determine the effluent concentration allowance (ECA) using the following steady state equation:

$$ECA = C + D(C-B) \text{ when } C > B, \text{ and}$$

$$ECA = C \text{ when } C \leq B,$$

Where C = The priority pollutant criterion/objective, adjusted if necessary for hardness, pH, and translators. For discharges from the Facility, criteria for saltwater are independent of hardness and pH.

D= The dilution credit

B = The ambient background concentration

As discussed above D=0; therefore:

$$ECA = 0$$

For nickel, the applicable water quality criteria is from the CTR. Thus, for nickel:

$$ECA_{acute} = 661 \text{ µg/L}$$

$$ECA_{chronic} = 74 \text{ µg/L}$$

$$ECA_{humanhealth} = 4,600 \text{ µg/L}$$

Step 2: For each ECA based on aquatic life criterion/objective, determine the long-term average (LTA) discharge condition by multiplying the ECA by a factor (multiplier). The multiplier is a statistically-based factor that adjusts the

ECA to account for effluent variability. The value of the multiplier varies depending on the coefficient of variation (CV) of the data set and whether it is an acute or chronic criterion/objective. Table 1 of the SIP provides pre-calculated values for the multipliers based on the value of the CV. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 3 of the SIP.

$$LTA = ECA \times \text{Multiplier}$$

The CV for the data set must be determined before the multipliers can be selected and will vary depending on the number of samples and the standard deviation of a data set. If the data set is less than 10 samples, or at least 80 percent of the samples in the data set are reported as non-detect, the CV shall be set equal to 0.6. If the data set is greater than 10 samples or at least 80 percent of the samples in the data set are reported as non-detected, then the CV is calculated by dividing the standard deviation of the data set by the mean of the data set.

For nickel, the CV was calculated as the standard deviation of reported results divided by mean since the number of samples was 11 and less than 80 percent of results for nickel analyses were reported as non-detect

$$\text{For nickel dataset, } CV = \text{standard deviation/mean} = 3.60/3.49 = 1.03$$

The following data was used in this Order to develop the acute and chronic LTAs using equations provided in section 1.4, Step 3 of the SIP.

Based on interpolated results from Table 1 of the SIP:

For a CV of 1.03

$$ECA \text{ Acute Multiplier} = 0.199$$

$$ECA \text{ Chronic Multiplier} = 0.364$$

LTA calculations:

$$LTA_{\text{acute}} = 661 \mu\text{g/L} \times 0.199 = 131.3 \mu\text{g/L}$$

$$LTA_{\text{chronic}} = 74 \mu\text{g/L} \times 0.364 = 26.8 \mu\text{g/L}$$

Step 3: Select the most limiting (lowest) of the LTA.

For nickel, the most limiting LTA is the $LTA_{\text{chronic}} = 26.8 \mu\text{g/L}$

Step 4: Calculate the performance goals by multiplying the LTA by a factor (multiplier). Performance goals are expressed as average monthly and maximum daily performance goals. The multiplier is a statistically-based factor that adjusts the LTA for the averaging periods and exceedance frequencies of the criteria/objectives and the effluent limitations. The value of the multiplier varies depending on the probability basis, the CV of the data set, the number of samples and whether it is a monthly or daily limit. Table 2 of the SIP provides pre-calculated values for the multipliers based on the value of the CV and the number of samples. Equations to develop the multipliers in place of using values in the tables are provided in section 1.4, Step 5 of the SIP.

Average monthly performance goal _{aquatic life} = LTA x AMEL_{multiplier95}

Maximum daily performance goal _{aquatic life} = LTA x MDEL_{multiplier99}

AMEL multipliers are based on a 95th percentile occurrence probability, and the MDEL multipliers are based on the 99th percentile occurrence probability. If the number of samples is less than four, the default number of samples to be used is four.

For nickel, the following data were used to develop the AMEL and MDEL for using equations provided in section 1.4, Step 5 of the SIP:

Table F-12. Data Used for Calculating Performance Goals for Nickel

Number of Samples Per Month	CV	AMEL Multiplier _{95th percentile}	MDEL Multiplier _{99th percentile}	Ratio
4	1.03	1.97	5.04	2.55

Average monthly performance goal _{aquatic life} = 26.8 µg/L x 1.97 = 52.8 µg/L

Maximum daily performance goal _{aquatic life} = 26.8 µg/L x 5.04 = 135.1 µg/L

Step 5: For the ECA based on human health, set the average monthly performance goal for human health equal to the ECA for human health.

Average monthly performance goal for human health for nickel = 4,600 µg/L

Step 6: Calculate the maximum daily performance goal for human health by multiplying the average monthly performance goal for human health by the ratio of AMEL Multiplier to the MDEL Multiplier. Table 2 of the SIP provides pre-calculated ratios to be used in this calculation based on the CV and the number of samples.

Maximum daily performance goal for human health = Average monthly performance goal for human health x (MDEL Multiplier/AMEL Multiplier)

For nickel, for a CV of 1.03:

Maximum daily performance goal for human health = 4,600 µg/L x 2.55 = 11,730 µg/L

Step 7: Select the lower of the average monthly and maximum daily performance goals based on aquatic life and human health as the WQBELs for the parameter.

The aquatic life-based performance goals are more stringent than the human health-based performance goals for nickel, thus the aquatic life based performance goals have been established in the Order.

Previous Orders for the Discharger have established effluent limitations based on Basin Plan WQOs by applying them directly as daily maximums. The

resulting effluent limitations are protective of beneficial uses and the same methodology was applied to develop WQBELs for this Order. Consistent with the intent of WQBELs to protect the beneficial uses of the receiving water, WQBELs are applied as far downstream of the treatment system as reasonable. The majority of the parameters are treated within the first half of the Facility, from the primary clarifiers to the point of dechlorination. The second half of the treatment Facility, from Pond C to Lakes No. 7, serves to stabilize the quality of the effluent discharge to Sycamore Creek by reducing the total nitrogen concentrations. Given this, the majority of the WQBELs are applied at Monitoring Location EFF-001A, while WQBELs for nutrients are applied at Monitoring Location EFF-001B. Order No. 98-60, a previous iteration of the NPDES permit for the Facility’s discharge to Sycamore Creek utilized the alternative method described in the Basin Plan for compliance with Basin Plan nitrogen and phosphorus WQOs. Subsequent NPDES permits for the Facility’s discharge to Sycamore Creek, including the previous permit, Order No. R9-2015-0002 have also utilized the alternative method. This Order retains the effluent limitations established in Order No. R9-2015-0002 for nitrogen and phosphorus at Monitoring Location EFF-001B, and for nitrate nitrogen at Monitoring location EFF-001A. Effluent limitations for nitrate nitrogen, based on the MUN beneficial use are established at Monitoring Location EFF-001B, where surface waters are hydrologically connected to groundwater and MUN beneficial use apply. A summary of effluent limitations specified in this Order based on Basin Plan WQOs are listed in Tables F-13 and F-14:

Table F-13. Basin Plan Based Effluent Limitations at Monitoring Location EFF-001A¹

Parameter	Units	Average Monthly ²	Average Weekly ²	Maximum Daily ²	Instantaneous Minimum	Instantaneous Maximum
pH	Standard units	--	--	--	6.5	8.5
Chloride	mg/L	--	--	400	--	--
Chloride	lbs/day	--	--	6,672	--	--
Total Dissolved Solids	mg/L	--	--	1,000	--	--
Total Dissolved Solids	lbs/day	--	--	16,680	--	--

Parameter	Units	Average Monthly ²	Average Weekly ²	Maximum Daily ²	Instantaneous Minimum	Instantaneous Maximum
Total Trihalomethanes	µg/L	80	--	160	--	--
Total Trihalomethanes	lbs/day	1.33	--	2.68	--	--
Dissolved Oxygen	mg/L	--	--	5.0 ³	--	--
MTBE	µg/L	--	--	--	5.0	--
MTBE	lbs/day	--	--	--	0.083	--
Total Residual Chlorine	µg/L	2	8	18	--	--
Total Residual Chlorine	lbs/day	0.033	0.13	0.30	--	--
Aluminum	mg/L	--	--	0.2	--	--
Aluminum	lbs/day	--	--	3.3	--	--
Iron	mg/L	--	--	0.3	--	--
Iron	lbs/day	--	--	5.0	--	--
Manganese, Total Recoverable	mg/L	--	--	0.05	--	--
Manganese, Total Recoverable	lbs/day	--	--	0.83	--	--

Notes for Table F-13

- 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: $MER \text{ (lbs/day)} = 8.34 \times Q \times C$, where Q is the permitted flow for the Facility (15.0 MGD) and C is the concentration (mg/L).

3 Applied as a Daily Minimum.

Table F-14. Basin Plan Based Effluent Limitations at Monitoring Location EFF-001B¹

Parameter	Units	Average Monthly	Maximum Daily	12-Month Average
Ammonia, Un-ionized (as Nitrogen)	mg/L	--	0.025	--
Ammonia, Un-ionized (as Nitrogen)	lbs/day	--	0.42	--
Nitrate Nitrogen	mg/L	--	45	--
Nitrate Nitrogen	lbs/day	--	751	--
Total Nitrogen	lbs/day	--	--	17 ²
Total Phosphorus	lbs/day	--	--	1.7 ²

Notes for Table F-14

- 1 See Attachment A for definitions of abbreviations and a glossary of common terms used in this Order.
- 2 Based on a running 12-month average.

4.3.6. Performance Goals

Constituents that do not have reasonable potential to cause or contribute to an exceedance of water quality objectives have been assigned performance goals. Pursuant to Water Code section 13383, this Order includes monitoring and reporting requirements related to performance goals. Performance goals serve to maintain existing treatment levels and effluent quality and supports state and federal antidegradation policies. Additionally, performance goals provide all interested parties with information regarding the expected level of pollutants in the discharge that should not be exceeded in order to maintain the WQOs established in the Basin Plan. Performance goals are not limitations or standards for the regulation of the discharge. Effluent concentrations above the performance goals

will not be considered as violations of the permit but serve as indicators that the effluent may be causing or contributing to a water quality exceedance. However, any two consecutive exceedances of the performance goals will trigger an investigation into the cause of the exceedance. If the exceedance persists in three successive monitoring events, the Discharger is required submit a written Performance Goal Exceedance Investigation Work Plan to the San Diego Water Board within 30 days of the Discharger becoming aware of the third successive exceedance. The Performance Goal Exceedance Investigation Work Plan is required to outline the investigative steps being taken, whether outside technical expertise is being retained to assist in the investigation, and the proposed schedule for completing a Performance Goal Exceedance Report. The Performance Goal Exceedance Report is required to include a description of the nature of the exceedance(s), the results of the investigation as to the cause of the exceedance(s), and the corrective actions taken, any proposed corrective measures, and a schedule for implementation, if necessary. Repeated exceedances of performance goals may prompt the San Diego Water Board to reopen and amend the permit to replace performance goals for constituents of concern with effluent limitations, or the San Diego Water Board may coordinate such actions with the next permit renewal. Order No. R9-2015-0002 established performance goals at Monitoring Location EFF-001A. The performance goals established in this Order are listed in Table F15.

