CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

320 West 4th Street, Suite 200, Los Angeles, California 90013
Phone (213) 576-6600 • Fax (213) 576-6640
Los Angeles Regional Water Quality Control Board
http://www.waterboards.ca.gov/losangeles

ORDER R4-2022-XXXX
NPDES NUMBER CA0056227

WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT FOR THE CITY OF LOS ANGELES DONALD C. TILLMAN WATER RECLAMATION PLANT

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

Table 1. Discharger Information

Discharger:	City of Los Angeles (Discharger or Permittee)
Name of Facility:	Donald C. Tillman Water Reclamation Plant (Tillman WRP or Facility)
Facility Address:	6100 Woodley Avenue Van Nuys, CA 91406 Los Angeles County

Table 2. Discharge Location

Discharge point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
002	Tertiary treated wastewater	34.183565°	-118.494493°	Los Angeles River via Lake Balboa, Hayvenhurst Channel, and Bull Creek
003	Tertiary treated wastewater	34.177666°	-118.473388°	Los Angeles River via Wildlife Lake and Haskell Channel
008	Tertiary treated wastewater	34.164805°	- 118.471805°	Los Angeles River

Table 3. Administrative Information

This Order was Adopted on:	**December 8, 2022**
This Order shall become effective on:	**February 1, 2023**
This Order shall expire on:	**January 31, 2028**
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with Title 23, California Code of Regulations, and an application for reissuance of a NPDES permit no later than:	**180 days prior to the Order expiration date**
The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board have classified this discharge as follows:	**Major**

I, Renee Purdy, 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, Los Angeles Region, on the date indicated above.

_____
Renee Purdy, Executive Officer

TABLE OF CONTENTS

TABLE OF TABLES

TABLE OF ATTACHMENTS

1. FACILITY INFORMATION

Information describing the Donald C. Tillman Water Reclamation Plant (Tillman WRP or 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 the Facility's permit application.

2. FINDINGS

The California Regional Water Quality Control Board, Los Angeles Region (Los Angeles Water Board), finds:

2.1. Legal Authorities. This Order serves as waste discharge requirements (WDRs) pursuant to article 4, chapter 4, division 7 of the California Water Code (Water Code) (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

2.2. Background and Rationale for Requirements. The Los Angeles Water Board developed the requirements in this Order based on information submitted as part of the application, and 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, H, and I are also incorporated into this Order.

2.3. Provisions and Requirements Implementing State Law. The provisions and requirements implementing state law 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. Notification of Interested Parties. The Los Angeles 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. Details of the notification are provided in the Fact Sheet.

2.5. Consideration of Public Comment. The Los Angeles 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 Order Number R4-2017-0062 is rescinded upon the effective date of this Order 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 Permittee shall comply with the requirements in this Order. This action in no way prevents the Los Angeles Water Board from taking enforcement action for past violations of the previous Order.

3. DISCHARGE PROHIBITIONS

3.1. Discharge of treated wastewater at a location different from that described in this Order is prohibited.

3.2. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited, except when meeting the criteria for exceptions in 40 CFR 122.41(m), as discussed in Standard Provision 1.7. of Attachment D, Standard Provisions.

3.3. The monthly average effluent dry weather discharge flow rate from the Facility shall not exceed the 80 million gallons per day (mgd) design capacity.

3.4. The Permittee shall not cause degradation of any water body, except as consistent with State Water Board Resolution Number 68-16.

3.5. The treatment or disposal of wastes from the facility shall not cause pollution or nuisance as defined in section 13050, subdivisions (l) and (m), of the Water Code.

3.6. The discharge of any substances in concentrations toxic to human, animal, plant, or aquatic life is prohibited.

3.7. The discharge of any radiological, chemical, or biological warfare agent or high-level radiological waste is prohibited.

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

4. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

4.1. Effluent Limitations – Discharge Points 002, 003, and 008

4.1.1. Final Effluent Limitations - Discharge Points 002, 003, and 008

a. The Discharger shall maintain compliance with the following effluent limitations in Table 4 for Discharge Points 002, 003, and 008, with compliance measured at Monitoring Locations EFF-001A and EFF-001B as described in the Monitoring and Reporting Program (MRP), Attachment E:

Table 4. Effluent Limitations for Discharge Points 002, 003, and 008

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Notes
Biochemical Oxygen Demand ($BOD_5$20°C)	mg/L	20	30	45	---
$BOD_5$20°C	lbs/day	13,340	20,020	30,020	a
Total Suspended Solids (TSS)	mg/L	15	40	45	---
TSS	lbs/day	10,010	26,690	30,020	a
Removal Efficiency for BOD and TSS	%	≥85	---	---	---
Oil and Grease	mg/L	10	---	15	---
Oil and Grease	lbs/day	6,670	---	10,010	a

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Notes
Settleable Solids	mL/L	0.1	---	0.3	---
Total Residual Chlorine	mg/L	---	---	0.1	---
Total Residual Chlorine	lbs/day	---	---	67	---
Temperature	°F	---	---	80	b
Total coliform	MPN or CFU/100 mL	23	2.2	240	c
E. coli	MPN or CFU/ 100 mL	126	2.2	235	l
Combined Radium-226 and Radium 228	pCi/L	5	---	---	d
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15	---	---	d
Uranium	pCi/L	20	---	---	d
Gross Beta/photon emitters	millirem/ year	4	---	---	d
Strontium-90	pCi/L	8	---	---	d
Tritium	pCi/L	20,000	---	---	d
Chloride	mg/L	190	---	---	---
Chloride	lbs/day	126,770	---	---	a
Total Dissolved Solids	mg/L	950	---	---	---
Total Dissolved Solids	lbs/day	633,840	---	---	a
Sulfate	mg/L	300	---	---	---
Sulfate	lbs/day	200,160	---	---	a
Methylene Blue Activated Substance (MBAS)	mg/L	0.5	---	---	---
MBAS	lbs/day	330	---	---	a
Nitrate (as N)	mg/L	7.2	---	---	e
Nitrate (as N)	lbs/day	4,800	---	---	a
Nitrite (as N)	mg/L	0.9	---	---	e
Nitrite (as N)	lbs/day	600	---	---	a
Nitrate + Nitrite (as N)	mg/L	7.2	---	---	e
Nitrate + Nitrite (as N)	lbs/day	4,800	---	---	
Ammonia Nitrogen	mg/L	3.0	---	6.4	f
Ammonia Nitrogen	lbs/day	2,000	---	4,300	a
Cadmium (wet)	µg/L	2.0	---	6.9	g

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Notes
Cadmium (wet)	lbs/day	1.3	---	4.6	a and h
Zinc (wet)	µg/L	152	---	212	g
Zinc (wet)	lbs/day	101	---	141	a and h
Copper	µg/L	27	---	31	i
Copper	lbs/day	18	---	21	a and h
Lead	µg/L	2.1	---	16	i
Lead	lbs/day	1.4	---	10.7	a and h
Selenium	µg/L	3.9	---	7.0	---
Selenium	lbs/day	2.6	---	4.7	a
Cyanide	µg/L	4.3	---	8.5	---
Cyanide	lbs/day	2.9	---	5.7	---
Carbon Tetrachloride	µg/L	0.5	---	---	---
Carbon Tetrachloride	lbs/day	0.3	---	---	a
Pentachlorophenol	µg/L	1.0	---	---	---
Pentachlorophenol	lbs/day	0.7	---	---	a
Benzo(a)pyrene	µg/L	0.049	---	0.098	---
Benzo(a)pyrene	lbs/day	0.033	---	0.065	a
Benzo(b)fluoranthene	µg/L	0.049	---	0.098	---
Benzo(b)fluoranthene	lbs/day	0.033	---	0.065	a
Benzo(k)fluoranthene	µg/L	0.049	---	0.098	---
Benzo(k)fluoranthene	lbs/day	0.033	---	0.065	a
Dibenzo(a,h)anthracene	µg/L	0.024	---	0.049	---
Dibenzo(a,h)anthracene	lbs/day	0.02	---	0.03	a
Indeno(1,2,3-cd)pyrene	µg/L	0.024	---	0.049	---
Indeno(1,2,3-cd)pyrene	lbs/day	0.02	---	0.03	a
Chronic Toxicity *Ceriodaphnia dubia* Survival and Reproduction endpoints	Pass or Fail (Test of Significant Toxicity (TST)), % Effect	Pass	---	Pass (TST) or % Effect < 50 (survival endpoint)	j and k

Footnotes for Table 4

a. The mass-based effluent limitations are based on the plant design flow rate of 80 mgd and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

b. An interim effluent limitation for temperature is included in Section 4.2 of this Order for the duration of the compliance schedule.

c. The wastes discharged to water courses shall be adequately disinfected. For the purpose of this requirement, the wastes shall be considered adequately disinfected if (1) the median number of total coliform bacteria at some point in the treatment process does not exceed a 7-day median of 2.2 Most Probable Number (MPN) or Colony Forming Units (CFU) per 100 milliliters utilizing the bacteriological results of the last seven (7) days for which an analysis has been completed, (2) the number of total coliform bacteria does not exceed 23 MPN or CFU per 100 milliliters in more than one sample within any 30-day period, and (3) no sample shall exceed 240 MPN or CFU of total coliform bacteria per 100 milliliters. Samples shall be collected at a time when wastewater flow and characteristics are most demanding on treatment facilities and disinfection processes.

d. The radioactivity final effluent limitations are derived from Title 22, chapter 15, article 5, sections 64442 and 64443, of the California Code of Regulations (CCR). The incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect.

e. This is a final effluent limitation consistent with the waste load allocation (WLA), set forth in the *Total Maximum Daily Load (TMDL) for Nitrogen Compounds and Related Effects in the Los Angeles River,* Basin Plan Chapter 7-8.

f. The monthly limit is the Water Quality Based limit developed using best professional judgement and according to the *TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River,* Basin Plan Chapter 7-8. The maximum daily limit is based on the WLA in the same TMDL and also includes a margin of safety factor in accordance with the TMDL.

g. The limits are based on the *TMDL for Metals in Los Angeles River* (LA River Metals TMDL) and only apply during wet weather. Wet-weather effluent limitations apply when the maximum daily flow measured at the Los Angeles River Wardlow station is equal to or greater than 500 cubic feet per second.

h. According to the *Total Maximum Daily Load for Metals in the Los Angeles River and Tributaries* (LA River Metals TMDL, Basin Plan Chapter 7-13), the mass-based effluent limitations for cadmium, copper, lead, and zinc do not apply during wet weather when the influent exceeds the plant design flow rate of 80 mgd. The mass-based effluent limits continue to apply at all other times, including during dry weather when the maximum daily flow at the Los Angeles River Wardlow station is less than 500 cubic feet per second.

i. The limits are based on the LA River Metals TMDL and apply during dry and wet weather.

j. A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations are established using current USEPA guidance in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June/2010)* and *EPA Regions 8, 9, and 10 Toxicity Training Tool (January 2010), https://www.epa.gov/sites/production/files/documents/ToxTrainingTool10Jan2010.pdf*

k. The average monthly result is compared to the Median Monthly Effluent Limitation (MMEL), and shall be reported as “Pass” or “Fail.” The maximum daily result is compared to the

Maximum Daily Effluent Limitation (MDEL) and shall be reported as "Pass" or "Fail" and "% Effect." If the chronic aquatic toxicity routine monitoring test results in a "Fail" at the instream waste concentration (IWC), then the Discharger shall complete a maximum of two MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine monitoring test was initiated that resulted in the "Fail" at the IWC. If the first chronic MMEL compliance test results in a "Fail" at the IWC, then the second MMEL compliance test is not necessary because the "Fail" results from the first two tests would constitute a violation of the chronic toxicity MMEL.

l. The *Los Angeles River Watershed Bacteria TMDL* (LA River Bacteria TMDL) contains WLAs for DC Tillman, Los Angeles-Glendale, and Burbank WRPs. WLAs are expressed as allowable exceedance days. The WLAs for DCTWRP are set equal to a 7-day median of 2.2 MPN/100 mL of *E. coli* or a daily max of 235 MPN/100mL to ensure zero (0) days of allowable exceedances. No exceedances of the geometric mean TMDL numeric target of 126/100 mL *E.coli* are permitted within the month.

End of Footnotes for Table 4

b. For the protection of the groundwater recharge (GWR) beneficial use of the surface water, which is intended to protect groundwater quality where surface water recharges groundwater, the wastes discharged shall not adversely affect the GWR beneficial use or cause a condition of pollution or nuisance.

c. pH shall be maintained in the final effluent within the limits of 6.5 and 8.5.

d. For the protection of the water contact recreation beneficial use, the wastes discharged to water courses shall have received adequate treatment, so that the turbidity of the treated wastewater does not exceed any of the following: (a) an average of 2 Nephelometric Turbidity Units (NTU) within a 24-hour period, (b) 5 NTU more than 5 percent of the time (72 minutes) within a 24-hour period, and (c) 10 NTU at any time.

4.1.2. Interim Effluent Limitations for Discharge Points 002, 003, 008

This Order includes a new, more stringent effluent limitation for temperature based on a new interpretation of the narrative water quality objective for temperature contained in the Basin Plan. Consistent with Section 1.e. of the State Water Board's Resolution 2008-0025 - *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy), the Discharger shall have up to ten years to implement actions specified in Table 6 to comply with a more stringent permit limitation. The interim effluent limitation in Table 5 shall apply from the effective date of Order Number R4-2022-XXXX until the expiration date of the compliance schedule.

Table 5. Interim Effluent Limitations for Discharge Points 002, 003, and 008

Constituent	Units	Daily Maximum	Notes
Temperature	°F	86	a

Footnote for Table 5

a. The temperature of the effluent shall not exceed 86°F except as a result of external ambient temperature. This interim limitation is based on the final effluent limitation for temperature in Order R4-2017-0062.