Table F-15. Performance Goals at Monitoring Location EFF-001A¹

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
1,1,1-trichloroethane	µg/L	2.00E+02	4.01E+02	--
1,1,1-trichloroethane	lbs/day	3.34E+00	6.69E+00	--
1,1,2,2-tetrachloroethane	µg/L	1.70E-01	3.42E-01	--
1,1,2,2-tetrachloroethane	lbs/day	2.84E-03	5.70E-03	--
1,1,2-trichloroethane	µg/L	6.00E-01	1.21E+00	--
1,1,2-trichloroethane	lbs/day	1.00E-02	2.01E-02	--
1,1-dichloroethane	µg/L	5.00E+00	1.01E+01	--
1,1-dichloroethane	lbs/day	8.34E-02	1.68E-01	--
1,1-dichloroethylene	µg/L	5.70E-02	1.14E-01	--
1,1-dichloroethylene	lbs/day	9.51E-04	1.91E-03	--
1,2,4-Trichlorobenzene	µg/L	5.00E+00	1.01E+01	--
1,2,4-Trichlorobenzene	lbs/day	8.34E-02	1.68E-01	--
1,2-Dichlorobenzene	µg/L	6.00E+02	1.20E+03	--
1,2-Dichlorobenzene	lbs/day	1.00E+01	2.01E+01	--
1,2-dichloroethane	µg/L	3.80E-01	7.62E-01	--
1,2-dichloroethane	lbs/day	6.34E-03	1.27E-02	--
1,2-dichloropropane	µg/L	5.20E-01	1.04E+00	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
1,2-dichloropropane	lbs/day	8.67E-03	1.74E-02	--
1,2-diphenylhydrazine	µg/L	4.00E-02	8.02E-02	--
1,2-diphenylhydrazine	lbs/day	6.67E-04	1.34E-03	--
1,2-Trans-Dichloroethylene	µg/L	1.00E+01	2.01E+01	--
1,2-Trans-Dichloroethylene	lbs/day	1.67E-01	3.35E-01	--
1,3-Dichlorobenzene	µg/L	4.00E+02	8.02E+02	--
1,3-Dichlorobenzene	lbs/day	6.67E+00	1.34E+01	--
1,3-dichloropropene	µg/L	5.00E-01	1.00E+00	--
1,3-dichloropropene	lbs/day	8.34E-03	1.67E-02	--
1,4-Dichlorobenzene	µg/L	5.00E+00	1.01E+01	--
1,4-Dichlorobenzene	lbs/day	8.34E-02	1.68E-01	--
2,4,6-trichlorophenol	µg/L	2.10E+00	4.22E+00	--
2,4,6-trichlorophenol	lbs/day	3.50E-02	7.04E-02	--
2,4-Dimethylphenol	µg/L	5.40E+02	1.09E+03	--
2,4-Dimethylphenol	lbs/day	9.01E+00	1.81E+01	--
2,4-dinitrophenol	µg/L	7.00E+01	1.40E+02	--
2,4-dinitrophenol	lbs/day	1.17E+00	2.34E+00	--
2,4-dinitrotoluene	µg/L	9.10E+00	1.83E+01	--
2,4-dinitrotoluene	lbs/day	1.52E-01	3.05E-01	--
2-4 Dichlorophenol	µg/L	9.30E+01	1.87E+02	--
2-4 Dichlorophenol	lbs/day	1.55E+00	3.12E+00	--
2-Chloronaphthalene	µg/L	1.70E+03	3.42E+03	--
2-Chloronaphthalene	lbs/day	2.84E+01	5.70E+01	--
2-Chlorophenol	µg/L	1.20E+02	2.41E+02	--
2-Chlorophenol	lbs/day	2.00E+00	4.02E+00	--
2-Methyl-4,6-Dinitrophenol	µg/L	1.34E+01	2.69E+01	--
2-Methyl-4,6-Dinitrophenol	lbs/day	2.24E-01	4.49E-01	--
3,3'-dichlorobenzidine	µg/L	4.00E-02	8.02E-02	--
3,3'-dichlorobenzidine	lbs/day	6.67E-04	1.34E-03	--
4,4'-DDD	µg/L	8.30E-04	1.67E-03	--
4,4'-DDD	lbs/day	1.38E-05	2.78E-05	--
4,4'-DDE	µg/L	5.90E-04	1.18E-03	--
4,4'-DDE	lbs/day	9.84E-06	1.97E-05	--
4,4'-DDT	µg/L	5.90E-04	1.18E-03	--
4,4'-DDT	lbs/day	9.84E-06	1.97E-05	--
4,6-dinitro-2-methylphenol	µg/L	1.34E+01	2.69E+01	--
4,6-dinitro-2-methylphenol	lbs/day	2.24E-01	4.48E-01	--
Acenaphthene	µg/L	1.20E+03	2.41E+03	--
Acenaphthene	lbs/day	2.00E+01	4.02E+01	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Acrolein	µg/L	3.20E+02	6.43E+02	--
Acrolein	lbs/day	5.34E+00	1.07E+01	--
Acrylonitrile	µg/L	5.90E-02	1.18E-01	--
Acrylonitrile	lbs/day	9.84E-04	1.97E-03	--
Aldrin	µg/L	1.30E-04	2.61E-04	--
Aldrin	lbs/day	2.17E-06	4.36E-06	--
Alpha Endosulfan	µg/L	4.57E-02	9.18E-02	--
Alpha Endosulfan	lbs/day	7.63E-04	1.53E-03	--
Alpha-BHC	µg/L	3.90E-03	7.84E-03	--
Alpha-BHC	lbs/day	6.51E-05	1.31E-04	--
Anthracene	µg/L	9.60E+03	1.93E+04	--
Anthracene	lbs/day	1.60E+02	3.22E+02	--
Antimony	µg/L	6.00E+00	1.20E+01	--
Antimony	lbs/day	1.00E-01	2.01E-01	--
Arsenic, Total Recoverable	µg/L	4.10E+00	1.00E+01	--
Arsenic, Total Recoverable	lbs/day	6.83E-02	1.67E-01	--
Asbestos	Million fibers per liter (MFL)	--	--	7.00E+00
Barium	µg/L	--	--	1.00E+03
Barium	lbs/day	--	--	1.67E+01
Benzene	µg/L	1.00E+00	2.01E+00	--
Benzene	lbs/day	1.67E-02	3.35E-02	--
Benzidine	µg/L	1.20E-04	2.41E-04	--
Benzidine	lbs/day	2.00E-06	4.02E-06	--
Benzo (a) Anthracene	µg/L	4.40E-03	8.84E-03	--
Benzo (a) Anthracene	lbs/day	7.34E-05	1.48E-04	--
Benzo (b) Floranthene	µg/L	4.40E-03	8.84E-03	--
Benzo (b) Floranthene	lbs/day	7.34E-05	1.48E-04	--
Benzo (k) Floranthene	µg/L	4.40E-03	8.84E-03	--
Benzo (k) Floranthene	lbs/day	7.34E-05	1.48E-04	--
Benzo(a)Pyrene	µg/L	4.40E-03	8.84E-03	--
Benzo(a)Pyrene	lbs/day	7.34E-05	1.48E-04	--
Beryllium	µg/L	4.00E+00	5.34E+00	--
Beryllium	lbs/day	6.67E-02	8.91E-01	--
Beta Endosulfan	µg/L	4.57E-02	9.18E-02	--
Beta Endosulfan	lbs/day	7.63E-04	1.53E-03	--
Beta-BHC	µg/L	1.40E-02	2.81E-02	--
Beta-BHC	lbs/day	2.34E-04	4.69E-04	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Bis(2-chloroethyl) Ether	µg/L	3.10E-02	6.22E-02	--
Bis(2-chloroethyl) Ether	lbs/day	5.17E-04	1.04E-03	--
Bis(2-chloroisopropyl)ether	µg/L	1.40E+03	2.81E+03	--
Bis(2-chloroisopropyl)ether	lbs/day	2.34E+01	4.69E+01	--
Bis(2-ethylhexyl)Phthalate	µg/L	1.80E+00	3.62E+00	--
Bis(2-ethylhexyl)Phthalate	lbs/day	3.00E-02	6.03E-02	--
Boron	µg/L	--	--	7.50E+02
Boron	lbs/day	--	--	1.25E+01
Bromoform	µg/L	3.60E+02	6.83E+02	--
Bromoform	lbs/day	6.00E+00	1.14E+01	--
Butbenzyl Phthalate	µg/L	3.00E+03	6.03E+03	--
Butbenzyl Phthalate	lbs/day	5.00E+01	1.01E+02	--
Carbon Tetrachloride	µg/L	2.50E-01	5.02E-01	--
Carbon Tetrachloride	lbs/day	4.17E-03	8.37E-03	--
Chlordane	µg/L	5.70E-04	1.14E-03	--
Chlordane	lbs/day	9.51E-06	1.91E-05	--
Chlorobenzene	µg/L	6.82E+02	1.37E+03	--
Chlorobenzene	lbs/day	1.13E+01	2.28E+01	--
Chlorodibromomethane	µg/L	4.01E-01	8.06E-01	--
Chlorodibromomethane	lbs/day	6.69E-03	1.34E-02	--
Chromium (VI), Total Recoverable ⁵	µg/L	7.11E+00	1.63E+01	--
Chromium (VI), Total Recoverable ⁵	lbs/day	1.19E-01	2.71E-01	--
Chrysene	µg/L	4.40E-03	8.84E-03	--
Chrysene	lbs/day	7.34E-05	1.48E-04	--
Color	AMDI Color Units	--	20	--
Cyanide, Total Recoverable	µg/L	4.25E+00	8.52E+00	--
Cyanide, Total Recoverable	lbs/day	7.09E-02	1.42E-01	--
Dibenzo(a,h)Anthracene	µg/L	4.40E-03	8.84E-03	--
Dibenzo(a,h)Anthracene	lbs/day	7.34E-05	1.48E-04	--
Dichlorobromomethane	µg/L	4.60E+01	6.10E+01	--
Dichlorobromomethane	lbs/day	7.67E-01	1.02E+00	--
Dieldrin	µg/L	1.40E-04	2.81E-04	--
Dieldrin	lbs/day	2.34E-06	4.68E-06	--
Diethyl Phthalate	µg/L	1.20E+05	2.41E+05	--
Diethyl Phthalate	lbs/day	2.00E+03	4.02E+03	--
Dimethyl Phthalate	µg/L	2.90E+06	5.83E+06	--
Dimethyl Phthalate	lbs/day	4.84E+04	9.72E+04	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Di-n-Butyl Phthalate	µg/L	1.20E+04	2.41E+04	--
Di-n-Butyl Phthalate	lbs/day	2.00E+02	4.02E+02	--
Endosulfan Sulfate	µg/L	1.10E+02	2.21E+02	--
Endosulfan Sulfate	lbs/day	1.83E+00	3.69E+00	--
Endrin	µg/L	2.94E-02	5.90E-02	--
Endrin	lbs/day	4.91E-04	9.84E-04	--
Endrin Aldehyde	µg/L	7.60E-01	1.52E+00	--
Endrin Aldehyde	lbs/day	1.27E-02	2.54E-02	--
Ethylbenzene	µg/L	3.00E+02	6.03E+02	--
Ethylbenzene	lbs/day	5.00E+00	1.01E+01	--
Fluoranthene	µg/L	3.00E+02	6.02E+02	--
Fluoranthene	lbs/day	5.00E+00	1.00E+01	--
Fluorene	µg/L	1.30E+03	2.61E+03	--
Fluorene	lbs/day	2.17E+01	4.36E+01	--
Fluoride	µg/L	--	--	1.00E+03
Fluoride	lbs/day	--	--	1.67E+01
Gamma-BHC	µg/L	1.90E-02	3.82E-02	--
Gamma-BHC	lbs/day	3.17E-04	6.37E-04	--
Heptachlor	µg/L	2.10E-04	4.21E-04	--
Heptachlor	lbs/day	3.50E-06	7.03E-06	--
Heptachlor Epoxide	µg/L	1.00E-04	2.01E-04	--
Heptachlor Epoxide	lbs/day	1.67E-06	3.35E-06	--
Hexachlorobenzene	µg/L	7.50E-04	1.51E-03	--
Hexachlorobenzene	lbs/day	1.25E-05	2.51E-05	--
Hexachlorobenzene	µg/L	7.50E-04	1.50E-03	--
Hexachlorobenzene	lbs/day	1.25E-05	2.51E-05	--
Hexachlorobutadiene	µg/L	4.40E-01	8.83E-01	--
Hexachlorobutadiene	lbs/day	7.34E-03	1.47E-02	--
Hexachlorocyclopentadiene	µg/L	5.00E+01	1.01E+02	--
Hexachlorocyclopentadiene	lbs/day	8.34E-01	1.68E+00	--
Hexachloroethane	µg/L	1.90E+00	3.81E+00	--
Hexachloroethane	lbs/day	3.17E-02	6.36E-02	--
Indeno(1,2,3-cd) Pyrene	µg/L	4.40E-03	8.84E-03	--
Indeno(1,2,3-cd) Pyrene	lbs/day	7.34E-05	1.48E-04	--
Isophorone	µg/L	8.40E+00	1.69E+01	--
Isophorone	lbs/day	1.40E-01	2.81E-01	--
Lead, Total Recoverable	µg/L	4.35E+00	8.74E+00	--
Lead, Total Recoverable	lbs/day	7.26E-02	1.46E-01	--
Methyl Bromide	µg/L	4.80E+01	9.65E+01	--