End of Footnote for Table 5

4.2. Land Discharge Specifications – Not Applicable

4.3. Recycling Specifications

The Discharger shall continue to investigate the feasibility of recycling, conservation, and/or alternative disposal methods for wastewater (such as groundwater injection), and/or capture and treatment of dry-weather urban runoff and stormwater on a permissive basis for beneficial reuse. The Discharger shall submit a detailed update to this feasibility investigation as part of the submittal of the Report of Waste Discharge (ROWD) for the next Order renewal.

5. RECEIVING WATER LIMITATIONS

5.1. Surface Water Limitations

Receiving water limitations are based on the water quality objectives in the Basin Plan. The discharge shall not cause the following in the receiving water:

5.1.1. The natural receiving water temperature of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Los Angeles Water Board that such alteration in temperature does not adversely affect beneficial uses. Additionally, for waters designated with a warm freshwater habitat (WARM) beneficial use, water temperature shall not be altered by more than 5°F above the natural temperature. At no time shall these WARM-designated waters be raised above 80°F as a result of waste discharge except during the term of the compliance schedule set forth in Table 6 section 6.3.7, when the following interim receiving water limitation is in effect: at no time shall these WARM-designated waters be raised above 86°F as a result of waste discharge, except as a result of external ambient temperature.

5.1.2. The pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of wastes discharged. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of wastes discharged. Natural conditions shall be determined on a case-by-case basis.

5.1.3. The dissolved oxygen in the receiving water shall not be depressed below 5 mg/L as a result of the wastes discharged.

5.1.4. The total residual chlorine shall not persist in the receiving waters at any concentration that causes impairment of beneficial uses as a result of the wastes discharged.

5.1.5. Waters shall be free of changes in turbidity that cause nuisance or adversely affect beneficial uses. Increases in natural turbidity attributable to controllable water quality factors shall not exceed the following limits, as a result of wastes discharged:

a. Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%.

b. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.

5.1.6. The wastes discharged shall not produce concentrations of substances in the receiving water that are toxic to or cause detrimental physiological responses in human, animal, or aquatic life.

5.1.7. The wastes discharged shall not cause concentrations of contaminants to occur at levels that are harmful to human health in waters which are existing or potential sources of drinking water.

5.1.8. The concentrations of toxic pollutants in the water column, sediments, or biota shall not adversely affect beneficial uses as a result of the wastes discharged.

5.1.9. The wastes discharged shall not contain substances that result in increases in BOD, which adversely affect the beneficial uses of the receiving waters.

5.1.10. Waters discharged shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses.

5.1.11. The dissolved sulfide concentration of waters in and near sediments shall not be significantly increased above that present under natural conditions as a result of waters discharged.

5.1.12. The wastes discharged shall not cause the receiving waters to contain any substance in concentrations that adversely affect any designated beneficial use.

5.1.13. The wastes discharged shall not degrade surface water communities and populations, including vertebrate, invertebrate, and plant species.

5.1.14. The wastes discharged shall not alter the natural taste, odor, or color of fish, shellfish, or other surface water resources used for human consumption.

5.1.15. The wastes discharged shall not result in problems due to breeding of mosquitoes, gnats, black flies, midges, or other pests.

5.1.16. The wastes discharged shall not result in visible floating particulates, foams, or oil and grease in the receiving waters that cause nuisance or adversely affect beneficial uses.

5.1.17. The wastes discharged shall not cause objectionable aquatic growths or degrade indigenous biota.

5.1.18. The wastes discharged shall not alter the color of the receiving waters; create a visual contrast with the natural appearance of the water; or cause aesthetically undesirable discoloration of the receiving waters.

5.1.19. The wastes discharged shall not contain any individual pesticide or combination of pesticides in concentrations that adversely affect beneficial uses of the receiving waters. There shall be no increase in pesticide concentrations found in bottom sediments or aquatic life as a result of the wastes discharged.

5.1.20. The wastes discharged shall not cause the ammonia water quality objective in the Basin Plan to be exceeded in the receiving waters. Compliance with the ammonia water quality objectives shall be determined by comparing the receiving water ammonia concentration to the ammonia water quality objective in the Basin Plan. The ammonia water quality objective can also be calculated using the pH and temperature of the receiving water at the time of collection of the ammonia sample.

5.1.21. There shall be no chronic toxicity in ambient waters as a result of wastes discharged. If the chronic toxicity median monthly threshold of the receiving water at both upstream and downstream stations is not met, but the effluent chronic toxicity median monthly effluent limitation was met, then chronic toxicity is not a result of the wastes discharged.

5.2. Groundwater Limitations – Not Applicable

6. PROVISIONS

6.1. Standard Provisions

6.1.1. The Discharger shall comply with all Standard Provisions included in Attachment D.

6.1.2. **Los Angeles Water Board Standard Provisions.** The Discharger shall comply with the following provisions. If there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

a. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by section 13050 of the Water Code.

b. Odors, vectors, and other nuisances of sewage or sludge origin beyond the limits of the treatment plant site or the sewage collection system due to improper operation of facilities and/or spills, bypass, or overflow of sewage sludge, as determined by the Los Angeles Water Board, are prohibited.

c. All facilities used for collection, transport, treatment, or disposal of wastes shall be adequately protected against damage resulting from overflow, washout, or inundation from a storm or flood having a 1-percent chance of occurring in a 24-hour period in an any given year.

d. Collection, treatment, and disposal systems shall be operated in a manner that precludes or impedes public contact with wastewater.

e. Collected screenings, sludges, and other solids removed from liquid wastes shall be disposed of in a manner approved by the Executive Officer of the Los Angeles Water Board.

f. The provisions of this order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

g. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Discharger from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation under authority preserved by section 311 of the CWA, related to oil and hazardous substances liability.

h. The Discharger must comply with the lawful requirements of municipalities, counties, drainage districts, and other local agencies regarding discharges of stormwater to storm drain systems or other water courses under their jurisdiction, including applicable requirements in municipal stormwater management programs developed to comply with the NPDES permit(s) issued by the Los Angeles Water Board to local agencies.

i. Discharge of wastes to any point other than specifically described in this Order is prohibited and constitutes a violation thereof.

j. The Discharger shall comply with all applicable effluent limitations, national standards of performance, toxic effluent standards, and all federal regulations established pursuant to sections 301, 302, 303(d), 304, 306, 307, 316, 403, and 405 of the federal CWA and amendments thereto.

k. These requirements do not exempt the operator of the waste disposal facility from compliance with any other laws, regulations, or ordinances which may be applicable; they do not legalize this waste disposal facility; and they leave unaffected any further restraints on the disposal of wastes at this site which may be contained in other statutes or required by other agencies.

l. The Discharger shall make diligent, proactive efforts to reduce Facility infrastructure vulnerability to current and future impacts resulting from climate change, including but not limited to extreme wet weather events, flooding, storm surges, and projected sea level rise when the facility is located near the ocean or discharges to the ocean.

m. Oil or oily material, chemicals, refuse, or other polluting materials shall not be stored or deposited in areas where they may be picked up by rainfall and carried off the property and/or discharged to surface waters. Any such spill of such materials shall be contained and removed immediately.

n. A copy of these waste discharge specifications shall always be maintained and available to operating personnel at the discharge Facility.

o. If there is any storage of hazardous or toxic materials or hydrocarbons at this Facility and if the Facility is not always manned, a 24-hour emergency response telephone number shall be prominently posted where it can easily be read from the outside.

p. The Discharger shall file with the Los Angeles Water Board a report of waste discharge at least 120 days before making any proposed change in the character, location or volume of the discharge.

q. In the event of any change in name, ownership, or control of these waste disposal facilities, the Discharger shall notify the Los Angeles Water Board of such change and shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Los Angeles Water Board, 30 days prior to taking effect.

r. The discharge of any waste resulting from the combustion of toxic or hazardous wastes to any waste stream that ultimately discharges to waters of the United States is prohibited, unless specifically authorized elsewhere in this Order.

s. The Discharger shall notify the Executive Officer in writing no later than 6 months prior to planned discharge of any chemical, other than the products previously reported to the Executive Officer, which may be toxic to aquatic life. Such notification shall include:

i. Name and general composition of the chemical,

ii. Frequency of use,

iii. Quantities to be used,

iv. Proposed discharge concentrations, and

v. USEPA registration number, if applicable.

t. Failure to comply with provisions or requirements of this Order, or violation of other applicable laws or regulations governing discharges from this Facility, may subject the Discharger to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Discharger to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

u. Water Code section 13385(h)(i) requires the Los Angeles Water Board to assess a mandatory minimum penalty of three-thousand dollars ($3,000) for each serious violation. Pursuant to Water Code section 13385(h)(2), a “serious violation” is defined as any waste discharge that violates the effluent limitations contained in the applicable waste discharge requirements for a Group II pollutant by 20 percent or more, or for a Group I pollutant by 40 percent or more. Appendix A of 40 CFR section 123.45 specifies the Group I and II pollutants. Pursuant to Water Code section 13385.1(a)(1), a “serious violation” is also defined as “a failure to file a discharge monitoring report required pursuant to section 13383 for each complete period of 30 days following the deadline for submitting the report, if the report is designed to ensure compliance with limitations contained in waste discharge requirements that contain effluent limitations.”

v. Water Code section 13385(i) requires the Los Angeles Water Board to assess a mandatory minimum penalty of three-thousand dollars ($3,000) for each violation whenever a person violates a waste discharge requirement effluent limitation four or more times in any period of six consecutive months, except that the requirement to assess the mandatory minimum penalty shall not be applicable to the first three non-serious violations within that time period.

w. Pursuant to Water Code section 13385.1(d), for the purposes of section 13385.1 and subdivisions (h), (i), and (j) of section 13385, “effluent limitation” means a numeric restriction or a numerically expressed narrative restriction, on the quantity, discharge rate, concentration, or toxicity units of a pollutant or pollutants that may be discharged from an authorized location. An effluent limitation may be final or interim and may be expressed as a prohibition. An effluent limitation, for these purposes, does not include a receiving water limitation, a compliance schedule, or a best management practice.

x. Water Code section 13387(e) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document

submitted or required to be maintained under this order, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained in this order shall be punished by a fine of not more than twenty-five thousand dollars ($25,000), imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment. For a subsequent conviction, such a person shall be punished by a fine of not more than twenty-five thousand dollars ($25,000) per day of violation, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, three, or four years, or by both that fine and imprisonment.

y. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Manager of the Watershed Regulatory Section at the Los Angeles Water Board by telephone at (213) 576-6616 or by fax at (213) 576-6660 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing to the Los Angeles Water Board within five days, unless the Los Angeles Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. The written notification shall also be submitted via email with reference to CI-5695 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.

6.2. Monitoring and Reporting Program (MRP) Requirements

The Discharger shall comply with the MRP, and future revisions thereto, in Attachment E.

6.3. Special Provisions

6.3.1. Reopener Provisions

a. This Order may be modified, revoked and reissued, or terminated for cause, including, but not limited to:

i. Violation of any term or condition contained in this Order;

ii. Obtaining this Order by misrepresentation, or by failure to disclose fully all relevant facts; or

iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

The filing of a request by the Discharger for an Order modification, revocation, and issuance or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

b. 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 testing, monitoring of 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.

c. This Order may be modified, in accordance with the provisions set forth in title 40 of the Code of Federal Regulations (40 CFR) parts 122 and 124 to include requirements for the implementation of a watershed protection management approach.

d. The Board may modify, or revoke and reissue this Order if present or future investigations demonstrate that the discharge(s) governed by this Order will cause, have reasonable potential to cause, or contribute to adverse impacts on beneficial uses or degradation of water quality of the receiving waters.

e. This Order may also be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, endangerment to human health or the environment resulting from the permitted activity, or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the Discharger for an Order modification, revocation and issuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any condition of this Order.

f. This Order may be modified, in accordance with the provisions set forth in 40 CFR parts 122 to 124, to include new minimum levels (MLs).

g. If an applicable toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is promulgated under section 307(a) of the CWA for a toxic pollutant and that standard or prohibition is more stringent than any limitation on the pollutant in this Order, the Los Angeles Water Board may institute proceedings under these regulations to modify or revoke and reissue the Orders to conform to the toxic effluent standard or prohibition.

h. If more stringent applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments, thereto, the Los Angeles Water Board will revise and modify this Order in accordance with such standards.

i. This Order may be reopened and modified to revise effluent limitations as a result of future additions or amendments to a statewide water quality control plan or the Los Angeles Region's Basin Plan or the adoption or revision of a TMDL.

j. This NPDES permit may be reopened for modification to recalculate the final water quality based effluent limitations (WQBELs) for ammonia as nitrogen and/or copper, to incorporate a revised margin of safety factor (MOSF) reflective of plant performance consistent with and up to the maximum limits allowed by the applicable TMDLs and SSOs, if the discharger provides new information to the Los Angeles Water Board showing the flow conditions or other extenuating circumstances cause a significant change in the water reclamation plant's treatment performance and if anti-backsliding and antidegradation requirements are met.

k. This Order will be reopened and modified to the extent necessary, to be consistent with new or revised policies, new or revised state-wide plans, new laws, or new regulations.