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Methyl Bromide	lbs/day	8.01E-01	1.61E+00	--
Methylene Blue Activated Substances	µg/L	--	--	5.00E+02
Methylene Blue Activated Substances	lbs/day	--	--	8.34E+00
Methylene Chloride (Dichloromethane)	µg/L	4.70E+00	9.43E+00	--
Methylene Chloride (Dichloromethane)	lbs/day	7.84E-02	1.57E-01	--
Nickel, Total Recoverable	µg/L	5.28E+01	1.35E+02	--
Nickel, Total Recoverable	lbs/day	8.81E-01	2.25E+00	--
Nitrobenzene	µg/L	1.70E+01	3.41E+01	--
Nitrobenzene	lbs/day	2.84E-01	5.69E-01	--
N-nitrosodimethylamine	µg/L	6.90E-04	1.38E-03	--
N-nitrosodimethylamine	lbs/day	1.15E-05	2.31E-05	--
N-nitrosodi-N-propylamine	µg/L	5.00E-03	1.00E-02	--
N-nitrosodi-N-propylamine	lbs/day	8.34E-05	1.67E-04	--
N-nitrosodiphenylamine	µg/L	1.60E+01	3.22E+01	--
N-nitrosodiphenylamine	lbs/day	2.67E-01	5.36E-01	--
Pentachlorophenol	µg/L	2.80E-01	5.63E-01	--
Pentachlorophenol	lbs/day	4.67E-03	9.39E-03	--
Percent Sodium	Percent	--	60	--
Perchlorate	µg/L	--	--	6.00E-03
Perchlorate	lbs/day	--	--	1.00E-04
Phenol	µg/L	2.10E+04	4.22E+04	--
Phenol	lbs/day	3.50E+02	7.04E+02	--
Polychlorinated Biphenyls (PCBs)	µg/L	1.70E-04	3.41E-04	--
Polychlorinated Biphenyls (PCBs)	lbs/day	2.84E-06	5.69E-06	--
Pyrene	µg/L	9.60E+02	1.93E+03	--
Pyrene	lbs/day	1.60E+01	3.22E+01	--
Radioactivity, Gross Alpha	picocuries per Liter (pCi/L)	--	--	15
Radium 226 and 228 (combined)	pCi/L	--	--	5
Silver, Total Recoverable	µg/L	4.06E+00	8.14E+00	--
Silver, Total Recoverable	lbs/day	6.77E-02	1.36E-01	--
Sulfate	µg/L	--	--	5.00E+05

Parameter	Units	Average Monthly ^{2,3}	Maximum Daily ^{2,3}	Instantaneous Maximum ^{2,3,4}
Sulfate	lbs/day	--	--	8.34E+03
TCDD Equivalents	µg/L	1.30E-08	2.61E-08	--
TCDD Equivalents	lbs/day	2.17E-10	4.35E-10	--
Tetrachloroethylene (Tetrachloroethene)	µg/L	8.00E-01	1.61E+00	--
Tetrachloroethylene (Tetrachloroethene)	lbs/day	1.33E-02	2.68E-02	--
Thallium, Total Recoverable	µg/L	1.70E+00	3.42E+00	--
Thallium, Total Recoverable	lbs/day	2.84E-02	5.70E-02	--
Toluene	µg/L	1.50E+02	3.02E+02	--
Toluene	lbs/day	2.50E+00	5.03E+00	--
Toxaphene	µg/L	1.63E-04	3.28E-04	--
Toxaphene	lbs/day	2.73E-06	5.47E-06	--
Trichloroethylene (Trichloroethene)	µg/L	2.70E+00	5.43E+00	--
Trichloroethylene (Trichloroethene)	lbs/day	4.50E-02	9.05E-02	--
Vinyl Chloride	µg/L	5.00E-01	1.01E+00	--
Vinyl Chloride	lbs/day	8.34E-03	1.68E-02	--

Notes for Table F-15

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 x 10⁻² or 0.061, 6.1E+02 represents 6.1 x 10² or 610, and 6.1E+00 represents 6.1 x 10⁰ 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 (2.0 MGD) and C is the concentration (mg/L).
4. Not to be exceeded more than 10 percent of the time during any one-year period.
5. Dischargers may, at their option, apply this performance goal as a total chromium performance goal.

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

- 4.3.7.1. 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.

The Basin Plan defines toxicity as the adverse response of organisms to chemical or physical agents.

The Basin Plan establishes a narrative WQO for toxicity which states that all waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life.

- 4.3.7.2. 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 $\leq 0.75 \times$ mean control response." A test that rejects this null hypothesis shall be reported as "Pass". A test that does not reject this null hypothesis shall be reported as "Fail". The chronic toxicity effluent limitation is expressed as "Pass" for each maximum daily individual result. The Discharger shall also report the "Percent Effect" as part of chronic toxicity result.

To determine the need for a chronic toxicity effluent limit, the San Diego Water Board conducted a RPA. In conducting the RPA, the San Diego Water Board considered and evaluated all chronic toxicity data generated during the previous permit term. It is appropriate to evaluate all chronic toxicity data generated during the previous permit term because that data is representative of the actual effluent quality from the treatment system. Reasonable potential exists if any of the chronic toxicity tests results in a "fail" or if the perfect effect at the in-stream waste concentration is greater than 10 percent.

Chronic toxicity tests conducted between July 2015 and April 2021, and listed in Table F-16, were evaluated in conducting the RPA. These chronic toxicity test results were used to conclude that the discharge has reasonable potential to cause or contribute to an exceedance of chronic toxicity objectives and that the discharge is subject to chronic toxicity effluent limitations. While several of the individual chronic toxicity test results listed in Table F-16 were not in violation of chronic toxicity effluent limitations established in Order No. R9-2015-0002, the chronic toxicity test results showed a reasonable potential to cause or contribute to an exceedance of water quality objectives based on the above-described criteria. Thus, an effluent limit for chronic toxicity was included in the Order.

Table F-16. Chronic Toxicity Test Results Used to Conclude Discharge Has Reasonable Potential

Test Initiation Date	Test Result	Percent Effect	Test Endpoint	Monitoring Location¹
February 4, 2016	Fail	32.8	Reproduction	EFF-001B
April 26, 2016	Fail	32.3	Reproduction	EFF-001A
April 26, 2016	Fail	25.4	Reproduction	EFF-001B
November 8, 2016	Fail	26.3	Reproduction	EFF-001A
November 18, 2016	Fail	7.53	Reproduction	EFF-001A
November 29, 2016	Fail	34.1	Reproduction	EFF-001A
March 13, 2017	Fail	19.1	Reproduction	EFF-001A
July 31, 2017	Pass	16	Growth	EFF-001A
August 31, 2017	Pass	15	Growth	EFF-001A
May 7, 2020	Fail	23	Growth	EFF-001B
October 13, 2020	Fail	25	Growth	EFF-001A
October 31, 2020	Pass	15	Growth	EFF-001A

Notes for Table F-16

1. Although chronic toxicity is analyzed for samples collected at monitoring locations, EFF-001 and EFF-001 B, the compliance point for chronic toxicity is monitoring location, EFF-001A.

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.

- 4.3.7.3. Although the Basin Plan specifies that compliance with the narrative WQOs for toxicity shall be evaluated with a 96-hour acute bioassay, effluent limitations and monitoring for acute toxicity are not established in this Order. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer exposure period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Thus, chronic toxicity is a more stringent requirement than acute toxicity. To ensure

the aggregated impacts of pollutants present within the Discharger's effluent does not result in the presence of toxicity within the receiving water, this Order establishes effluent limitations for chronic toxicity.

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.

This Order complies with anti-backsliding provisions because effluent limitations in this Order are at least as stringent with the effluent limitations in Order No. R9-2015-0002. Effluent limitations for bis-2-ethyl hexyl phthalate have been discontinued and performance goals have been assigned for this constituent. This relaxation of water quality effluent limitations are governed by section 402(o)(2) of the CWA. Section 402(o)(2)(B(i) permits the relaxation of an effluent limitation when new information becomes available that would have justified the application of a less stringent standard. New monitoring data collected since adoption of Order No. R9-2015-0002 indicates that the discharge does not have reasonable potential to cause or contribute to an exceedance of water quality criteria for bis-2-ethyl hexyl phthalate. As a result, removal of the effluent limitations of for bis-2-ethyl hexyl phthalate is consistent with the anti-backsliding requirements of the CWA and federal 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.

This Order removes WQBELs for bis-2-ethyl hexyl phthalate as this parameter does not have reasonable potential to cause an exceedance of water quality criteria. This change is not expected to affect the quality of the discharge or to degrade the receiving waters. Requirements of this permit require the Discharger to continue operating at current treatment efficiency. Additionally, performance goals for bis-2-ethyl hexyl phthalate were included in this Order to signal where impacts may be significant. Thus, the removal of these effluent limitations is consistent with federal and state antidegradation policy and a complete antidegradation analysis is not required.

4.4.3. **Stringency of Requirements for Individual Pollutants**

This Order contains both TBELs and WQBELs for individual pollutants. This Order includes effluent limitations for BOD₅, TSS, and pH that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The San Diego Water Board has considered the factors listed in section 13241.1 of the Water Code in establishing these requirements. These limitations remain unchanged from those established in Order No. R9-2015-0002, and the Discharger has demonstrated the ability to consistently comply with the limitations.

WQBELs have been derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs were approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the CTR implemented by the SIP, which was approved by USEPA on May 18, 2000. Most beneficial uses and WQOs contained in the Basin Plan were approved under State law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). The remaining WQOs and beneficial uses implemented by this Order were approved by USEPA and are applicable water quality standards pursuant to 40 CFR section 131.21(c)(2). 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

Section 303(a-c) of the CWA, requires states to adopt water quality standards, including criteria necessary to protect beneficial uses. The San Diego Water Board adopted water quality criteria as WQOs in the Basin Plan. The Basin Plan states “WQOs must protect the most sensitive of the beneficial uses which have been designated for a water body.” The Basin Plan includes numeric and narrative WQOs for various beneficial uses and water bodies. Receiving water limitations of this Order are derived from the WQOs for Inland Surface Waters established by the Basin Plan and Part 3 of the ISWEBE Plan. Consistent with anti-backsliding requirements, numeric and narrative receiving water limitations for dissolved oxygen, pH, nutrients, color, floating material, oil and grease, radioactivity, suspended sediments, suspended and settleable solids, taste and odors, temperature, toxic substances, and turbidity are carried over from Order No. R9-2015-0002.

This Order establishes receiving water limitations for total coliform, fecal coliform, and *E. coli* as stipulated in the Bacteria TMDL based on Basin Plan WQOs for surface waters with the REC-1 beneficial use; and receiving water limitations for enterococci based on State Water Board WQOs from part 3 of the ISWEBE Plan. The receiving water limitations included in the Order for total coliform, fecal coliform, and *E. coli* implement the Bacteria TMDL which establishes WLAs for the Facility based on the Basin Plan WQOs.

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.

6.2.2. Special Studies and Additional Monitoring Requirements

6.2.2.1. Spill Prevention and Response Plans

The CWA largely prohibits any discharge of pollutants from point sources to waters of the United States except as authorized under an NPDES permit. In general, any point source discharge of sewage effluent to waters of the United States must comply with technology-based, secondary treatment standards, at a minimum, and any more stringent requirements necessary to meet applicable water quality standards and other requirements. The unpermitted discharge of wastewater to waters of the United States is illegal under the 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 United States and/or State. There are many factors which may affect the likelihood of a spill. To ensure appropriate funding, management, and planning to reduce the likelihood of a spill, and to increase the level of response if a spill does occur, this Order 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.

6.2.2.3. Watercourse Monitoring and Management Plan (WMMP)

As a condition of demonstrating alternative conformance to Basin Plan WQOs for nitrogen and phosphorus, the Discharger is required to provide updated information for the WMMP. Specific requirements of the WMMP are provided in the Basin Plan (see page 4-41 of the Basin Plan).

6.2.2.4. Data Collection for the WMMP Update

A condition of the alternative conformance determination is the development and implementation of a watercourse monitoring and management plan. The purpose of the WMMP is to collect receiving water data necessary to measure any impacts to beneficial uses. The Basin Plan specifies several parameters that the program shall target for data collection. These requirements shall continue to be incorporated into the Discharger's WMMP.

6.2.2.5. Whole Effluent Toxicity

The Basin Plan states, "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration, or other appropriate methods as specified by the San Diego Water Board." The Basin Plan further states, "survival of aquatic life in surface waters subjected to a waste discharge, shall not be less than that for the same water body in areas unaffected by the discharge..." and that effluent limitations based upon acute bioassays of effluent will be prescribed where appropriate. This Order incorporates chronic toxicity effluent limitations and monitoring requirements.

This Order and MRP require the Discharger to conduct additional toxicity testing for exceedances of the chronic toxicity effluent limitations. If the additional tests demonstrate toxicity, the Discharger is required to submit a Toxicity Reduction Evaluation (TRE) workplan in accordance with USEPA guidance which shall include further steps taken by the Discharger to investigate, identify, and correct the causes of toxicity; actions the Discharge will take to mitigate the effects of the discharge and prevent the recurrence of toxicity; and a schedule for these actions. This provision also includes requirements to conduct the Toxicity Identification Evaluation (TIE) process in accordance with the Workplan if the results of toxicity testing exceed the effluent limitation for toxicity.

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

In algaecide or aquatic herbicide applications, it is reasonable to conclude that some residual algaecides or aquatic herbicides will remain in the waters. These residual algaecides or aquatic herbicides may cause toxicity to aquatic life. However, information regarding the specific amount of algaecide or aquatic herbicide residues in the waters as a result of direct applications for weed control is not adequate to develop limitations for these algaecides and

aquatic herbicides. Therefore, this Order contains monitoring triggers and/or monitoring requirements for these algaecides or aquatic herbicides. The monitoring triggers and monitoring data will be used to assess whether the discharges of these algaecide or aquatic herbicide residues have the reasonable potential to cause or contribute to an excursion of a water quality standard, including numeric and narrative objectives within a standard, in Sycamore Creek, a tributary of the San Diego River.

The Discharger is required to minimize the discharge of pollutants consistent with the requirements of section 2.4.5.1 of the SIP. The goal of the pollutant minimization program is to reduce all potential sources of a priority pollutant through pollutant minimization strategies to maintain the effluent concentration at or below WQBELs.

6.2.4. Construction, Operation, and Maintenance Specifications

- 6.2.4.1. This Order requires the Discharger 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 carries over a provision from Order No. R9-2015-0002 to ensure all waste treatment, containment, and disposal facilities are protected against the impact of 100-year peak stream flows.
- 6.2.4.3. This Order carries over a provision from Order No. R9-2015-0002 to ensure waste treatment, containment, and disposal facilities are protected against the impact of storm events.
- 6.2.4.4. This Order adds a provision to ensure waste treatment, containment, and disposal facilities are protected against regional impacts due to climate change (e.g., sea level rise and floods).
- 6.2.4.5. This Order adds a provision based on the requirements of 40 CFR section 122.41(e) to ensure the Facility has adequate power.

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

6.2.5.1 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.

6.2.5.2. 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 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)].

6.2.6. **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. Based on information provided by the Discharger, San Diego Water Board estimates the requirements in the MRP collectively cost between \$350,000 to \$400,000 per year. The reports required by the MRP are needed to ensure compliance with the Order, protect beneficial uses, and

obtain other benefits as described in this Fact Sheet and the MRP. Thus, the burdens, including costs, of the MRP required by this Order bear a reasonable relationship to the need for and benefits to be obtained from the MRP.

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 requirements been retained from Order No. R9-2015-0002, except this Order removes the requirement to monitor for total nitrogen and total phosphorus.

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 Order No. R9-2015-0002, with the following exceptions:

- This Order removes the requirement to monitor for chemical oxygen demand at monitoring location EFF-001A because there are no effluent limitations for chemical oxygen demand and the Discharger is required to monitor for BOD₅.
- This Order removes the requirement to monitor for specific conductance at monitoring location EFF-001A and EFF-001B because TDS is required to be monitored at these locations.
- This Order adds monitoring requirements for perchlorate, gross alpha radioactivity, and radium 226 and 228 at monitoring location EFF-001A to evaluate consistency with performance goals and provide data for future RPAs.
- This Order increases the monitoring frequency for cadmium, mercury, and selenium at monitoring location EFF-001A from twice per year to once per month to evaluate compliance with effluent limitations.
- This Order reduces the monitoring frequency for fecal coliform and enterococci at monitoring location EFF-001A from once per day to once per week.
- The previous Order, Order No. R9-2015-0002, required that bis(2-ethylhexyl)phthalate be monitored at monitoring location EFF-001A once per month with the option to reduce the frequency to twice per year after four consecutive months of non-detect. This Order requires bis(2-ethylhexyl)phthalate be monitored twice per year at monitoring location EFF-001A.