6.3.2. Special Studies, Technical Papers and Additional Monitoring Requirements

a. Toxicity Reduction Requirements

The Discharger shall prepare and submit a copy of the Discharger's initial investigation Toxicity Reduction Evaluation (TRE) work plan in accordance with Monitoring and Reporting Program section 5.6.

b. Ammonia Receiving Water Confirmatory Monitoring

The *TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River* requires the Permittee to evaluate the effects of the application of the ammonia site-specific objective (SSO) to the TMDL wasteload allocations on the receiving water. The Permittee submitted a draft confirmatory work plan addressing the effects of ammonia SSO in the receiving water for the Tillman WRP, Burbank WRP, and Los Angeles-Glendale WRP on July 10, 2017. The Los Angeles Water Board responded with comment letters dated August 11, 2017 for the Burbank and Los Angeles-Glendale WRPs. The Los Angeles-Glendale letter was also applicable to the Tillman WRP. A final confirmatory monitoring work plan was submitted on October 19, 2017. However, the Discharger did not implement the work plan during the previous permit cycle because the TMDL does not require confirmatory monitoring if ammonia concentrations are consistently at levels below effluent limitations that would be set without the use of the SSO. Order R4-2017-0062 specified the performance-based AMEL for ammonia, 3.0 mg/L, as the base effluent limitation for confirmatory monitoring. In addition, the Los Angeles Water Board and the Discharger agreed that confirmatory monitoring would only need to be initiated after more than one AMEL exceedance occurred during a rolling three-year period which was incorporated into the final work plan. There was no AMEL exceedance observed for ammonia in the Discharger's effluent data ranging from May 2017 to June 2022. The Permittee shall submit an updated work plan no later than 90 days after the effective date of this Order for approval by the Executive Officer. The work plan shall include the following requirements per the *TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River*, Basin Plan Chapter 7-8:

i. The Permittee must conduct confirmatory receiving water monitoring to verify that water quality conditions are similar to those of the 2003 ammonia site specific objective (SSO) study period. Confirmatory monitoring will include concurrent chemistry and toxicity receiving water monitoring. The confirmatory toxicity monitoring will be supplemental to the three species toxicity testing required in the NPDES permits and **shall** utilize *Hyallela azteca* as the test organism. Temperature, pH, and ammonia receiving water data will be collected at the time and location of collection of the toxicity samples. Regular species sensitivity screening for chronic toxicity tests shall follow the requirements specified in section 5.4 of Attachment E – Monitoring and Reporting Program.

ii. Monitoring of chemistry and toxicity testing shall include a minimum of three sample events per year for three years. Monitoring sites shall be representative of those investigated in the Los Angeles River during the SSO study, as well as one location in the reach immediately downstream of where the SSO is applied. Two of the three sample events shall be conducted during dry weather. Following the

first three-year monitoring cycle, if there is no increase in toxicity attributable to ammonia, monitoring may be reduced to once per year at each site, as appropriate. The number and type of events during the year shall be as described above.

iii. Chemistry monitoring shall include all nitrogen species, including total ammonia, pH, hardness, temperature, sodium, potassium, calcium, BOD, sulfate, total dissolved solids, and chloride.

iv. If confirmatory monitoring indicates toxicity due to ammonia or a change in the waterbody that could impact the calculation or application of the SSOs, including either its chemical characteristics or the aquatic species present (including early life stages of fish), the POTW shall develop and submit a plan for reevaluating the SSOs to the Executive Officer.

v. In the event that ammonia concentrations are consistently at levels below effluent limitations that would be set without use of the SSO, monitoring to confirm the SSOs is not necessary. The effluent limitation for AMEL without use of SSO is equal to 3.0 mg/l.

c. Treatment Plant Capacity

The Discharger shall submit a written report to the Executive Officer of the Los Angeles Water Board within 90 days after the “30-day (monthly) average” daily dry-weather flow equals or exceeds 75 percent of the design capacity of waste treatment and/or disposal facilities. The Discharger's senior administrative officer shall sign a letter, which transmits that report, and certify that the Discharger's policy-making body is adequately informed of the report's contents. The report shall include the following:

i. The average daily flow for the month, the date on which the peak flow occurred, the rate of that peak flow, and the total flow for the day;

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

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

This requirement is applicable in the case where the facility has not reached 75 percent of capacity as of the effective date of this Order. If the facility has reached 75 percent of capacity by that date but has not previously submitted such report, such a report shall be filed within 90 days of the issuance of this Order.

6.3.3. Best Management Practices and Pollution Prevention

a. Stormwater Pollution Prevention Plan (SWPPP) – Not Applicable

b. Spill Clean-up Contingency Plan (SCCP)

Within 90 days of the effective date of this Order, the Discharger is required to update and submit the SCCP for the Facility, which describes the activities and

protocols to address clean-up of spills, overflows, and bypasses of untreated or partially treated wastewater from the Discharger's collection system or treatment facilities. At a minimum, the plan shall include sections on spill clean-up and containment measures, public notification, and monitoring. The Discharger shall review and amend the plan as appropriate after each spill from the Facility or in the service area of the Facility. The Discharger shall include a discussion in the annual summary report of any modifications to the Plan and the application of the Plan to all spills during the year.

c. Pollutant Minimization Program (PMP)

Reporting protocols in MRP section 10.2.4 describe sample results that are to be reported as Detected but Not Quantified (DNQ) or Not Detected (ND). Definitions for a reported Minimum Level (ML) and Method Detection Limit (MDL) are provided in Attachment A. These reporting protocols and definitions are used in determining the need to conduct a PMP as follows:

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 pollutant is present in the effluent above an effluent limitation and either of the following is true:

i. The concentration of the pollutant is reported as DNQ and the effluent limitation is less than the ML; or

ii. The concentration of the pollutant is reported as ND and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in MRP.

The goal of the PMP shall be to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Los Angeles 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.

The PMP shall include, but not be limited to, the following actions and submittals acceptable to the Los Angeles Water Board:

i. 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;

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

iii. 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;

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

An annual status report that shall be sent to the Los Angeles Water Board including:

(a) All PMP monitoring results for the previous year;

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

(c) A summary of all actions undertaken pursuant to the control strategy; and

(d) A description of actions to be taken in the following year.

6.3.4. Construction, Operation and Maintenance Specifications

a. Certified Wastewater Treatment Plant Operator. Wastewater treatment facilities subject to this Order shall be supervised and operated by persons possessing certificates of appropriate grade pursuant to California Code of Regulations (CCR), title 23, division 3, chapter 26 (Water Code sections 13625 – 13633).

b. Climate Change Effects Vulnerability Assessment and Mitigation Plan. The Discharger shall consider the impacts of climate change as they affect the operation of the treatment facility due to flooding, wildfire, or other climate-related changes. The Discharger shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change-related effects that may impact the wastewater treatment facility's operation, water supplies, its collection system, and water quality, including any projected changes to the influent water temperature and pollutant concentrations, and beneficial uses. The permittee shall also identify new or increased threats to the sewer system resulting from climate change that may impact desired levels of service in the next 50 years. The permittee shall project upgrades to existing assets or new infrastructure projects, and associated costs, necessary to meet desired levels of service. Climate change research also indicates the overarching driver of climate change is increased atmospheric carbon dioxide from human activity. The increased carbon dioxide emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges, lead to more erratic rainfall and local weather patterns, trigger a gradual warming of freshwater and ocean temperatures, and trigger changes to ocean water chemistry. As such, the Climate Change Plan shall also identify steps being taken or planned to address greenhouse gas emissions attributable to wastewater treatment plants and effluent discharge processes. The Climate Change Plan is due 24 months after effective date of this Order.

c. Alternate Power Source. The Discharger shall maintain in good working order a sufficient alternate power source for operating the wastewater treatment and disposal facilities. All equipment shall be located to minimize failure due to moisture, liquid spray, flooding, wildfires, and other physical phenomena. The alternate power source shall be designed to permit inspection and maintenance and shall provide for periodic testing. If such alternate power source is not in existence, the Discharger

shall halt, reduce, or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power. The Discharger shall provide standby or emergency power facilities and/or storage capacity or other means so that in the event of plant upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

d. Routine Maintenance and Operational Testing for Emergency Infrastructure/Equipment: The Permittee shall perform monthly maintenance and operational testing for all emergency infrastructure and equipment at the facility, including but not limited to any bypass gate/weir in the headworks, alarm systems, backup pumps, standby power generators, and other critical emergency pump station components. The Permittee shall update the Operation and Maintenance Plan to include monthly maintenance and operational testing of emergency infrastructure and equipment, and shall keep the records of all operational testing for emergency systems, repairs, and modifications.

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

a. Biosolids Disposal Requirements (Not Applicable)

All sludge generated at the wastewater treatment plant is returned back to the sewer for transport and processing at the Hyperion Water Reclamation Plant.

b. Pretreatment Requirements

i. The Permittee has developed and implemented a Pretreatment Program that was previously submitted to the Los Angeles Water Board. This Order requires implementation of the approved Pretreatment Program. Any violation of the Pretreatment Program will be considered a violation of this Order.

ii. In 1952, the City adopted their Wastewater Ordinance. The purpose of this Ordinance is to establish controls on users of the City's sewerage system in order to protect the environment and public health, and to provide for the maximum beneficial use of the City's facilities. This Wastewater Ordinance was most recently amended on August 11, 2015. The Discharger has an industrial wastewater Pretreatment Program which was approved by the USEPA and the Los Angeles Water Board in accordance with 40 CFR part 403, *General Pretreatment Regulations for Existing and New Sources of Pollution*. The Pretreatment Program regulates industries to protect the Discharger's wastewater collection and treatment system, to ensure effluent water quality and the quality of biosolids, and to protect health and safety of the treatment plant workers. In 2020, there were 171 Significant Industrial User (SIU) permittees, and 18,365 other industrial users in the City of Los Angeles' Pretreatment Program.

iii. Any proposed change to the Pretreatment Program shall be reported to the Los Angeles Water Board in writing and shall not become effective until approved by the Executive Officer in accordance with procedures established in 40 CFR § 403.18.

iv. Applications for renewal or modification of this Order must contain information about industrial discharges to the POTW pursuant to 40 CFR § 122.21(j)(6). Pursuant to 40 CFR § 122.42(b) and provision 7 of Attachment D, Standard

Provisions, of this Order, the Discharger shall provide adequate notice of any new introduction of pollutants or substantial change in the volume or character of pollutants from industrial discharges which were not included in the permit application. Pursuant to 40 CFR § 122.44(j)(1), the Discharger shall annually identify and report, in terms of character and volume of pollutants, any Significant Industrial Users discharging to the POTW subject to Pretreatment Standards under section 307(b) of the CWA and 40 CFR § 403.

v. The Discharger shall evaluate whether its pretreatment local limits are adequate to meet the requirements of this Order and shall submit a written technical report as required under section 2.1 of Attachment H. The Tillman WRP is part of the Hyperion Treatment System (HTS), consisting of the Hyperion Water Reclamation Plant and three upstream water reclamation plants: the Donald C. Tillman WRP, Burbank WRP, and the Los Angeles-Glendale WRP. In the reevaluation of the local limits, the Discharger shall consider the effluent limitations contained in this Order, the contributions from the upstream WRPs in the HTS, and other relevant factors due to the interconnection of the Discharger's WRPs within the HTS. The Discharger shall also submit to the Los Angeles Water Board revised local limits, as necessary, for Los Angeles Water Board approval. In addition, the Discharger shall consider collection system overflow protection from such constituents as large debris, oil and grease, etc.

vi. The Discharger shall comply with requirements contained in Attachment H – Pretreatment Reporting Requirements.

c. Collection System Requirements

The Discharger’s collection system is part of the system that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system (40 CFR § 122.41(e)). The Discharger must report any non-compliance (40 CFR § 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 CFR § 122.41(d)). The Hyperion collection system includes the Tillman WRP collection system and is enrolled (effective November 22, 2006) under the *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, State Water Board Order Number 2006-0003-DWQ, including monitoring and reporting requirements as amended by State Water Board Order WQ 2013-0058-EXEC and any subsequent order updating these requirements.

d. Filter Bypass

Conditions pertaining to bypass are contained in Attachment D, Section 1.7 Bypass. The bypass or overflow of untreated or partially treated wastewater to waters of the State is prohibited, except as allowed under conditions stated in 40 CFR section 122.41(m) and (n). During periods of elevated, wet weather flows, a portion of the secondary treated wastewater is diverted around the tertiary filters as a necessary means to avoid loss of life, personal injury or severe property damage. There are no feasible alternatives to this diversion. These anticipated discharges are approved under the bypass conditions when all storage has been utilized and the resulting combined discharge of fully treated (tertiary) and partially treated (secondary)

wastewater complies with the effluent and receiving water limitations in this Order. The ROWD constitutes notice of these anticipated bypasses.

6.3.6. Spill Reporting Requirements

a. Initial Notification

Although State and Los Angeles Water Board staff do not have duties as first responders, this requirement is an appropriate mechanism to ensure that the agencies that do have first responder duties are notified in a timely manner in order to protect public health and beneficial uses. For certain spills, overflows and bypasses, the Discharger shall make notifications as required below:

i. In accordance with the requirements of Health and Safety Code section 5411.5, the Discharger shall provide notification to the local health officer or the director of environmental health with jurisdiction over the affected water body of any unauthorized release of sewage or other waste that causes, or probably will cause, a discharge to any waters of the state or odors, vectors, and other nuisances of sewage or sludge origin beyond the limits of the treatment plant site or the sewage collection system as soon as possible, but no later than two hours after becoming aware of the release.

ii. In accordance with the requirements of Water Code section 13271, the Discharger shall provide notification to the California Office of Emergency Services (Cal OES) of the release of reportable amounts of hazardous substances or sewage that causes, or probably will cause, a discharge to any waters of the state as soon as possible, but not later than two hours after becoming aware of the release. The CCR, Title 23, section 2250, defines a reportable amount of sewage as being 1,000 gallons. The phone number for reporting these releases to the Cal OES is (800) 852-7550. In addition, the Permittee shall notify other interested persons of any such sewage spill by maintaining an email list of those interested persons that have requested such notification.

iii. The Discharger shall notify the Los Angeles Water Board of any unauthorized release of sewage from its POTW that causes, or probably will cause, a discharge to a water of the state or odors, vectors, and other nuisances of sewage or sludge origin beyond the limits of the treatment plant site or the sewage collection system as soon as possible, but not later than two hours after becoming aware of the release. This initial notification does not need to be made if the Discharger has notified Cal OES and the local health officer or the director of environmental health with jurisdiction over the affected water body. The phone number for reporting these releases of sewage to the Los Angeles Water Board is (213) 576-6657. The phone numbers for after hours and weekend reporting of releases of sewage to the Los Angeles Water Board are (213) 305-2284 and (213) 305-2253.

At a minimum, the following information shall be provided to the Los Angeles Water Board:

- The location, date, and time of the release.
- The water body that received or will receive the discharge.