- This Order adds monitoring requirements for flumioxazin at monitoring location EFF-001B to evaluate compliance with the pesticide monitoring trigger.
- This Order requires the monitoring frequency for *E. coli*, total coliform, fecal coliform, and/or enterococci at monitoring location EFF-001B be increased from once per week to once per day if both the applicable receiving water limitation is exceeded at monitoring location RSW-001a and the applicable effluent limitation is exceeded at EFF-001A. The Discharger may automatically reduce the frequency back to once per week once the receiving water is in compliance with receiving water limitations. This monitoring requirement will provide information on the Facility's contribution to bacteria exceedances in the receiving water.

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

7.1.3. Whole Effluent Toxicity Testing Requirements

Chronic toxicity effluent limitations and monitoring requirements have been established in this Order in accordance with *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects until it gets to the higher level. For this Order, chronic toxicity in the discharge is evaluated using USEPA's 2010 TST hypothesis testing approach, and is expressed as "Pass" or "Fail" for the median monthly summary results and "Pass" or "Fail" and "Percent Effect" for each individual chronic toxicity result. The chronic toxicity effluent limitations protect the narrative water quality objective in the Basin Plan.

This Order requires the Discharger to submit 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. The Discharger may update the Initial Investigation TRE Work Plan submitted pursuant to Order No. R9-2015-0002.

If a routine chronic toxicity test results in a "Fail" at the instream waste concentration, this Order requires the Discharger to conduct a maximum of two chronic toxicity tests in the same calendar month to evaluate compliance with the MMEL. A TRE is required when the Discharger has any combination of two or more MDEL or MMEL violations within a single calendar month or within two successive calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, fish kills, intermittent recurring toxicity, etc.), then the San Diego Water Board may require a TRE. If a TRE is required, the Discharger is required to submit a Detailed TRE work plan in accordance with USEPA guidance 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. This provision also includes requirements to conduct the TRE/TIE process in accordance with the submitted work plan if the results of toxicity testing exceed the effluent limitations for toxicity.

Refer to section 3.3 of the MRP (Attachment E).

7.2. Receiving Water Monitoring Requirements

The receiving water monitoring requirements set forth below are designed to measure the effects of the effluent discharge on the receiving water. These monitoring requirements will remain in effect on an interim basis, pending development of a new and updated monitoring and assessment program.

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

7.2.1. Surface Water Quality Monitoring Requirements

This Order carries over the surface water monitoring requirements from Order No. R9-2015-0002, except this Order removes the requirement to monitor for specific conductance and adds a requirement to monitor for *E. coli*. Specific conductance was removed as TDS is required to be monitored in the receiving water. *E. coli* was added to evaluate compliance with the *E. coli* receiving water limitation. The surface water monitoring requirements are needed to evaluate compliance with applicable WQOs.

Refer to sections 4.1 through 4.3 of the MRP (Attachment E).

7.2.2. Groundwater-Not Applicable

7.2.3. Benthic and Fish Tissue Monitoring in Sycamore Creek

- 7.2.3.1. **Benthic Monitoring.** Benthic monitoring requirements at Monitoring Locations RSW-001a and RSW-001 have been carried over from Order No. R9-2015-0002, with the exception of updating the reference documents. These monitoring requirements are included in this Order to evaluate the impact of the discharge on the benthic community within Sycamore Creek.

Refer to section 4.4.1 of the MRP (Attachment E)

- 7.2.3.1. **Fish Tissue Monitoring.** Fish tissue monitoring requirements have been carried over from Order No. R9-2015-0002, except this Order requires fish tissue monitoring results be submitted to the California Environmental Data Exchange Network (CEDEN) or an equivalent database that is linked to CEDEN within one year of sample collection. Fish tissue monitoring is necessary to monitor potential human health effects from the discharge. Further, fish tissue sampling, combined with benthic monitoring provides a reliable indication of the health of the receiving water and the impacts of the discharge.

Refer to section 4.4.2 of the MRP (Attachment E)

7.3. Regional Monitoring Requirements

The Discharger's effluent has the potential to impact the receiving water, and downstream receiving waters to which Sycamore Creek is a tributary. The Discharger is required to participate in regional monitoring activities as directed by the San Diego Water Board. The intent of regional monitoring activities is to maximize efforts of all monitoring partners using a more cost-effective monitoring design and to best utilize the pooled resources of the region.

Refer to section 5 of the MRP (Attachment E)

7.4. Special Studies Requirements

- 7.4.1. **Downstream Bacteria Evaluation and Action Plan.** As discussed in sections 3.4 and 4.3.2.4 of this Fact Sheet, the Lower San Diego River is 303(d) listed for indicator bacteria and WLA for bacteria are applicable to the Discharger. This requirement specifies that the Discharger minimize the contribution of bacteria to the receiving water if effluent data and receiving water indicate that Facility effluent is causing or contributing to an exceedance of WQOs within the receiving water immediately downstream of Discharge Point No. 001.

Refer to section 6.1 of the MRP (Attachment E).

7.5. Other Monitoring Requirements

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 has considered the issuance of WDRs that will serve as an NPDES permit for the Facilities. As a step in the WDR adoption process, the San Diego Water Board staff has developed tentative WDRs and has 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 October 15, 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 the Executive Office at the San Diego Water Board 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 November 15, 2021.

8.3. **Public Hearing**

The San Diego Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date:	February 9, 2022
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:
http://www.waterboards.ca.gov/public_notices/petitions/wqpetition_instructions.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 – BASIN PLAN DISCHARGE PROHIBITIONS

1. Basin Plan Discharge Prohibitions
 - 1.1. 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.
 - 1.2. The discharge of waste to land, except as authorized by WDRs of the terms described in Water Code section 13264 is prohibited.
 - 1.3. 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.
 - 1.4. 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.
 - 1.5. 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.
 - 1.6. 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.
 - 1.7. 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.
 - 1.8. 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].

- 1.9. The unauthorized discharge of treated or untreated sewage to waters of the State or to a storm water conveyance system is prohibited.
- 1.10. 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.
- 1.11. The discharge of radioactive wastes amenable to alternative methods of disposal into the waters of the State is prohibited.
- 1.12. The discharge of any radiological, chemical, or biological warfare agent into waters of the State is prohibited.
- 1.13. 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.
- 1.14. 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.

ATTACHMENT H – SUMMARY OF WATER QUALITY CRITERIA FOR PRIORITY POLLUTANTS

Table H provides a comparison of applicable water quality criteria for priority pollutants, which include water quality criteria established in the National Toxics Rule (NTR) or California Toxics Rule (CTR) and maximum contaminant levels (MCLs) established in Title 22 of the California Code of Regulations. Some of the freshwater criteria established in the NTR and CTR are hardness dependent. In determining the applicable NTR or CTR criteria for hardness dependent metals, a hardness concentration of 150 milligrams per liter was used, which is the 90th percentile lowest hardness value reported at monitoring station RSW-001 from July 2015 to April 2021.

Table H. Summary of Applicable Water Quality Criteria for Priority Pollutants¹

Priority Pollutant	Lowest/ Most Stringent Criteria ²	Lowest/Most Stringent Human Health Criteria ²	Lowest/Most Stringent Chronic Criterion ²	Lowest/Most Stringent Acute Criterion ²	Primary MCL/Basin Plan WQO ²	Freshwater Acute CMC (from NTR or CTR) ²	Freshwater Chronic CMC (from NTR or CTR) ²	CTR Human Health Criteria ¹	Ma	Ba	Mc	Bc	Conversion Factor for (CF) Freshwater Acute Criteria (MDEL)	CF for Freshwater Chronic Criteria (AMEL)
Antimony	6	4,300	--	--	6	--	--	4,300	--	--	--	--	--	--
Arsenic	10	10	150	10	10	340	150	--	--	--	--	--	1	-1
Beryllium	4	--	--	4.0	4	--	--	--	--	--	--	--	--	--
Cadmium	3.4	--	1.7	2.6	5	7.1	3.4	--	1.1280	-3.6867	0.7852	-2.715	0.927 ³	0.892 ³
Chromium (III)	289	--	289	2420	--	2420	289	--	0.8190	3.6880	0.8190	1.5610	0.316	0.860
Chromium (VI)	11.4	--	11	16	--	16	11	--	--	--	--	--	0.982	0.962
Chromium (Total)	50	--	--	50	50	--	--	--	--	--	--	--	--	--
Copper	13	--	13	21	--	21	13	--	0.9422	-1.7000	0.8545	-1.7020	0.960	0.960
Lead	5.3	--	5.3	137	--	137	5.3	--	1.2730	-1.4600	1.2730	-4.7050	0.732 ³	0.732 ³
Mercury	0.051	0.05	--	2.0	2	--	--	0.051	--	--	--	--	--	--
Nickel	74	100	74	661	100	661	74	4,600	0.8460	2.2550	0.8460	0.0584	0.998	0.997
Selenium	5	50	5.0	20	50	20	5	--	--	--	--	--	--	--
Silver	8.2	100	--	8.2	100	8.2	--	--	1.7200	-6.5200	--	--	0.850	--
Thallium	2	2	--	2	2	--	--	6.3	--	--	--	--	--	--
Zinc	169	--	169	169	--	169	169	--	0.8473	0.8840	0.8473	0.8840	0.978	0.986
Cyanide	5.2	150	5.2	22	150	22	5.2	220,000	--	--	--	--	--	--
Asbestos ²	7	--	--	7	7	--	--	--	--	--	--	--	--	--
2,3,7,8-TCDD	1.4E-08	1.4E-08	--	3.0E-08	3.0E-08	--	--	1.4E-08	--	--	--	--	--	--