- An estimate of the amount of sewage or other waste released and the amount that reached a surface water at the time of notification.
- If ongoing, the estimated flow rate of the release at the time of the notification.
- The name, organization, phone number and email address of the reporting representative.

b. Monitoring

For spills, overflows and bypasses reported under section 6.3.6.a, the Discharger shall monitor as required below:

To define the geographical extent of the spill's impact, the Discharger shall obtain grab samples (if feasible, accessible, and safe) for all spills, overflows or bypasses of any volume that reach any waters of the state (including surface and ground waters). If a grab sample cannot be obtained due to accessibility or safety concerns that cannot be addressed with the appropriate personal protective equipment or following proper sampling procedures, the sample shall be obtained as soon as it becomes safe to do so. The Discharger shall analyze the samples for total coliform, *E. coli* (if total coliform tests positive)*, Enterococcus* (if spill reaches the marine waters, where the salinity is greater than 1 part per thousand more than 5 percent of time), and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible, and safe). Daily monitoring shall be conducted from the time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to the background level or the County Department of Public Health authorizes cessation of monitoring.

c. Reporting

The initial notification required under section 6.3.6.a. shall be followed by:

i. As soon as possible, but not later than twenty-four hours after becoming aware of an unauthorized discharge of sewage or other waste from its wastewater treatment plant to a water of the state, the Discharger shall submit a statement to the Los Angeles Water Board by email at augustine.anijielo@waterboards.ca.gov. If the discharge is 1,000 gallons or more, this statement shall certify that Cal OES has been notified of the discharge in accordance with Water Code section 13271. The statement shall also certify that the local health officer or director of environmental health with jurisdiction over the affected water bodies has been notified of the discharge in accordance with Health and Safety Code section 5411.5. The statement shall also include at a minimum the following information:

- Agency, NPDES Number, Order Number, and MRP CI Number, if applicable;
- The location, date, and time of the discharge;
- The water body that received the discharge;
- A description of the level of treatment of the sewage or other waste discharged;
- An initial estimate of the amount of sewage or other waste released and the amount that reached a surface water;

- The Cal OES control number and the date and time that notification of the incident was provided to Cal OES; and,
- The name of the local health officer or director of environmental health representative notified (if contacted directly); the date and time of notification; and the method of notification (e.g., phone, fax, email).

ii. A written preliminary report five business days after disclosure of the incident is required. Submission to the Los Angeles Water Board of the California Integrated Water Quality System (CIWQS) Sanitary Sewer Overflow (SSO) event number shall satisfy this requirement. Within 30 days after submitting the preliminary report, the Discharger shall submit the final written report to the Los Angeles Water Board. (A copy of the final written report, for a given incident, already submitted pursuant to a statewide *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems* (SSS WDRs), may be submitted to the Los Angeles Water Board to satisfy this requirement). The written report shall document the information required in paragraph d below, monitoring results and any other information required in provisions of the Standard Provisions document including corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences. The Executive Officer for just cause can grant an extension for submittal of the final written report.

iii. The Discharger shall include a certification in the annual summary report (due according to the schedule in the MRP) that states that the sewer system emergency equipment, including alarm systems, backup pumps, standby power generators, and other critical emergency pump station components were maintained and tested in accordance with the Discharger's preventive maintenance plan. Any deviations from or modifications to the plan shall be discussed.

d. Records

The Discharger shall develop and maintain a record of all spills, overflows or bypasses of raw or partially treated sewage from its collection system or treatment plant. This record shall be made available to the Los Angeles Water Board upon request and a spill summary shall be included in the annual summary report. The records shall contain:

i. The date and time of each spill, overflow, or bypass;

ii. The location of each spill, overflow, or bypass;

iii. The estimated volume of each spill, overflow, and bypass including gross volume, amount recovered and amount not recovered, monitoring results as required by section 6.3.6.b;

iv. The cause of each spill, overflow, or bypass;

v. Whether each spill, overflow, or bypass entered a receiving water and, if so, the name of the water body and whether it entered via storm drains or other man-made conveyances;

vi. Any mitigation measures implemented;

vii. Any corrective measures implemented or proposed to be implemented to prevent/minimize future occurrences; and,

viii. The mandatory information included in SSO online reporting for finalizing and certifying the SSO report for each spill, overflow, or bypass under the SSS WDRs.

e. Activities Coordination

Although not required by this Order, the Los Angeles Water Board expects that the POTW's owners/operators will coordinate their compliance activities for consistency and efficiency with other entities that have responsibilities to implement: (i) this NPDES permit, including the Pretreatment Program, (ii) a Municipal Separate Storm Sewer Systems (MS4) NPDES permit that may contain spill prevention, sewer maintenance, reporting requirements, and (iii) the SSS WDRs or subsequent updates. The Los Angeles Water Board also expects the POTW's owners/operators to consider coordination with other agencies regarding the potential for the permissive integration of the MS4 with the wastewater collection system.

f. Consistency with SSS WDRs

The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 United States Code sections 1311, 1342). The Permittee must separately comply with the SSS WDRs (State Water Board Order Number 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems,* as amended by State Water Board Order No. WQ 2008-0002-EXEC and No. WQ 2013-0058-EXEC). These SSS WDRs require public agencies that own or operate sanitary sewer systems with greater than one mile of sewer lines to apply for coverage and comply with requirements, to develop and implement sewer system management plans, and to report all SSOs to the State Water Board's online SSO database. The Permittee enrolled in the SSS WDRs in 2006, and the collection systems of the Permittee are covered under the SSS WDRs. The Discharger must properly operate and maintain its collection system (40 CFR § 122.41 (e)), report any non-compliance (40 CFR § 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR § 122.41(d)).

The requirements contained in this Order in sections 6.3.3.b. (SCCP), 6.3.4. (Construction, Operation and Maintenance Specifications), and 6.3.6. (Spill Reporting Requirements) are intended to be consistent with the requirements of the SSS WDRs. The Los Angeles Water Board recognizes that there may be some overlap between these NPDES permit provisions and SSS WDRs requirements, related to the collection systems. The requirements of the SSS WDRs are considered the minimum thresholds (see finding 11 of State Water Board Order Number 2006-0003-DWQ). To encourage efficiency, the Los Angeles Water Board will accept the documentation prepared by the permittees under the SSS WDRs for compliance purposes as satisfying the requirements in sections 6.3.3.b, 6.3.4, and 6.3.6 provided the more stringent provisions contained in this NPDES permit are also addressed. Pursuant to SSS WDRs, section D, provision 2(iii) and (iv), the

provisions of this NPDES permit supersede the SSS WDRs, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative.

6.3.7. Compliance Schedules

a. The compliance schedule and the interim limit in Section 4.1.2 of this Order are authorized under Section 1.e. of the State Water Board's Resolution 2008-0025 - *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy).

b. The Discharger shall notify the Los Angeles Water Board in a written compliance report, no later than 14 days following each interim milestone date, of its compliance or noncompliance with the interim requirements.

c. In order to monitor compliance with the interim and final effluent limitations for temperature, the Discharger shall monitor the influent, effluent, and receiving water for temperature at the frequencies required in Tables E-2 and E-3. Each result shall be reported in the monthly report to track progress in achieving compliance with the final effluent limitations.

d. The Permittee may be subject to enforcement action for failure to complete the tasks by the given milestone dates, as specified in Table 6.

e. Submit progress reports no later than 14 days following the completion date of each milestone including a description of efforts taken by the Discharger toward achieving compliance with the final effluent limitations for chloride. The reports shall summarize the progress to date, activities conducted since the last progress report, and the future activities planned. The reports shall also state whether the Discharger was in compliance with the interim effluent limitations during the reporting period.

Table 6. Compliance Schedule & Milestone Dates

Task	Completion Date
Submit and Begin Implementation of Pollution Prevention Plan (PPP) for Source Control	April 1, 2023
Select members for the Technical Advisory Committee and Stakeholder Committee and regularly convene the committee members to initiate the development of a Technical Workplan that includes a temperature study that identifies the potential impacts of the WRP's effluent temperature and potential control measures (including nature-based solutions) that can be implemented to protect beneficial uses.	July 1, 2023
Finalize and submit a Technical Workplan for the Los Angeles Water Board Approval, secure the necessary permits for Los Angeles River Channel access and deployment of in-situ monitoring devices, and initiate bidding and procurement for any necessary equipment and/or services.	May 1, 2024

Task	Completion Date
Implement the Technical Workplan, initiate testing and deployment of any necessary equipment, and continue securing necessary permits for the Los Angeles River Channel access and deployment of in-situ monitoring devices, and submit a Progress Report	May 1, 2025
Implement the Technical Workplan and begin drafting a Final Technical Report.	May 1, 2026
Complete and submit the Final Technical Report	February 1, 2027
Notify the Los Angeles Water Board of the Selected Preferred Project and identify Regulatory Approval Process (if appropriate given the study findings), Present Results of Technical Workplan at Next Scheduled Los Angeles Water Board Meeting.	August 1, 2027
Begin Preliminary Design and Environmental Review	April 30, 2028
Complete Preliminary Design	April 30, 2029
Complete Environmental Review	April 30, 2030
Design Preferred Project	April 30, 2031
Issue Notice to Proceed for Project Work	April 30, 2032
Complete Preferred Project	February 1, 2033

7. COMPLIANCE DETERMINATION

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

7.1. General

Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined in the MRP and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional and State Water Boards, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

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

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

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

the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.

7.3. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection 7.2 above for multiple sample data) of daily discharges over a calendar month exceeds the AMEL for a given parameter, this will represent a single violation for the purpose of calculating mandatory minimum penalties, though the Discharger may be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month) in cases where discretionary administrative civil liabilities are appropriate. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Discharger may be considered out of compliance for that calendar month. The Discharger will only be considered out of compliance for days when the discharge occurs. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month with respect to the AMEL.

If the analytical result of a single sample, monitored monthly, quarterly, semiannually, or annually, does not exceed the AMEL for a given parameter, the Discharger will have demonstrated compliance with the AMEL for each day of that month for that parameter.

If the analytical result of any single sample, monitored monthly, quarterly, semiannually, or annually, exceeds the AMEL for any parameter, the Discharger may collect up to four additional samples within the same calendar month. All analytical results shall be reported in the monitoring report for that month. The concentration of pollutant (an arithmetic mean or a median) in these samples estimated from the “Multiple Sample Data Reduction” section above, will be used for compliance determination.

In the event of noncompliance with an AMEL, the sampling frequency for that parameter shall be increased to weekly and shall continue at this level until compliance with the AMEL has been demonstrated.

7.4. Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week 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 7 days of non-compliance. 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 with respect to the AWEL.

A calendar week will begin on Sunday and end on Saturday. Partial calendar weeks at the end of calendar month will be carried forward to the next month in order to calculate and report a consecutive seven-day average value on Saturday.

7.5. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge on a calendar day exceeds the MDEL for a given parameter, an alleged violation will be flagged, and the Discharger will be considered out of compliance

for that day for that parameter. If no sample (daily discharge) is taken over a calendar day, no compliance determination can be made for that day with respect to effluent violation determination, but compliance determination can be made for that day with respect to reporting violation determination.

7.6. Instantaneous Minimum Effluent Limitation

If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a potential 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 non-compliance with the instantaneous minimum effluent limitation).

7.7. Instantaneous Maximum Effluent Limitation

If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a potential 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 non-compliance with the instantaneous maximum effluent limitation).

7.8. Six-month Median Effluent Limitation

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

7.9. Median Monthly Effluent Limitation (MMEL)

If the median of daily discharges over a calendar month exceeds the MMEL 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 non-compliance in a 31-day month). However, an alleged violation of the MMEL will be considered one violation for the purpose of assessing State mandatory minimum penalties. If no sample (daily discharge) is taken over a calendar month, no compliance determination can be made for that month with respect to effluent violation determination, but compliance determination can be made for that month with respect to reporting violation determination.

7.10. Chronic Toxicity

The discharge is subject to determination of “Pass” or “Fail” and “Percent Effect” from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach 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, Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge In-stream Waste Concentration (IWC) response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass". A test result that does not reject this null hypothesis is reported as "Fail". The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response) × 100. This is a t-test, a statistical analysis comparing two sets of replicate observations - in the case of Whole Effluent Toxicity (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 MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed at the IWC for the reproduction endpoint using the TST statistical approach, results in "Fail" and the "Percent Effect" of the survival endpoint is ≥50%.

The MMEL for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST statistical approach, results in "Fail" for any endpoint.

If a chronic aquatic toxicity routine monitoring test results in a "Fail" at the IWC, the Permittee shall complete a maximum of two MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine monitoring test was initiated that resulted in the "Fail" at the IWC. If the first chronic MMEL compliance test results in a "Fail" at the IWC, then the second MMEL compliance test is not necessary because the "Fail" results from the first two tests would constitute a violation of the chronic toxicity MMEL.

The chronic toxicity MDEL and MMEL 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 compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using only the 100% effluent concentration and negative control, expressed in units of the TST, using the *Ceriodaphnia dubia*, which was determined to be the most sensitive species for the Tillman WRP discharge. The TST hypothesis (Ho) (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* (USEPA 2002, EPA-821-R-02-013). However, if the USEPA approves the Alternative Test Procedure, the Discharger may use a two-concentration test design. The Los Angeles Water Board's review of reported toxicity test results will not include review of concentration-response patterns as appropriate (see Fact Sheet discussion at 4.3.6.). As described in the bioassay laboratory audit correspondence from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the No Observable Effect Concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST

results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach must be consistent with *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013). The Los Angeles Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Discharger, the USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program (ELAP) as needed. The Board may consider the results of any TIE/TRE studies in an enforcement action.

7.11. Percent Removal

The average monthly percent removal is the removal efficiency expressed in percentage across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of pollutant concentrations (C in mg/L) of influent and effluent samples collected at about the same time using the following equation:

$$\text{Percent Removal (\%)} = [1-(C_{Effluent}/C_{Influent})] \times 100\%$$

When preferred, the Discharger may substitute mass loadings and mass emissions for the concentrations.

7.12. 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 mass emission rate determined from that sample concentration shall also be reported as ND or DNQ.