Priority Pollutant	Lowest/ Most Stringent Criteria ²	Lowest/Most Stringent Human Health Criteria ²	Lowest/Most Stringent Chronic Criterion ²	Lowest/Most Stringent Acute Criterion ²	Primary MCL/Basin Plan WQO ²	Freshwater Acute CMC (from NTR or CTR) ²	Freshwater Chronic CMC (from NTR or CTR) ²	CTR Human Health Criteria ¹	Ma	Ba	Mc	Bc	Conversion Factor for (CF) Freshwater Acute Criteria (MDEL)	CF for Freshwater Chronic Criteria (AMEL)
Acrolein	780	780	--	--	--	--	--	780	--	--	--	--	--	--
Acrylonitrile	0.66	0.66	--	--	--	--	--	0.66	--	--	--	--	--	--
Benzene	1	71	--	1	1	--	--	71	--	--	--	--	--	--
Bromoform	360	360	--	--	--	--	--	360	--	--	--	--	--	--
Carbon Tetrachloride	0.5	4.4	--	0.50	0.5	--	--	4.4	--	--	--	--	--	--
Chlorobenzene	70	21,000	--	70	70	--	--	21,000	--	--	--	--	--	--
Chlorodibromomethane	34	34	--	--	--	--	--	34	--	--	--	--	--	--
Chloroethane	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
2-Chloroethylvinyl Ether	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloroform	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Dichlorobromomethane	46	46	--	--	--	--	--	46	--	--	--	--	--	--
1,1-Dichloroethane	5	--	--	5.0	5	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	0.5	99	--	0.50	0.5	--	--	99	--	--	--	--	--	--
1,1-Dichloroethylene	3.2	3.2	--	6.0	6	--	--	3.2	--	--	--	--	--	--
1,2-Dichloropropane	5	39	--	5.0	5	--	--	39	--	--	--	--	--	--
1,3-Dichloropropylene	0.5	1,700	--	0.50	0.5	--	--	1,700	--	--	--	--	--	--
Ethylbenzene	300	29,000	--	300	300	--	--	29,000	--	--	--	--	--	--
Methyl Bromide	4,000	4,000	--	--	--	--	--	4,000	--	--	--	--	--	--
Methyl Chloride	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Methylene Chloride (Dichloromethane)	5	1,600	--	5.0	5	--	--	1,600	--	--	--	--	--	--
1,1,2,2-Tetrachloroethane	1	11	--	1.0	1	--	--	11	--	--	--	--	--	--
Tetrachloroethylene	5	8.85	--	5.0	5	--	--	8.85	--	--	--	--	--	--
Toluene	150	200,000	--	150	150	--	--	200,000	--	--	--	--	--	--

Priority Pollutant	Lowest/ Most Stringent Criteria ²	Lowest/Most Stringent Human Health Criteria ²	Lowest/Most Stringent Chronic Criterion ²	Lowest/Most Stringent Acute Criterion ²	Primary MCL/Basin Plan WQO ²	Freshwater Acute CMC (from NTR or CTR) ²	Freshwater Chronic CMC (from NTR or CTR) ²	CTR Human Health Criteria ¹	Ma	Ba	Mc	Bc	Conversion Factor for (CF) Freshwater Acute Criteria (MDEL)	CF for Freshwater Chronic Criteria (AMEL)
1,2-Trans-Dichloroethylene	10	140,000	--	10	10	--	--	140,000	--	--	--	--	--	--
1,1,1-Trichloroethane	200		--	200	200	--	--	--	--	--	--	--	--	--
1,1,2-Trichloroethane	5	42	--	5.0	5	--	--	42	--	--	--	--	--	--
Trichloroethylene	5	81	--	5.0	5	--	--	81	--	--	--	--	--	--
Vinyl Chloride	1	525	--	0.50	0.5	--	--	525	--	--	--	--	--	--
Chlorophenol	400	400	--	--	--	--	--	400	--	--	--	--	--	--
2,4-Dichlorophenol	790	790	--	--	--	--	--	790	--	--	--	--	--	--
2,4-Dimethylphenol	2,300	2,300	--	--	--	--	--	2,300	--	--	--	--	--	--
2-Methyl-4,6-Dinitrophenol	765	765	--	--	--	--	--	765	--	--	--	--	--	--
2,4-Dinitrophenol	14,000	14,000	--	--	--	--	--	14,000	--	--	--	--	--	--
2-Nitrophenol	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
4-Nitrophenol	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
3-Methyl-4-Chlorophenol	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Pentachlorophenol	1	8.2	8	1.0	1	2	1	8.2	--	--	--	--	--	--
Phenol	4,600,000	4,600,000	--	--	--	--	--	4,600,000	--	--	--	--	--	--
2,4,6-Trichlorophenol	6.5	6.5	--	--	--	--	--	6.5	--	--	--	--	--	--
Acenaphthene	2,700	2,700	--	--	--	--	--	2,700	--	--	--	--	--	--
Acenaphthylene	No Criteria		--	--	--	--	--	--	--	--	--	--	--	--
Anthracene	110,000	110,000	--	--	--	--	--	110,000	--	--	--	--	--	--
Benzidine	0.00054	0.00054	--	--	--	--	--	0.00054	--	--	--	--	--	--
Benzo(a)Anthracene	0.049	0.049	--	--	--	--	--	0.049	--	--	--	--	--	--
Benzo(a)Pyrene	0.049	0.049	--	0.20	0.2	--	--	0.049	--	--	--	--	--	--
Benzo(b)Fluoranthene	0.049	0.049	--	--	--	--	--	0.049	--	--	--	--	--	--

Priority Pollutant	Lowest/ Most Stringent Criteria ²	Lowest/Most Stringent Human Health Criteria ²	Lowest/Most Stringent Chronic Criterion ²	Lowest/Most Stringent Acute Criterion ²	Primary MCL/Basin Plan WQO ²	Freshwater Acute CMC (from NTR or CTR) ²	Freshwater Chronic CMC (from NTR or CTR) ²	CTR Human Health Criteria ¹	Ma	Ba	Mc	Bc	Conversion Factor for (CF) Freshwater Acute Criteria (MDEL)	CF for Freshwater Chronic Criteria (AMEL)
Benzo(ghi)Perylene	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Benzo(k)Fluoranthene	0.049	0.049	--	--	--	--	--	0.049	--	--	--	--	--	--
Bis(2-Chloroethoxy) Methane	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Bis(2-Chloroethyl)Ether	1.4	1.4	--	--	--	--	--	1.4	--	--	--	--	--	--
Bis(2-Chloroisopropyl)Ether	170,000	170,000	--	--	--	--	--	170,000	--	--	--	--	--	--
Bis(2-Ethylhexyl)Phthalate	5.9	5.9	--	--	--	--	--	5.9	--	--	--	--	--	--
4-Bromophenyl Phenyl Ether	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Butylbenzyl Phthalate	5,200	5,200	--	--	--	--	--	5,200	--	--	--	--	--	--
2-Chloronaphthalene	4,300	4,300	--	--	--	--	--	4,300	--	--	--	--	--	--
4-Chlorophenyl Phenyl Ether	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Chrysene	0.049	0.049	--	--	--	--	--	0.049	--	--	--	--	--	--
Dibenzo(a,h)Anthracene	0.049	0.049	--	--	--	--	--	0.049	--	--	--	--	--	--
1,2-Dichlorobenzene	600	17,000	--	600	600	--	--	17,000	--	--	--	--	--	--
1,3-Dichlorobenzene	2,600	2,600	--	--	--	--	--	2,600	--	--	--	--	--	--
1,4-Dichlorobenzene	5	2,600	--	5.0	5	--	--	2,600	--	--	--	--	--	--
3,3'-Dichlorobenzidine	0.077	0.077	--	--	--	--	--	0.077	--	--	--	--	--	--
Diethyl Phthalate	120,000	120,000	--	--	--	--	--	120,000	--	--	--	--	--	--
Dimethyl Phthalate	2,900,000	2,900,000	--	--	--	--	--	2,900,000	--	--	--	--	--	--
Di-n-Butyl Phthalate	12,000	12,000	--	--	--	--	--	12,000	--	--	--	--	--	--
2,4-Dinitrotoluene	9.1	9.1	--	--	--	--	--	9.1	--	--	--	--	--	--
2,6-Dinitrotoluene	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--

Priority Pollutant	Lowest/ Most Stringent Criteria ²	Lowest/Most Stringent Human Health Criteria ²	Lowest/Most Stringent Chronic Criterion ²	Lowest/Most Stringent Acute Criterion ²	Primary MCL/Basin Plan WQO ²	Freshwater Acute CMC (from NTR or CTR) ²	Freshwater Chronic CMC (from NTR or CTR) ²	CTR Human Health Criteria ¹	Ma	Ba	Mc	Bc	Conversion Factor for (CF) Freshwater Acute Criteria (MDEL)	CF for Freshwater Chronic Criteria (AMEL)
Di-n-Octyl Phthalate	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
1,2-Diphenylhydrazine	0.54	0.54	--	--	--	--	--	0.54	--	--	--	--	--	--
Fluoranthene	370	370	--	--	--	--	--	370	--	--	--	--	--	--
Fluorene	14,000	14,000	--	--	--	--	--	14,000	--	--	--	--	--	--
Hexachlorobenzene	0.00077	0.00077	--	1.0	1	--	--	0.00077	--	--	--	--	--	--
Hexachlorobutadiene	50	50	--	--	--	--	--	50	--	--	--	--	--yll	--
Hexachlorocyclopentadiene	50	17,000	--	50	50	--	--	17,000	--	--	--	--	--	--
Hexachloroethane	8.9	8.9	--	--	--	--	--	8.9	--	--	--	--	--	--
Indeno(1,2,3-cd) Pyrene	0.049	0.049	--	--	--	--	--	0.049	--	--	--	--	--	--
Isophorone	600	600	--	--	--	--	--	600	--	--	--	--	--	--
Naphthalene	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Nitrobenzene	1,900	1,900	--	--	--	--	--	1,900	--	--	--	--	--	--
N-Nitrosodimethylamine	8.1	8.1	--	--	--	--	--	8.1	--	--	--	--	--	--
N-Nitrosodi-n-Propylamine	1.4	1.4	--	--	--	--	--	1.4	--	--	--	--	--	--
N-Nitrosodiphenylamine	16	16	--	--	--	--	--	16	--	--	--	--	--	--
Phenanthrene	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Pyrene	11,000	11,000	--	--	--	--	--	11,000	--	--	--	--	--	--
1,2,4-Trichlorobenzene	5	--	--	--	--	--	--	--	--	--	--	--	--	--
Aldrin	0.00014	0.00014	--	3	--	3	--	0.00014	--	--	--	--	--	--
alpha-BHC	0.013	0.013	--	--	--	--	--	0.013	--	--	--	--	--	--
beta-BHC	0.046	0.046	--	--	--	--	--	0.046	--	--	--	--	--	--
gamma-BHC (Lindane)	0.063	0.063	--	0.95	--	0.95	--	0.063	--	--	--	--	--	--
delta-BHC	No Criteria	--	--	--	--	--	--	--	--	--	--	--	--	--
Chlordane	0.00059	0.00059	0.0043	2.4	--	2.4	0.0043	0.00059	--	--	--	--	--	--