7.13. Compliance with Single Constituent Effluent Limitations

Permittees may be considered out of compliance with the effluent limitation if the concentration of the pollutant (see section B "Multiple Sample Data Reduction" above) in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

7.14. Compliance with Effluent Limitations Expressed as a Sum of Several Constituents

Permittees are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB's) 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.

7.15. Compliance with 2,3,7,8-TCDD and its Equivalents

Compliance with the dioxin effluent limitation shall be determined based on 2,3,7,8-TCDD alone. However, TCDD equivalents shall be monitored and calculated using the following formula, where the MLs and toxicity equivalency factors (TEFs) are as provided in the table below. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Discharger shall set

congener concentrations below the minimum levels to zero. USEPA method 1613 may be used to analyze dioxin and furan congeners.

$$Dioxin\ Concentration = \sum_{1}^{17}(TEQi) = \sum_{1}^{17}(Ci)(TEFi)$$

where:
Ci = individual concentration of a dioxin or furan congener
TEFi = individual TEF for a congener

MLs and TEFs

Congeners	MLs (pg/L)	TEFs
2,3,7,8-TetraCDD	10	1.0
1,2,3,7,8-PentaCDD	50	1.0
1,2,3,4,7,8-HexaCDD	50	0.1
1,2,3,6,7,8-HexaCDD	50	0.1
1,2,3,7,8,9-HexaCDD	50	0.1
1,2,3,4,6,7,8-HeptaCDD	50	0.01
OctaCDD	100	0.0001
2,3,7,8-TetraCDF	10	0.1
1,2,3,7,8-PentaCDF	50	0.05
2,3,4,7,8-PentaCDF	50	0.5
1,2,3,4,7,8-HexaCDF	50	0.1
1,2,3,6,7,8-HexaCDF	50	0.1
1,2,3,7,8,9-HexaCDF	50	0.1
2,3,4,6,7,8-HexaCDF	50	0.1
1,2,3,4,6,7,8-HeptaCDF	50	0.01
1,2,3,4,7,8,9-HeptaCDF	50	0.01
OctaCDF	100	0.0001

7.16. Compliance with Gross Beta/photon Emitters

The monthly average effluent limitation for gross beta/photon is equal to 4 millirem/year with a screening level of 50 picoCuries per liter (pCi/L). Due to naturally occurring Potassium-40, the results of the Potassium-40 may be subtracted from the total gross beta activity to determine if the screening level is exceeded. The Potassium-40 beta particle activity must be calculated by multiplying elemental potassium concentration (in mg/L) by a factor of 0.82 to determine activity from Potassium-40. The Potassium-40 must be analyzed from the same or equivalent sample used for the gross beta analysis.

If the gross beta particle activity minus the naturally occurring Potassium-40 is less than or equal to 50 pCi/L, the facility is in compliance and the value shall be reported as <4 millirem/year. If the gross beta particle activity minus the naturally occurring Potassium-40 beta particle activity exceeds the screening level, the Discharger must have the samples

further analyzed for the *individual* nuclides. The calculation for the sum of the fractions is presented below.

The maximum contaminant level (MCL) for gross beta/photon emitters is equal to 4 millirem per year. A millirem is a dose of energy to the body or any internal organ. USEPA regulates 179 man-made nuclides, and each of them has a concentration of radiation measured in pCi/L, which produces the 4 millirem dose. These concentrations are listed in table, *Derived Concentrations of (pCi/L) of Beta and Photon Emitters in Drinking Water,* which shall be used to determine compliance.

Derived Concentrations (pCi/l) of Beta and Photon Emitters in Drinking Water

Yielding a Dose of 4 mrem/yr to the Total Body or to any Critical Organ as defined in NBS Handbook 69

Nuclide	pCi/l	Nuclide	pCi/l	Nuclide	pCi/l	Nuclide	pCi/l	Nuclide	pCi/l	Nuclide	pCi/l
H-3	20,000	Ni-65	300	Nb-95	300	Sb-124	60	Nd-147	200	Os-191	600
Be-7	6,000	Cu-64	900	Nb-97	3,000	Sb-125	300	Nd-149	900	Os-191m	9,000
C-14	2,000	Zn-65	300	Mo-99	600	Te-125m	600	Pm-147	600	Os-193	200
F-18	2,000	Zn-69	6,000	Tc-96	300	Te-127	900	Pm-149	100	Ir-190	600
Na-22	400	Zn-69m	200	Tc-96m	30,000	Te-127m	200	Sm-151	1,000	Ir-192	100
Na-24	600	Ga-72	100	Tc-97	6,000	Te-129	2,000	Sm-153	200	Ir-194	90
Si-31	3,000	Ge-71	6,000	Tc-97m	1,000	Te-129m	90	Eu-152	200	Pt-191	300
P-32	30	As-73	1,000	Tc-99	900	Te-131m	200	Eu-154	60	Pt-193	3,000
S-35 inorg	500	As-74	100	Tc-99m	20,000	Te-132	90	Eu-155	600	Pt-193m	3,000
Cl-36	700	As-76	60	Ru-97	1,000	I-126	3	Gd-153	600	Pt-197	300
Cl-38	1,000	As-77	200	Ru-103	200	I-129	1	Gd-159	200	Pt-197m	3,000
K-42	900	Se-75	900	Ru-105	200	I-131	3	Tb-160	100	Au-196	600
Ca-45	10	Br-82	100	Ru-106	30	I-132	90	Dy-165	1,000	Au-198	100
Ca-47	80	Rb-86	600	Rh-103m	30,000	I-133	10	Dy-166	100	Au-199	600
Sc-46	100	Rb-87	300	Rh-105	300	I-134	100	Ho-166	90	Hg-197	900
Sc-47	300	Sr-85 m	20,000	Pd-103	900	I-135	30	Er-169	300	Hg-197m	600
Sc-48	80	Sr-85	900	Pd-109	300	Cs-131	20,000	Er-171	300	Hg-203	60
V-48	90	Sr-89	20	Ag-105	300	Cs-134	80	Tm-170	100	Tl-200	1,000
Cr-51	6,000	Sr-90	8	Ag-110m	90	Cs-134m	20,000	Tm-171	1,000	Tl-201	900
Mn-52	90	Sr-91	200	Ag-111	100	Cs-135	900	Yb-175	300	Tl-202	300
Mn-54	300	Sr-92	200	Cd-109	600	Cs-136	800	Lu-177	300	Tl-204	300
Mn-56	300	Y-90	60	Cd-115	90	Cs-137	200	Hf-181	200	Pb-203	1,000
Fe-55	2,000	Y-91	90	Cd-115m	90	Ba-131	600	Ta-182	100	Bi-206	100
Fe-59	200	Y-91m	9,000	In-113m	3,000	Ba-140	90	W-181	1,000	Bi-207	200
Co-57	1,000	Y-92	200	In-114m	60	La-140	60	W-185	300	Pa-230	600
Co-58	300	Y-93	90	In-115	300	Ce-141	300	W-187	200	Pa-233	300
Co-58m	9000	Zr-93	2,000	In-115m	1,000	Ce-143	100	Re-186	300	Np-239	300
Co-60	100	Zr-95	200	Sn-113	300	Ce-144	30	Re-187	9,000	Pu-241	300
Ni-59	300	Zr-97	60	Sn-125	60	Pr-142	90	Re-188	200	Bk-249	2,000
Ni-63	50	Nb-93m	1,000	Sb-122	90	Pr-143	100	Os-185	200		

The sum of the fraction method is used because each photon emitter targets a different organ of the body, which results in a different magnitude of risk. The sum of the beta and photon emitters shall not exceed 4 millirem/year (40 CFR section 141.66(d)(2).

Each nuclide has a different concentration that produces the 4 millirem dose because different radionuclides have different energy levels. Some nuclides need to be in a higher concentration to give the same 4 millirem dose.

The laboratory shall measure the nuclide concentration in the water and compare this result to the concentration allowed for that particular nuclide (see table below). The comparison results in a fraction. This is shown in calculation below:

Fraction of the maximum

$$\text{4 millirem/year exposure limit} = \frac{pCi/L\ found\ in\ sample\ (from\ laboratory\ results)}{pCi/L\ equivalent\ from\ 4\ millirem\ of\ exposure\ (from\ conversion\ table)}$$

Each fraction must then be converted to a dose equivalent of 4 millirem/year by multiplying the fraction by 4. The results for each emitter must be summed to determine compliance.

A sample calculation is presented in the table below:

---	X	Y	X/Y	4(X/Y)
Emitter	Lab Analysis (pCi/L)	Conversion from table (pCi/4millirem)	Calculate Fraction	Calculate Total (millirem)
Cs-134m	5,023	20,000	0.25115	1.0
Cs-137	30	200	0.150	0.6
Sr-90	4	8	0.5	2.0
I-131	2	3	0.7	2.8
Sum of the Fractions	---	---	1.60115	6.4

In the example above, the system would be considered in violation of the gross beta/photon effluent limitation because the “sum-of-the-fractions” is 6.4 millirem, which means that the sum of the annual dose equivalent to the total body, or to any internal organ, exceeds 4 millirem/year.

7.17. Mass Emission Rate

The mass emission rate shall be obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lb/day)} = \frac{8.34}{N}\sum_{i=1}^{N} Q_i C_i$$

$$\text{Mass emission rate (kg/day)} = \frac{3.79}{N}\sum_{i=1}^{N} Q_i C_i$$

in which 'N' is the number of samples analyzed in any calendar day. 'Q_i' and 'C_i' are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' grab samples, which may be taken in any calendar day. If a composite sample is taken, 'C_i' is the concentration measured in the composite sample and 'Q_i' is the average flow rate occurring during the period over which samples are composited.

The daily concentration of all constituents shall be determined from the flow-weighted average of the same constituents in the combined waste streams as follows:

$$\text{Daily concentration} = \frac{1}{Q_t}\sum_{i=1}^{N} Q_i C_i$$

in which 'N' is the number of component waste streams. 'Q_i' and 'C_i' are the flow rate (mgd) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Q_t' is the total flow rate of the combined waste streams.

7.18. Bacterial Standards and Analysis

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

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

where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling. The geometric mean values should be calculated based on a statistically sufficient number of samples and should not be less than 5 samples equally spaced over a 30-day period.

7.18.2. For bacterial analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for enterococcus). The detection methods used for each analysis shall be reported with the results of the analyses.

7.18.3. Detection methods used for coliforms (total) shall be those presented in Table 1A of 40 CFR part 136, unless alternate methods have been approved by USEPA pursuant to 40 CFR part 136, or improved methods have been determined by the Executive Officer and/or USEPA.

7.18.4. Detection methods used for *E.coli* and *Enterococcus* shall be those presented in Table 1A of 40 CFR part 136 or in the USEPA publication EPA 600/4-85/076, “Test Methods for *Escherichia coli* and *Enterococci* in Water By Membrane Filter Procedure” or any improved method determined by the Executive Officer and/or USEPA to be appropriate.

7.19. Single Operational Upset (SOU)

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

7.19.1. An 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.

7.19.2. A Permittee may assert SOU to limit liability only for those violations which the Permittee submitted notice of the upset as required in Provision 5.5.2.b. of Attachment D – Standard Provisions.

7.19.3. For violations other than violations of Water Code section 13385 subdivisions (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for permittees to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with USEPA

Memorandum “Issuance of Guidance Interpreting Single Operational Upset” (September 27, 1989).

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

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)
Also called the average, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

$$\text{Arithmetic mean } (\mu) = \frac{\Sigma x}{n}$$

where: Σx is the sum of the measured ambient water concentrations, and n is the number of samples.

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.

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

Biosolids
Sewage sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulators as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 CFR Part 503.

Carcinogenic
Carcinogenic pollutants are substances that are known to cause cancer in living organisms.

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.

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 Order), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

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

arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

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

Detected, but Not Quantified (DNQ)
DNQ are those sample results less than the RL, but greater than or equal to the laboratory's MDL. Sample results reported as DNQ are estimated concentrations.

Dilution Credit
Dilution Credit is 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, Type 1
Type 1 discharges are tertiary-treated effluent that flow directly from Tillman WRP to surface waters in the Los Angeles River watershed. These discharges are subject to compliance with effluent limitations in the Order. The water quality of Type 1 discharges is measured at the Tillman WRP at EFF-001 before effluent is directed to Discharge Points 002 (Lake Balboa), 003 (Wildlife Lake), and 008 (Los Angeles River, Reach 4).

Discharge, Type 2
Type 2 discharges are effluent from Lake Balboa and Wildlife Lake that include tertiary-treated effluent from Tillman WRP that eventually flow to Los Angeles River, Reach 5 through Bull Creek, Hayvenhurst Channel, and Haskell Creek. These discharges are located at Discharge Points 004A, 004B, 005, 006, and 007.

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 wasteload 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).

Enclosed Bays
Enclosed Bays means 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 the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration
The estimated chemical concentration that results from the confirmed detection of the substance by the analytical method below the ML value.

Estuaries
Estuaries means waters, including coastal lagoons, located at the mouths of streams that serve as areas of mixing for fresh and ocean waters. Coastal lagoons and mouths of streams that are temporarily separated from the ocean by sandbars shall be considered estuaries. Estuarine waters shall be considered to extend from a bay or the open ocean to a point upstream where there is no significant mixing of fresh water and seawater. Estuarine waters included, but are not limited to, the Sacramento-San Joaquin Delta, as defined in Water Code section 12220, Suisun Bay, Carquinez Strait downstream to the Carquinez Bridge, and appropriate areas of the Smith, Mad, Eel, Noyo, Russian, Klamath, San Diego, and Otay rivers. Estuaries do not include inland surface waters or ocean waters.

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).

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.

Maximum Daily Flow
The maximum daily flow means the maximum instantaneous flow of the day.

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)
For the purposes of chronic aquatic toxicity, MMEL is an effluent limitation based on a maximum of three independent toxicity tests, analyzed using the TST.

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

Minimum Level (ML)
ML is 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)
Sample results which are less than the laboratory's MDL.

PCBs (polychlorinated biphenyls) as Aroclors
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.