Priority Pollutant	Lowest/ Most Stringent Criteria ²	Lowest/Most Stringent Human Health Criteria ²	Lowest/Most Stringent Chronic Criterion ²	Lowest/Most Stringent Acute Criterion ²	Primary MCL/Basin Plan WQO ²	Freshwater Acute CMC (from NTR or CTR) ²	Freshwater Chronic CMC (from NTR or CTR) ²	CTR Human Health Criteria ¹	Ma	Ba	Mc	Bc	Conversion Factor for (CF) Freshwater Acute Criteria (MDEL)	CF for Freshwater Chronic Criteria (AMEL)
4,4-DDT	0.00059	0.00059	0.001	1.1	--	1.1	0.001	0.00059	--	--	--	--	--	--
4,4-DDE	0.00059	0.00059	--	--	--	--	--	0.00059	--	--	--	--	--	--
4,4-DDD	0.00084	0.00084	--	--	--	--	--	0.00084	--	--	--	--	--	--
Dieldrin	0.00014	0.00014	--	--	--	--	--	0.00014	--	--	--	--	--	--
alpha-Endosulfan	0.056	240	0.056	0.22	--	0.22	0.056	240	--	--	--	--	--	--
beta-Endosulfan	0.056	240	0.056	0.22	--	0.22	0.056	240	--	--	--	--	--	--
Endosulfan Sulfate	240	240	--	--	--	--	--	240	--	--	--	--	--	--
Endrin	0.036	0.81	0.036	0.086	--	0.086	0.036	0.81	--	--	--	--	--	--
Endrin Aldehyde	0.81	0.81	--	--	--	--	--	0.81	--	--	--	--	--	--
Heptachlor	0.00021	0.00021	0.0038	0.52	--	0.52	0.0038	0.00021	--	--	--	--	--	--
Heptachlor Epoxide	0.00011	0.00011	0.0038	0.52	--	0.52	0.0038	0.00011	--	--	--	--	--	--
PCBs sum	0.00017	0.00017	0.014	0.50	--	--	0.014	0.00017	--	--	--	--	--	--
Toxaphene	0.0002	0.00075	0.0002	0.73	--	0.73	0.0002	0.00075	--	--	--	--	--	--

Notes for Table H:

1. Definitions of abbreviations: CF = Conversion Factor, CMC = Criterion Maximum Concentration, CCC = Criterion Continuous Concentration, WQO = Water Quality Objective, MDEL = Maximum Daily Effluent Limitation, AMEL = Average Monthly Effluent Limitation, µg/L = Micrograms Per Liter, MFL = Million Fibers Per Liter.
2. Concentrations of criteria for all pollutants are expressed in µg/L with the exception of the criterion for asbestos which is expressed in MFL.
3. These factors are dependent on the hardness of the receiving water. A hardness of 150 mg/L was used in calculating these factors.

ATTACHMENT I- SUMMARY OF REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

A reasonable potential analysis (RPA) was conducted for all priority pollutants identified in the National Toxics Rule (NTR) and the California Toxics Rule (CTR). The RPA was conducted based on procedures identified in section 1.4 of the SIP. The following steps outlined in section 1.3 of the Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP) were followed in the RPA:

Step 1: The lowest/most stringent water quality criteria (C) for each priority pollutant was identified from applicable water quality criteria specified in the NTR or CTR, Water Quality Control Plan for the San Diego Basin (Basin Plan), and from maximum contaminant levels (MCLs) specified in Title 22 of the California Code of Regulations.

Step 2: Effluent data at effluent monitoring stations EFF-001A and EFF-001B collected from July 2015 to April 2021 was identified.

Step 3: The maximum effluent concentration (MEC) at effluent monitoring stations EFF-001A and EFF-001B from July 2015 to April 2021 was identified. For pollutants that were not detected the lowest method detection limit (MDL) was used as the MEC in the RPA.

Step 4: The MEC was compared to C for each priority pollutant. For any pollutant in which the MEC was greater than or equal to the C, the pollutant was determined to have reasonable potential and an effluent limitation was established.

Step 5: The maximum background concentration (B) for each priority pollutant for which data was available was determined. Monitoring data collected from monitoring station RSW-001 from July 2015 to April 2021 was used in determining the B.

Step 6: Pollutants for which the B was greater than the C, and which were also detected in the effluent were determined to have reasonable potential, and effluent limitations were established.

Table I provides a summary of the RPA data and results:

Table I- Summary of Reasonable Potential Analysis for Priority Pollutants^{1,2}

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (If all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
Antimony	6	Basin Plan/MCL	Y	N	--	0.5	Y	N	--	0.53	No
Arsenic	10	Basin Plan/MCL	Y	N	--	1	Y	N	--	2.8	No
Beryllium	4	Basin Plan/MCL	Y	N	--	0.8	Y	N	--	0.4 (DNQ)	No
Cadmium	3.4	NTR or CTR	Y	N	--	8	Y	N	--	2 (DNQ)	Yes, MEC >C
Chromium (III)	289	NTR or CTR	Y	N	--	0.65	Y	N	--	0.14	No
Chromium (VI)	11.4	NTR or CTR	Y	N	--	0.16	Y	N	--	0.059	No
Copper	3.73	NTR or CTR	Y	N	--	4.1	Y	N	--	2.2	Yes
Lead	5.3	NTR or CTR	Y	N	--	0.33	Y	N	--	1(DNQ)	No
Mercury	0.051	NTR or CTR	Y	N	--	0.7	Y	N	--	2.34	Yes, B>C and