PCBs as Congeners
The sum of the following 41 individually quantified PCB congeners or mixtures of isomers of a single congeners in a co-elution: PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105, 110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206.

Persistent Pollutants
Persistent pollutants are substances for which degradation or decomposition in the environment is nonexistent or very slow.

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 a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Los Angeles Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention
Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in Water Code section 13263.3). Pollution prevention does not include actions that merely shift a pollutant in wastewater from one environmental medium to another environmental medium, unless clear environmental benefits of such an approach are identified to the satisfaction of the State Water Resources Control Board (State Water Board) or Los Angeles Water Board.

Reporting Level (RL)
The 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 Los Angeles 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 RL.

Source of Drinking Water
Any water designated as municipal or domestic supply (MUN) in a Los Angeles Water Board Basin Plan.

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

$$\sigma = \sqrt{\frac{\sum(x-\mu)^2}{n-1}}$$

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

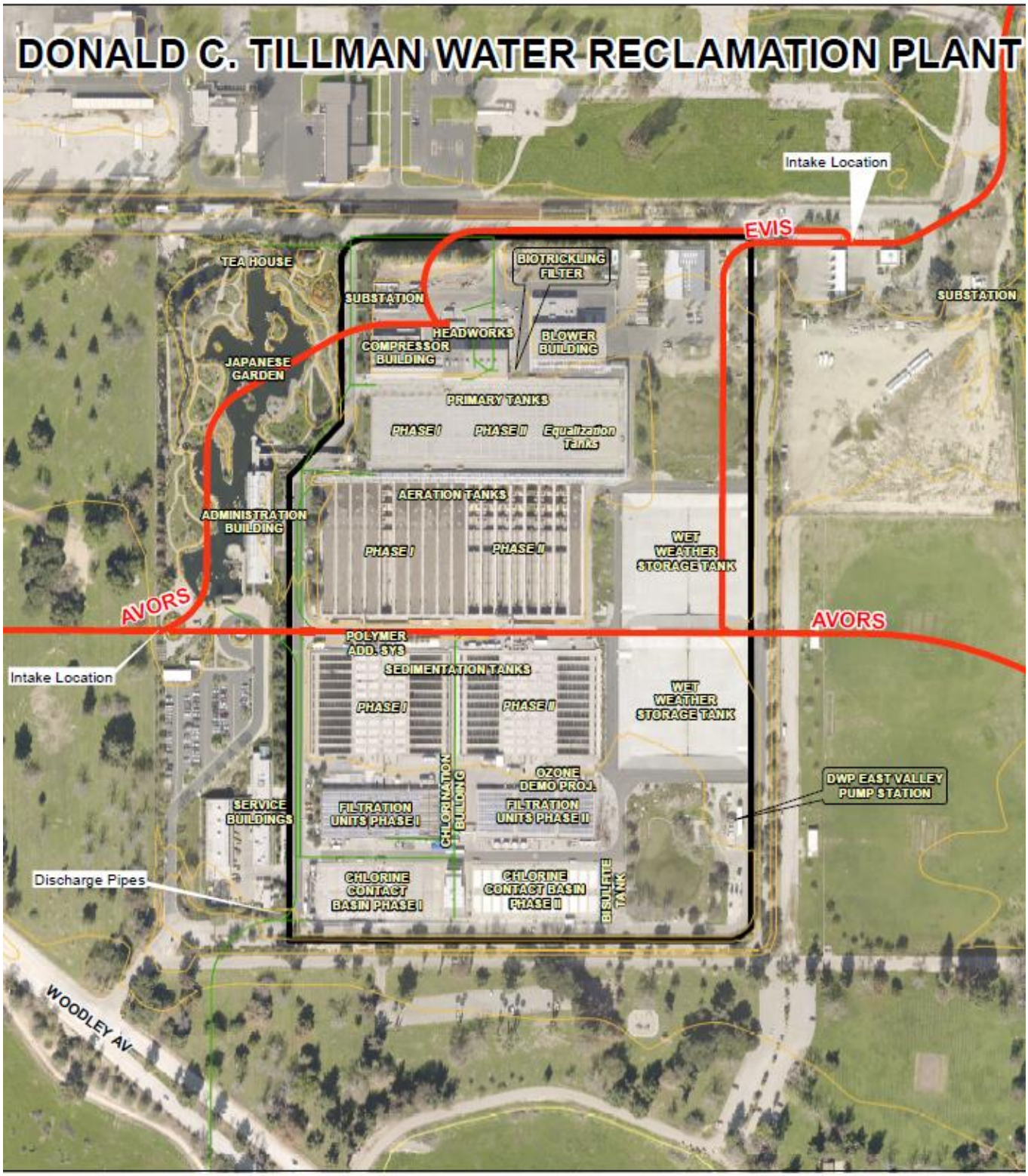
Total Trihalomethanes (TTHMs)
The sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

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

Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

ATTACHMENT B1 – MAP OF D.C. TILLMAN WRP, DISCHARGE LOCATIONS, AND NEARBY WATERBODIES

ATTACHMENT B2 – D.C. TILLMAN WRP SITE LAYOUT

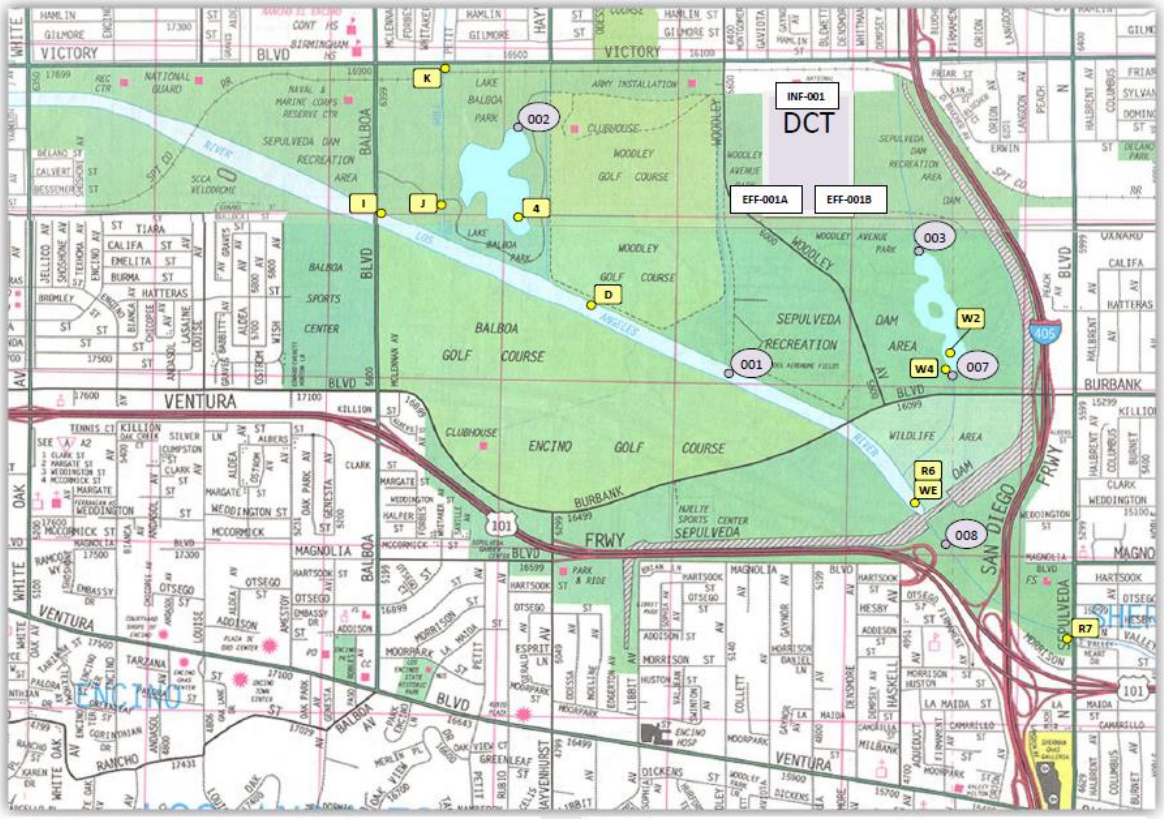


ATTACHMENT B3 – D.C. TILLMAN WRP MRP SAMPLING POINTS AND DISCHARGE POINTS

Prepared By: D. Galbreath
Date: October 2006
Revised: September 15, 2022

DONALD C. TILLMAN WATER RECLAMATION PLANT

MONITORING AND REPORTING PROGRAM SAMPLE POINTS



Lake Balboa Detail

LA River Station	Description
D (RSW-LATT622)	100 yards downstream of the confluence of the L. A. River and Hayvenhurst Channel
I (RSW-LATT612)	Los Angeles River, upstream of Bull Creek
J (RSW-LATT616)	Bull Creek, 100 yards downstream of the lake weir outlet (at Balboa Lake Storm Drains Nos. 1 and 2 outlets) (Discharge Serial No. 004)
K (RSW-LATT614)	Bull Creek, 250 feet above the upstream discharge near the corner of Victory Blvd. and Petit Ave.
R6,WE (RSW-LATT628)	Los Angeles River, 300 ft. downstream of Haskell Flood Control Channel
R7 (RSW-LATT630)	Los Angeles River, 1980 feet downstream of Discharge Serial No. 008

Lake Station	Description
4 (RSW-4)	Balboa Lake, 400 feet from the outlet spillway
W2 (RSW-W2)	Wildlife Lake south of the island, near the west lake shoreline at 2 foot water depth

Tillman Effluent Discharge Serial

001	Tillman Plant old discharge (inactive)
002	Tillman Effluent discharge to Lake Balboa at the SE corner of Victory & Balboa Blvd.
003	Tillman Eff. Discharge to Wildlife Lake located NE of Burbank Blvd. & Woodley Ave.
008	Tillman Plant Effluent Discharge downstream of Sepulveda Dam & downstream of old discharge serial # 001

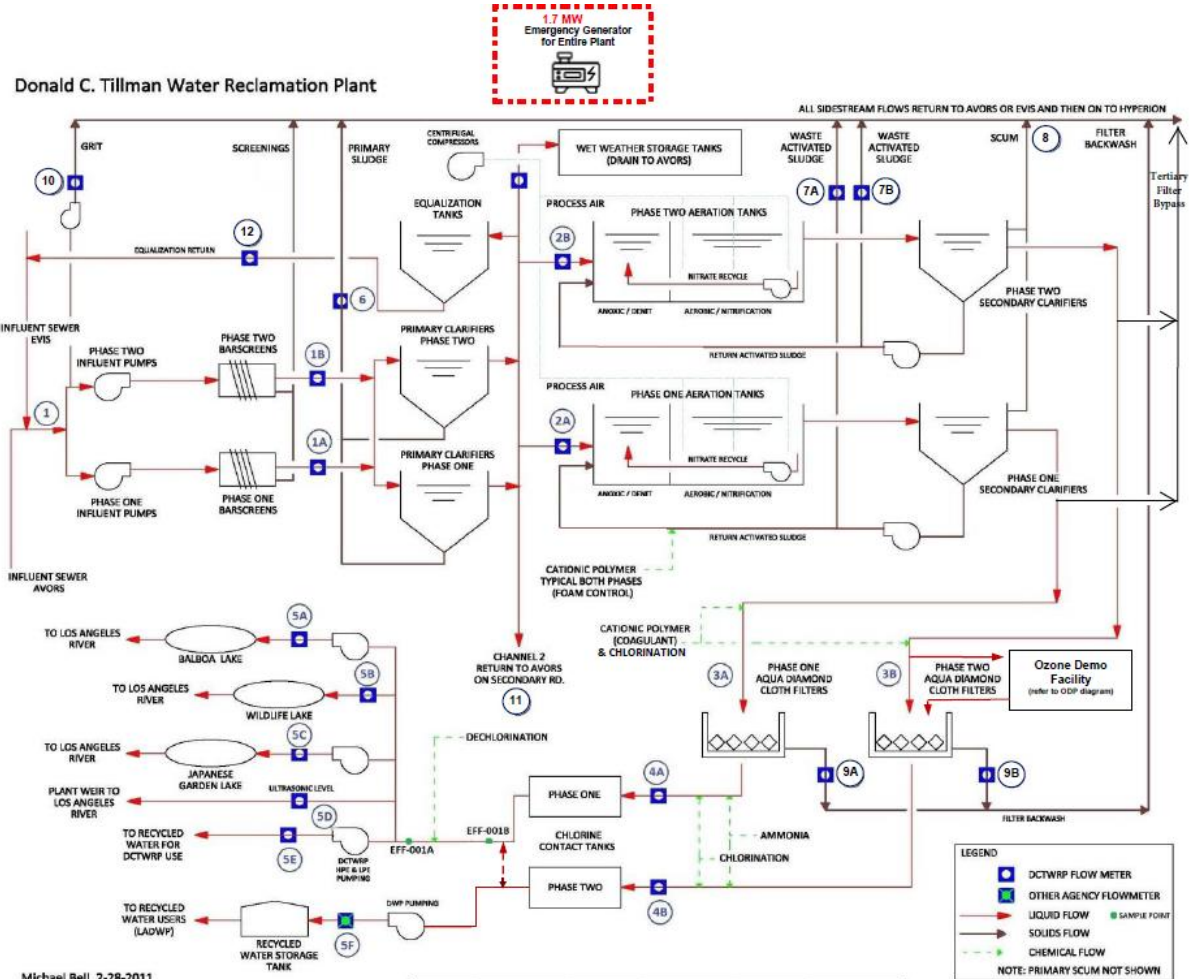
Lake Discharge	Description
002	Tillman Effluent Discharge to Lake Balboa at the SE corner of Victory and Balboa Blvd.
004 A	Lake Balboa Discharge approx. 100 feet upstream of River Station J
004 B	Lake Balboa Discharge approx. 250 feet downstream of K from edge of the south bridge of Victory & Petit Ave.
005	Lake Balboa Discharge to Hayvenhurst Channel
006	Lake Balboa Discharge to L.A. River

Lake Alternate Stations	Description
W4 (RSW-W4)	Wildlife Lake Station W2 alternate
5 (RSW-5)	Balboa Lake Station 4 alternate

Tillman Plant Sampling Point

INF-001	Tillman Influent Sampling Station
EFF-001A	Tillman Effluent sampling station for all constituents except bacteria
EFF-001B	Tillman Effluent sample station for Bacteria

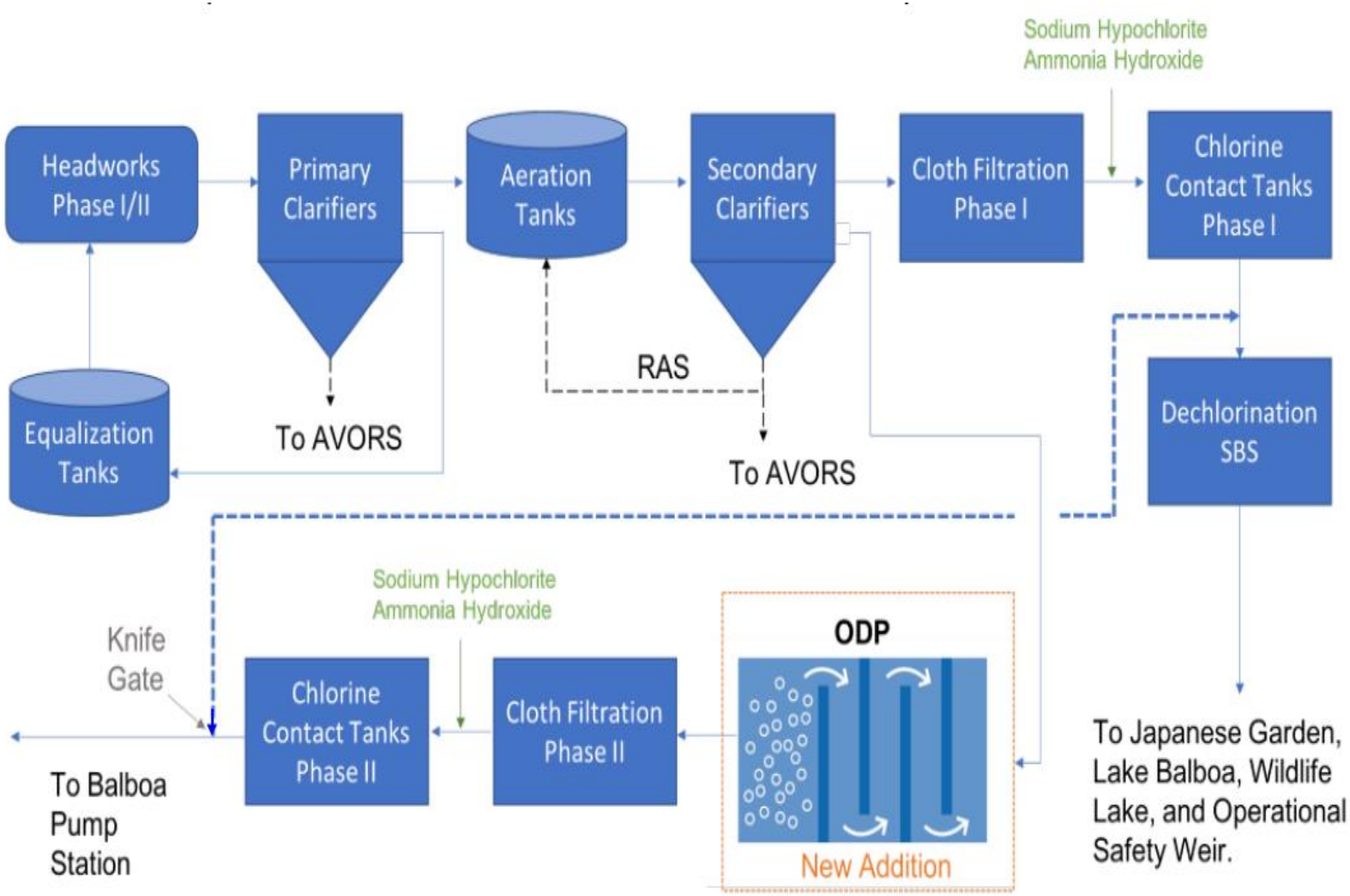
ATTACHMENT C 1 – D.C. TILLMAN WRP PROCESS FLOW DIAGRAM



Michael Bell 2-28-2011
Revised by Saeeda Rafique 12-09-2021
Revised by Karina Gonzalez 09-14-2022

Annual Average Flow Data					
Point	Flow (MGD)	Point	Flow (MGD)	Point	Flow (MGD)
1	41.6	5C	3.3	8	5.2
2	28.6	5D	0.6	9	0.3
3	23.6	5E	2.3	10	0.6
4	24.0	5F	3.0	11	8.4
5A	12.5	6	1.3	12	2.3
5B	3.9	7	0.5		

ATTACHMENT C 2 – OZONE DEMONSTRATION PROJECT DIAGRAM



ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

1.1.1. The Discharger must comply with all 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. (Title 40 of the Code of Federal Regulations (40 CFR) § 122.41(a); California Water Code (Water Code), §§ 13261, 13263, 13264, 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 § 122.41(a)(1).)

1.2. Need to Halt or Reduce Activity Not a Defense

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

1.3. Duty to Mitigate

The 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 § 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 include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e).)

1.5. Property Rights

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

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

1.6. Inspection and Entry

The Discharger shall allow the Los Angeles 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. § 1318(a)(B); 40 CFR § 122.41(i); Water Code, §§ 13267, 13383):

1.6.1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(B)(i); 40 CFR § 122.41(i)(1); Water Code, §§ 13267, 13383);

1.6.2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. § 1318(a)(B)(ii); 40 CFR § 122.41(i)(2); Water Code, §§ 13267, 13383);

1.6.3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(B)(ii); 40 CFR § 122.41(i)(3); Water Code, §§ 13267, 13383); and

1.6.4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(B); 40 CFR § 122.41(i)(4); Water Code, §§ 13267, 13383.)

1.7. Bypass

1.7.1. Definitions

a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)

b. “Severe property damage” means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)

1.7.2. Bypass not exceeding limitations. The 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 § 122.41(m)(2).)

1.7.3. Prohibition of bypass. Bypass is prohibited, and the Los Angeles Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and

c. The Discharger submitted notice to the Los Angeles Water Board as required under Standard Provisions – Permit Compliance 1.7.5 below. (40 CFR § 122.41(m)(4)(i)(C).)

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

1.7.5. Notice

a. **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. As of December 21, 2025, all notices submitted in compliance with this section must be submitted electronically by the Discharger to the Los Angeles Water Board and USEPA Region IX or initial recipient, as defined in 40 CFR § 127.2(b), in compliance with this section and 40 CFR § 3 (including, in all cases, subpart D to part 3), 122.22 and part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular Order or if required to do so by State law. (40 CFR § 122.41(m)(3)(i).)

b. **Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting 5.5 below (24-hour notice). As of December 21, 2025, all notices submitted in compliance with this section must be submitted electronically by the Discharger to the Los Angeles Water Board and USEPA or initial recipient, as defined in 40 CFR § 127.2(b), in compliance with this section and 40 CFR § 3 (including, in all cases, subpart D to part 3), 122.22 and part 127. Part 127 is not intended to undo existing requirements for electronic reporting. Prior to this date, and independent of part 127, the Discharger may be required to report electronically if specified by a particular Order or if required to do so by State law. (40 CFR § 122.41(m)(3)(ii).)

1.8. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the 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 § 122.41(n)(1).)

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

1.8.2 **Conditions necessary for a demonstration of upset.** A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly

signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):

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

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

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting 5.5.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and

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

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

2. STANDARD PROVISIONS – PERMIT ACTION

2.1. General

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

2.2. Duty to Reapply

If the 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 § 122.41(b).)

2.3. Transfers

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

3. STANDARD PROVISIONS – MONITORING

3.1. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 CFR § 122.41(j)(1).)

3.2. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:

3.2.1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter,

and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

3.2.2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 when approved by the Los Angeles Water Board and the State Water Board, or required under 40 CFR chapter 1, subchapter N for the measured pollutant or pollutant parameter. In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

4.1. The 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 Los Angeles Water Board Executive Officer at any time. (40 CFR § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

4.2.1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));

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

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

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

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

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

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

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

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

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information

The Discharger shall furnish to the Los Angeles Water Board, State Water Board, or USEPA within a reasonable time, any information which the Los Angeles 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 Los Angeles Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR § 122.41(h); Water Code, §§ 13267, 13383.)

5.2. Signatory and Certification Requirements

5.2.1. All applications, reports, or information submitted to the Los Angeles Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 CFR § 122.41(k).)

5.2.2. All permit applications shall be signed by 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 § 122.22(a)(3).)

5.2.3. All reports required by this Order and other information requested by the Los Angeles 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:

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

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

c. The written authorization is submitted to the Los Angeles Water Board and State Water Board. (40 CFR § 122.22(b)(3).)

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

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

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those

persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations." (40 CFR § 122.22(d).)

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

5.3. Monitoring Reports

5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR § 122.41(l)(4).)

5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Los Angeles Water Board or State Water Board. All reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting 5.10 and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(l)(4)(i).)

5.3.3. If the 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 Los Angeles Water Board or State Water Board. (40 CFR § 122.41(l)(4)(ii).)

5.3.4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR § 122.41(l)(4)(iii).)

5.4. Compliance Schedules

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

5.5. Twenty-Four Hour Reporting

5.5.1. The Discharger shall report any noncompliance which may endanger health or the environment to the Manager of the Watershed Regulatory Section of the Los Angeles Water Board at (213) 576-6616 and jeong-hee.lim@waterboards.ca.gov. 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, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events 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 Los Angeles Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(6)(i).)

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

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

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

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

5.6. Planned Changes

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

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

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

5.6.3. The alteration or addition results in a significant change in the Permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan. (40 CFR § 122.41(l)(1)(iii))

5.7. Anticipated Noncompliance

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

5.8. Other Noncompliance

The 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 Los Angeles Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(7).)

5.9. Other Information

When the 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 Los Angeles Water Board, State Water Board, or USEPA, the Discharger shall promptly submit such facts or information. (40 CFR § 122.41(*l*)(8).)

5.10. Initial Recipient for Electronic Reporting Data

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

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. The Los Angeles 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.

6.2. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the CWA, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who *negligently* violates sections 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the CWA, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two years, or both. Any person who *knowingly* violates such conditions or limitations is subject to criminal penalties of

$5,000 to $50,000 per day of violation, or imprisonment for not more than three years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than 6 years, or both. Any person who *knowingly* violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions (40 CFR § 122.41(a)(2); Water Code section 13385 and 13387).

6.3. Any person may be assessed an administrative penalty by the Administrator of USEPA, the Los Angeles Water Board, or State Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this CWA, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the CWA. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000. (40 CFR § 122.41(a)(3))

6.4. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four years, or both. (40 CFR § 122.41(j)(5)).

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

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. Publicly Owned Treatment Works (POTWs)

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

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

7.1.2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR § 122.42(b)(2).)

7.1.3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW. (40 CFR § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

TABLE OF CONTENTS

TABLE OF TABLES

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Section 308(a) 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 NPDES permits specify monitoring and reporting requirements. Water Code section 13383 also authorizes the Los Angeles Water Board to establish monitoring, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement the federal and California laws and/or regulations.

1. GENERAL MONITORING PROVISIONS

1.1. All samples shall be representative of the waste discharge under conditions of peak load. Results of monthly, quarterly, semiannual, and annual analyses shall be reported as due date specified in Table E-10 of the MRP.

1.2. Pollutants, except those analyzed in the field, shall be analyzed using the analytical methods described in 40 CFR parts 136.3, 136.4, and 136.5; or where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or the State Water Board.

1.3. **Laboratory Certification.** Laboratories analyzing samples shall be certified by the State Water Resources Control Board, Division of Drinking Water (DDW) Environmental Laboratory Accreditation Program (ELAP) in accordance with Water Code 13176 and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided in the Annual Report due to the Los Angeles Water Board each time a new certification and/or renewal of the certification is obtained from ELAP.

1.4. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR § 136.3. All QA/QC analyses must be run on the same dates that samples are analyzed. The Discharger shall retain the QA/QC documentation in its files and make available for inspection and/or submit them when requested by the Los Angeles Water Board. Proper chain of custody procedures must be followed, and a copy of that documentation shall be submitted with the monthly report.

1.5. The Discharger shall calibrate and perform maintenance procedures on all monitoring instruments and ensure accuracy of measurements, or shall ensure that both equipment activities will be conducted.

1.6. For any analyses performed for which no procedure is specified in the United States Environmental Protection Agency (USEPA) guidelines, or in the MRP, the constituent or parameter analyzed, and the method or procedure used must be specified in the monitoring report.

1.7. Each monitoring report must affirm in writing that “with the exception of field test, all analyses were conducted at a laboratory certified for such analyses, under the Environmental Laboratory Accreditation Program (ELAP) through the State Water Resources Control Board, Division of Drinking Water; or, were approved by the Executive Officer in accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program.”

1.8. The monitoring report shall specify the USEPA analytical method used, the Method Detection Limit (MDL), and the Reporting Level (RL) [the applicable minimum level (ML) or

reported Minimum Level (RML)] for each pollutant. The MLs are those published by the State Water Resources Control Board (State Water Board) in the *Policy for the Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California*, (State Implementation Policy or SIP), February 9, 2005, Appendix 4. The ML represents the lowest quantifiable concentration in a sample based on the proper application of all method-based analytical procedures and the absence of any matrix interference. When all specific analytical steps are followed and after appropriate application of method specific factors, the ML also represents the lowest standard in the calibration curve for that specific analytical technique. When there is deviation from the method analytical procedures, such as dilution or concentration of samples, other factors may be applied to the ML depending on the sample preparation. The resulting value is the reported ML.