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (If all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
											pollutant detected in effluent
Nickel	74	NTR or CTR	Y	N	--	4.40	Y	N	--	4.8	No
Selenium	5	NTR or CTR	Y	N	--	0.73	Y	N	--	11.0	Yes, B>C and pollutant detected in effluent
Silver	8.2	NTR or CTR	Y	Y	0.2	--	Y	Y	0.2	--	No
Thallium	2	NTR or CTR	Y	Y	0.11	--	Y	Y	0.11	--	No
Zinc	169	NTR or CTR	Y	N	--	652	Y	N	--	68	Yes, MEC >C
Cyanide	5.2	NTR or CTR	Y	N	--	10 (DNQ)	Y	N	--	10 (DNQ)	No
Asbestos	7	Basin Plan/MCL	Y	Y	0.02	--	Y	Y	1	--	No
2,3,7,8-TCDD	1.4E-08	NTR or CTR	Y	Y	1.8E-07	--	Y	Y	1.4E-08	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
Acrolein	780	NTR or CTR	Y	Y	2.8	--	Y	Y	2.8	--	No
Acrylonitrile	0.66	NTR or CTR	Y	Y	0.63	--	Y	Y	0.66	--	No
Benzene	1	NTR or CTR	Y	Y	0.24	--	Y	Y	0.24	--	No
Bromoform	360	NTR or CTR	Y	N	--	1.01	N	--	--	--	No
Carbon Tetrachloride	0.5	NTR or CTR	Y	Y	0.26	--	Y	Y	0.26	--	No
Chlorobenzene	70	NTR or CTR	Y	Y	0.21	--	Y	Y	0.21	--	No
Chlorodibromomethane	34	NTR or CTR	Y	N	--	30.8	N	--	--	--	No
Chloroethane	No Criteria	No Criteria	Y	Y	0.38	--	Y	Y	0.88	--	No Criteria
2-Chloroethylvinyl Ether	No Criteria	No Criteria	Y	Y	0.19	--	Y	Y	0.36	--	No Criteria
Chloroform	No Criteria	No Criteria	Y	N	--	44.9	N	--	--	--	No Criteria
Dichlorobromomethane	46	CTR	Y	N	--	33.1	N	--	--	--	No
1,1-Dichloroethane	5	Basin Plan/MCL	Y	Y	0.31	--	Y	Y	0.31	--	No
1,2-Dichloroethane	0.5	Basin Plan/MCL	Y	Y	0.21	--	Y	Y	0.2	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
1,1-Dichloroethylene	3.2	NTR or CTR	Y	Y	0.31	--	Y	Y	0.31	--	No
1,2-Dichloropropane	5	Basin Plan/MCL	Y	Y	0.21	--	Y	Y	0.21	--	No
1,3-Dichloropropylene	0.5	Basin Plan/MCL	Y	Y	0.17	--	Y	Y	0.17	--	No
Ethylbenzene	300	Basin Plan/MCL	Y	Y	0.18	--	Y	Y	0.18	--	No
Methyl Bromide	4,000	CTR	Y	N	--	0.67	Y	Y	0.17	--	No
Methyl Chloride	No Criteria	No Criteria	Y	Y	0.35	--	Y	Y	0.35	--	No Criteria
Methylene Chloride (Dichloromethane)	5	Basin Plan/MCL	Y	N	--	0.69 (DNQ)	Y	N	--	0.45 (DNQ)	No
1,1,2,2-Tetrachloroethane	1	Basin Plan/MCL	Y	Y	0.21	--	Y	Y	0.21	--	No
Tetrachloroethylene	5	Basin Plan/MCL	Y	Y	0.34	--	Y	Y	0.66	--	No
Toluene	150	Basin Plan/MCL	Y	N	--	0.21 (DNQ)	Y	Y	0.21	--	No
1,2-Trans-Dichloroethylene	10	Basin Plan/MCL	Y	Y	0.19	--	Y	Y	0.19	--	No
1,1,1-Trichloroethane	200	Basin Plan/MCL	Y	Y	0.31	--	Y	Y	0.41	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
1,1,2-Trichloroethane	5	Basin Plan/MCL	Y	Y	0.21	--	Y	Y	0.22	--	No
Trichloroethylene	5	Basin Plan/MCL	Y	Y	0.12	--	Y	Y	0.12	--	No
Vinyl Chloride	1	Basin Plan/MCL	Y	Y	0.31	--	Y	Y	0.43	--	No
Chlorophenol	400	NTR or CTR	Y	Y	0.28	--	Y	Y	0.73	--	No
2,4-Dichlorophenol	790	NTR or CTR	Y	Y	0.75	--	Y	Y	0.75	--	No
2,4-Dimethylphenol	2,300	NTR or CTR	Y	Y	0.3	--	Y	Y	1.64	--	No
2-Methyl-4,6-Dinitrophenol	765	NTR or CTR	Y	Y	0.78	--	Y	Y	0.78	--	No
2,4-Dinitrophenol	14,000	NTR or CTR	Y	Y	0.97	--	Y	Y	0.97	--	No
2-Nitrophenol	No Criteria	No Criteria	Y	Y	0.81	--	Y	Y	0.81	--	No Criteria
4-Nitrophenol	No Criteria	No Criteria	Y	Y	1.04	--	Y	Y	1.04	--	No Criteria
3-Methyl-4-Chlorophenol	No Criteria	No Criteria	Y	Y	0.23	--	Y	Y	1.21	--	No Criteria
Pentachlorophenol	1	CTR	Y	Y	0.4	--	Y	Y	1.07	--	No
Phenol	4,600,000	Basin Plan/MCL	Y	N	--	3.51	Y	Y	1.08	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
2,4,6-Trichlorophenol	6.5	NTR or CTR	Y	Y	0.22	--	Y	Y	1.19	--	No
Acenaphthene	2,700	NTR or CTR	Y	Y	0.28	--	Y	Y	0.52	--	No
Acenaphthylene	No Criteria	NTR or CTR	Y	Y	0.033	--	Y	Y	0.87	--	No
Anthracene	110,000	NTR or CTR	Y	Y	0.12	--	Y	Y	0.63	--	No
Benzidine	0.00054	NTR or CTR	Y	Y	0.18	--	Y	Y	0.18	--	No
Benzo(a)Anthracene	0.049	NTR or CTR	Y	Y	0.19	--	Y	Y	0.55	--	No
Benzo(a)Pyrene	0.049	Basin Plan/MCL	Y	Y	0.39	--	Y	Y	0.65	--	No
Benzo(b)Fluoranthene	0.049	NTR or CTR	Y	Y	--	0.029 (DNQ)	Y	Y	1.8	--	No
Benzo(ghi)Perylene	No Criteria	No Criteria	Y	N	1.09	--	Y	Y	1.09	--	No Criteria
Benzo(k)Fluoranthene	0.049	CTR	Y	Y	1.39	--	Y	Y	1.39	--	No
Bis(2-Chloroethoxy) Methane	No Criteria	No Criteria	Y	Y	0.25	--	Y	Y	0.47	--	No Criteria
Bis(2-Chloroethyl)Ether	1.4	NTR or CTR	Y	Y	0.27	--	Y	Y	0.66	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
Bis(2-Chloroisopropyl)Ether	170,000	NTR or CTR	Y	Y	0.38	--	Y	Y	0.66	--	No
Bis(2-Ethylhexyl)Phthalate	5.9	NTR or CTR	Y	Y	1.79	--	Y	N	--	5.3	No
4-Bromophenyl Phenyl Ether	No Criteria	No Criteria	Y	Y	0.36	--	Y	Y	1.05	--	No Criteria
Butylbenzyl Phthalate	5,200	NTR or CTR	Y	Y	0.18	--	Y	Y	0.91	--	No
2-Chloronaphthalene	4,300	NTR or CTR	Y	Y	0.45	--	Y	Y	0.97	--	No
4-Chlorophenyl Phenyl Ether	No Criteria	No Criteria	Y	Y	0.41	--	Y	Y	0.44	--	No Criteria
Chrysene	0.049	NTR or CTR	Y	Y	0.032	--	Y	Y	0.5	--	No
Dibenzo(a,h)Anthracene	0.049	NTR or CTR	Y	Y	0.53	--	Y	Y	0.95	--	No
1,2-Dichlorobenzene	600	Basin Plan/MCL	Y	Y	0.46	--	Y	Y	0.62	--	No
1,3-Dichlorobenzene	2,600	CTR	Y	Y	0.4	--	Y	Y	0.4	--	No
1,4-Dichlorobenzene	5	Basin Plan/MCL	Y	Y	0.48	--	Y	Y	0.66	--	No
3,3'-Dichlorobenzidine	0.077	NTR or CTR	Y	Y	0.99	--	Y	Y	2.52	--	No
Diethyl Phthalate	120,000	NTR or CTR	Y	Y	0.15	--	Y	Y	0.91	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
Dimethyl Phthalate	2,900,000	NTR or CTR	Y	Y	0.18	--	Y	Y	0.66	--	No
Di-n-Butyl Phthalate	12,000	NTR or CTR	Y	Y	0.1	--	Y	Y	0.52	--	No
2,4-Dinitrotoluene	9.1	NTR or CTR	Y	Y	0.66	--	Y	Y	0.66	--	No
2,6-Dinitrotoluene	No Criteria	NTR or CTR	Y	Y	0.27	--	Y	Y	0.67	--	No
Di-n-Octyl Phthalate	No Criteria	No Criteria	Y	Y	0.1	--	Y	Y	0.77	--	No Criteria
1,2-Diphenylhydrazine	0.54	NTR or CTR	Y	Y	0.3	--	Y	Y	0.79	--	No
Fluoranthene	370	NTR or CTR	Y	Y	0.039	--	Y	Y	0.6	--	No
Fluorene	14000	NTR or CTR	Y	Y	0.029	--	Y	Y	0.55	--	No
Hexachlorobenzene	0.00077	NTR or CTR	Y	Y	0.49	--	Y	Y	0.73	--	No
Hexachlorobutadiene	50	NTR or CTR	Y	Y	0.77	--	Y	Y	0.77	--	No
Hexachlorocyclopentadiene	50	Basin Plan/MCL	Y	Y	0.98	--	Y	Y	1.17	--	No
Hexachloroethane	8.9	NTR or CTR	Y	Y	0.47	--	Y	Y	0.47	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
Indeno(1,2,3-cd) Pyrene	0.049	NTR or CTR	Y	Y	0.065	--	Y	Y	0.99	--	No
Isophorone	600	NTR or CTR	Y	Y	0.21	--	Y	Y	0.57	--	No
Naphthalene	No Criteria	No Criteria	Y	Y	0.36	--	Y	Y	0.35	--	No Criteria
Nitrobenzene	1,900	NTR or CTR	Y	Y	0.36	--	Y	Y	0.61	--	No
N-Nitrosodimethylamine	8.1	NTR or CTR	Y	Y	0.5	--	Y	Y	0.85	--	No
N-Nitrosodi-n-Propylamine	1.4	NTR or CTR	Y	Y	0.26	--	Y	Y	1.07	--	No
N-Nitrosodiphenylamine	16	NTR or CTR	Y	Y	0.19	--	Y	Y	0.96	--	No
Phenanthrene	No Criteria	No Criteria	Y	Y	0.32	--	Y	Y	0.46	--	No Criteria
Pyrene	11,000	NTR or CTR	Y	Y	0.04	--	Y	Y	1.15	--	No
1,2,4-Trichlorobenzene	5	Basin Plan/MCL	Y	Y	0.49	--	Y	Y	0.53	--	No
Aldrin	0.00014	Basin Plan/MCL	Y	Y	0.002	--	Y	Y	0.07	--	No
alpha-BHC	0.013	NTR or CTR	Y	Y	0.0022	--	Y	Y	0.04	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
beta-BHC	0.046	NTR or CTR	Y	Y	0.003	--	Y	Y	0.05	--	No
gamma-BHC (Lindane)	0.063	NTR or CTR	Y	Y	0.0008	--	Y	Y	0.05	--	No
delta-BHC	No Criteria	No Criteria	Y	Y	0.0035	--	Y	Y	0.05	--	No Criteria
Chlordane	0.00059	NTR or CTR	Y	Y	0.02	--	Y	Y	0.04	--	No
4,4-DDT	0.00059	NTR or CTR	Y	Y	0.05	--	Y	Y	0.08	--	No
4,4-DDE	0.00059	NTR or CTR	Y	Y	0.014	--	Y	Y	0.04	--	No
4,4-DDD	0.00084	NTR or CTR	Y	Y	0.0025	--	Y	Y	0.04	--	No
Dieldrin	0.00014	NTR or CTR	Y	Y	0.016	--	Y	Y	0.04	--	No
alpha-Endosulfan	0.056	NTR or CTR	Y	Y	0.022	--	Y	Y	0.04	--	No
beta-Endosulfan	0.056	NTR or CTR	Y	Y	0.014	--	Y	Y	0.05	--	No
Endosulfan Sulfate	240	NTR or CTR	Y	Y	0.0019	--	Y	Y	0.06	--	No
Endrin	0.036	NTR or CTR	Y	Y	0.0022	--	Y	Y	0.05	--	No

Priority Pollutant	Lowest/ Most Stringent Criteria(C)	Source of Lowest Criteria	Is all Effluent Data Available(Y/N)?	Is all Effluent Data Non-Detect (Y/N)?	Minimum MDL (if all Data is Non-Detect)	Maximum Effluent Concentration (MEC) Detected	Is Background Data (B) Available (Y/N)	Is all Background Data Non-Detect (Y/N)?	Minimum MDL for Background Data	Maximum Background Concentration	Reasonable Potential Result
Endrin Aldehyde	0.81	NTR or CTR	Y	Y	0.0038	--	Y	Y	0.04	--	No
Heptachlor	0.00021	NTR or CTR	Y	Y	0.0012	--	Y	Y	0.04	--	No
Heptachlor Epoxide	0.00011	NTR or CTR	Y	Y	0.0008	--	Y	Y	0.05	--	No
PCBs sum	0.00017	NTR or CTR	Y	Y	0.052	--	Y	Y	0.34	--	No
Toxaphene	0.0002	NTR or CTR	Y	Y	0.039	--	Y	Y	1	--	No

Notes for Table I:

- Definitions of abbreviations: C = Lowest/Most Stringent Criteria, Y = Yes, N = No, MCL = Maximum Contaminant Level, NTR = National Toxics Rule, CTR = California Toxics Rule, DNQ = Detected, but Not Quantified, MEC = Maximum Effluent Concentration, B = Maximum Background Concentration, µg/L = Micrograms Per Liter, MFL = Million Fibers Per Liter.
- Concentrations of criteria for all pollutants are expressed in µg/L with the exception of the criterion for asbestos which is expressed in MFL.