1.9. The Discharger shall select the analytical method that provides an ML lower than the Order limit established for a given parameter, unless the Discharger can demonstrate that a particular ML is not attainable, in accordance with procedures set forth in 40 CFR part 136, and obtains approval for a higher ML from the Executive Officer, as provided for in section 1.11 below. If the effluent limitation is lower than all the MLs in Appendix 4 of the SIP, the Discharger must select the method with the lowest ML for compliance purposes. The Discharger shall include in the Annual Summary Report a list of the analytical methods employed for each test.

1.10. The Discharger shall instruct its laboratories to establish calibration standards so that the ML (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. In accordance with section 1.11 below, the Discharger's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.

1.11. In accordance with section 2.4.3 of the SIP, the Los Angeles Water Board Executive Officer, in consultation with the State Water Board's Quality Assurance Program Manager, may establish an ML that is not contained in Appendix 4 of the SIP to be included in the Discharger's Order in any of the following situations:

1.11.1. When the pollutant under consideration is not included in Appendix 4 of the SIP;

1.11.2. When the Discharger and the Los Angeles Water Board agree to include in the Order a test method that is more sensitive than those specified in 40 CFR part 136;

1.11.3. When the Discharger agrees to use an ML that is lower than those listed in Appendix 4 of the SIP;

1.11.4. When the Discharger demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 of the SIP and proposes an appropriate ML for the matrix; or,

1.11.5. When the Discharger uses a method, for which quantification practices are not consistent with the definition of the ML. Examples of such methods are USEPA-approved method 1613 for dioxins, and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Discharger, the Los Angeles Water Board, and the State Water Board shall agree

on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

If there is any conflict between foregoing provisions and the SIP, the provisions stated in the SIP (section 2.4) shall prevail.

1.12. If the Discharger samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this MRP using approved analytical methods, the results of those analyses shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with limitations set forth in this Order.

1.13. The Discharger shall develop and maintain a record of all spills or bypasses of raw or partially treated sewage from its collection system or treatment plant according to the requirements in the WDR section of this Order. This record shall be made available to the Los Angeles Water Board upon request and a spill summary shall be included in the annual summary report.

1.14. For all bacteriological analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for *Enterococcus*). The detection methods used for each analysis shall be reported with the results of the analyses.

1.14.1. Detection methods used for coliforms (total) shall be those presented in Table 1A of 40 CFR part 136 unless alternate methods have been approved in advance by the USEPA pursuant to 40 CFR part 136.

1.14.2. Detection methods used for *E. coli* and *Enterococcus* shall be those presented in Table 1A of 40 CFR part 136 or in the USEPA publication EPA 600/4-85/076, “Test Methods for *Escherichia coli* and *Enterococci* in Water By Membrane Filter Procedure,” or any improved method determined by the Los Angeles Water Board to be appropriate.

1.15. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

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

2. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
---	INF-001	The influent monitoring location shall be located at each point of inflow to the sewage treatment plant and located upstream of any in-plant return flows and/or where representative samples of the influent can be obtained. Latitude: 34.183611° Longitude: -118.479389°
002, 003, and 008	EFF-001A	The effluent monitoring location for all constituents (except for bacteria) shall be located downstream of any in-plant return flows and after the final dechlorination process, where representative samples of the effluent can be obtained from Tillman WRP. Latitude: 34.18025°, Longitude: -118.48028°
---	EFF-001B	The effluent monitoring location for bacteria shall be located downstream of any in-plant return flows and after the final disinfection process, where representative samples of the effluent can be obtained from Tillman WRP. Latitude: 34.18028°, Longitude: 118.478194°
---	RSW-LATT612 (I)	This upstream receiving water monitoring location is located in Los Angeles River, upstream of Bull Creek. Latitude 34.179509°, Longitude -118.500309°
---	RSW-LATT616 (J)	This upstream receiving water monitoring location is located in Bull Creek, 100 ft. downstream of Lake Balboa weir outlet (Lake Balboa Storm Drain Nos. 1 and 2 outlets). Latitude 34.180526°, Longitude -118.497745°
---	RSW-LATT614 (K)	This upstream receiving water monitoring location is located in Bull Creek, upstream of Lake Balboa discharge (250 feet upstream of Lake Balboa upper discharge, near the corner of Victory Blvd. and Petit Ave). Latitude 34.186110°, Longitude -118.497777°
---	RSW-4 (4)	This upstream receiving water monitoring location is located in Lake Balboa, 400 feet upstream from the outlet spillway. Latitude 34.17941°, Longitude -118.49391°

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
---	RSW-5 (5)	The alternate monitoring station for RSW-4 Latitude 34.17946°, Longitude -118.49344°
---	RSW-W2 (W2)	This upstream receiving water monitoring location is located in the Wildlife Lake, south of the island, near the westerly lake shoreline at a 1-foot water depth Latitude 34.17391°, Longitude -118.47203°
---	RSW-W4 (W4)	The alternate monitoring station for RSW-W2 Latitude 34.17280°, Longitude -118.47203°
---	RSW-LATT622 (D)	This downstream receiving water monitoring location is located at 100 yards downstream of the confluence of the Los Angeles River and Hayvenhurst Channel. Latitude 34.175740°, Longitude -118.490828°
---	RSW-LATT628 (W-E)	This downstream receiving water monitoring location is located in Los Angeles River, 300 ft downstream of the Haskell Flood Control Channel. Latitude 34.167335°, Longitude -118.474015°
---	RSW-LATT630 (R-7)	This downstream receiving water monitoring location is located in the Los Angeles River, 1,980 feet downstream of Outfall 008 and below Sepulveda Dam, Latitude 34.161697°, Longitude -118.466418°
Los Angeles River	RSW-003D	The TMDL dry and wet-weather flow monitoring location is located at the County of Los Angeles Department of Public Works' Wardlow Gage Station No. F319-R, in the Los Angeles River, just below Wardlow River Road. Latitude 33.81598°, Longitude -118.20552°

The North latitude and West longitude information in Table E-1 are approximate for administrative purposes. A map of the receiving water locations and discharge points is included in Attachment B2. The monitoring locations are shown in the map in Attachment B.

The monitoring locations RSW-4 and RSW-W2, in Lake Balboa and Wildlife Lake, respectively, are located off the shoreline of each lake and both require a boat to conduct the monitoring. The Discharger shall ensure all required equipment is available to conduct monitoring at these two locations. This includes implementing a maintenance schedule and

contingency plan to ensure at least one boat is operable and available for sampling as needed. If the Discharger is unable to collect samples at RSW-4 and RSW-W2, the Discharger shall submit a request prior to sampling for Executive Officer approval to use the approved alternate monitoring locations (RSW-5 and RSW-W3, respectively) in any of the following situations:

1. Unsafe or hazardous conditions create a safety concern for the sampling crew.

2. The water level is too low to operate a boat.

If the Discharger receives Executive Officer approval to sample at the approved alternate monitoring locations, a summary of why the alterative monitoring locations were monitored shall be included in the monthly monitoring report.

3. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to:

- Determine compliance with NPDES permit conditions.
- Assess treatment plant performance.
- Assess effectiveness of the Pretreatment Program.

3.1 Monitoring Location INF-001

The Discharger shall monitor influent to the facility at INF-001 as follows:

Table E-2. Influent Monitoring INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	recorder	continuous	a
pH	pH unit	Grab	weekly	b
Temperature	°F	Grab	weekly	b
Total Suspended Solids (TSS)	mg/L	24-hour composite	weekly	b
Biochemical Oxygen Demand (BOD_5 20°C)	mg/L	24-hour composite	weekly	b
Ammonia nitrogen	mg/L	24-hour composite	quarterly	b
Lead	μg/L	24-hour composite	quarterly	b
Selenium	μg/L	24-hour composite	quarterly	b
Cadmium	μg/L	24-hour composite	quarterly	b
Zinc	μg/L	24-hour composite	quarterly	b
Copper	μg/L	24-hour composite	quarterly	b
Carbon Tetrachloride	μg/L	24-hour composite	quarterly	b
Pentachlorophenol	μg/L	24-hour composite	quarterly	b

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Benzo(a)pyrene	μg/L	24-hour composite	quarterly	b
Benzo(b)fluoranthene	μg/L	24-hour composite	quarterly	b
Benzo(k)fluoranthene	μg/L	24-hour composite	quarterly	b
Dibenzo(a,h)anthracene	μg/L	24-hour composite	quarterly	b
Indeno(1,2,3-cd)pyrene	μg/L	24-hour composite	quarterly	b
PCBs as Aroclors	µg/L	24-hour composite	annually	b and c
PCBs as Congeners	pg/L	24-hour composite	annually	b and c
Total Trihalomethanes	µg/L	calculated	semiannually	b
Remaining USEPA priority pollutants excluding asbestos	µg/L	24-hour composite; grab for VOCs, cyanide, and chromium VI; grab or composite for bis(2-ehtylhexyl) phthalate and 2,3,7,8-TCDD equivalents	semiannually	b, d, and e

Footnotes for Table E-2

a. Total daily flow and instantaneous peak daily flow (24-hr basis) shall be reported. The actual monitored flow shall be reported (not the maximum flow, i.e., design capacity).

b. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Board. For any pollutant whose effluent limitation is lower than all the MLs specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

c. PCBs as aroclors shall be analyzed using USEPA method 608.3. PCBs as congeners shall be analyzed using method 1668c. USEPA recommends that until the USEPA proposed method 1668c is incorporated into 40 CFR 136, permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608.3 for monitoring data, reported as aroclor results, that will be used for determining compliance with WQBELs (if applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes.

d. Priority pollutants are those constituents referred to in 40 CFR part 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

e. The 40 CFR Part 136 method for phthalate esters, including bis (2-ethylhexyl) phthalate, and TCDD equivalents requires samples to be collected in glass sample containers to avoid interference, which can lead to artifacts and/or elevated baselines in gas chromatograms. Sample collection must be done using glass sample containers for all

phthalate esters, including bis (2-ethylhexyl) phthalate, and TCDD equivalents unless analytical methods for these pollutants in 40 CFR Part 136 specify that other means of sample collection are approved. Grab sample type is recommended, but an automatic sampler (composite sample) can be used to collect samples for all phthalate esters, including bis (2-ethylhexyl) phthalate, and TCDD equivalents as long as the sample bottles are glassware.

End of footnotes for Table E-2

4. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to:

- Determine compliance with National Pollutant Discharge Elimination System (NPDES) permit conditions and water quality standards.
- Assess and improve plant performance and identify operational problems.
- Provide information on wastewater characteristics and flows for use in interpreting water quality and biological data.
- Determine reasonable potential analysis for toxic pollutants.
- Determine waste load allocation compliance and TMDL effectiveness.

4.1 Monitoring Location EFF-001

The Discharger shall monitor the discharge of tertiary-treated effluent at EFF-001 as shown in Table E-3. All parameters except for bacteria shall be monitored at EFF-001A. Bacteria shall be monitored at EFF-001B. If more than one analytical test method is listed for a given parameter, the Discharger must select a method with a minimum level (ML) that is below the effluent limitation. If no analytical test method has an ML that is below the effluent limitation, then the method with the lowest ML must be used.

Table E-3. Effluent Monitoring at EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total flow	mgd	recorder	continuous	a
Turbidity	NTU	recorder	continuous	a, b, and c
Total residual chlorine	mg/L	recorder	continuous	b and d
Total residual chlorine	mg/L	grab	daily	b and e
Total coliform	MPN/100mL or CFU/100mL	grab	daily	b, c, and f
E. coli	MPN/100mL or CFU/100mL	grab	daily	b and f
Temperature	°F	grab	daily	b, g, and q
pH	pH units	grab	daily	b, g, and q
Settleable solids	mL/L	grab	daily	b and q

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total suspended solids (TSS)	mg/L	24-hour composite	daily	b
BOD_5 20°C	mg/L	24-hour composite	weekly	b and h
Oil and grease	mg/L	grab	weekly	b
Dissolved oxygen	mg/L	grab	monthly	b
Total Dissolved Solids	mg/L	24-hour composite	monthly	b
Sulfate	mg/L	24-hour composite	monthly	b
Chloride	mg/L	24-hour composite	monthly	b
Fluoride	mg/L	24-hour composite	quarterly	b
Ammonia Nitrogen	mg/L	24-hour composite	monthly	b and g
Nitrate nitrogen (as N)	mg/L	24-hour composite	monthly	b and g
Nitrite nitrogen (as N)	mg/L	24-hour composite	monthly	b and g
Nitrate + nitrite (as N)	mg/L	calculated	monthly	b and g
Total Kjeldahl nitrogen	mg/L	24-hour composite	monthly	b and g
Organic nitrogen	mg/L	calculated	monthly	b and g
Total nitrogen	mg/L	calculated	monthly	b
Surfactants (MBAS)	mg/L	24-hour composite	monthly	b
Surfactants (CTAS)	mg/L	24-hour composite	monthly	b
Total hardness ($CaCO_3$)	mg/L	24-hour composite	monthly	b
Perchlorate	μg/L	grab	annually	l
1,4-Dioxane	μg/L	grab	annually	l
1,2,3-Trichloropropane	μg/L	grab	annually	l
Methyl tert-butyl-ether (MTBE)	μg/L	grab	annually	l
Antimony	µg/L	24-hour composite	quarterly	b
Arsenic	µg/L	24-hour composite	quarterly	b
Beryllium	µg/L	24-hour composite	quarterly	b
Cadmium	µg/L	24-hour composite	monthly	b
Chromium III	µg/L	calculated	quarterly	b
Chromium VI	µg/L	grab	quarterly	b
Total Chromium	µg/L	grab	quarterly	b
Copper	µg/L	24-hour composite	monthly	b
Lead	µg/L	24-hour composite	monthly	b
Mercury	µg/L	24-hour composite	quarterly	b and o
Nickel	µg/L	24-hour composite	quarterly	b
Selenium	µg/L	24-hour composite	monthly	b
Silver	µg/L	24-hour composite	quarterly	b

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Thallium	µg/L	24-hour composite	quarterly	b
Zinc	µg/L	24-hour composite	monthly	b
Cyanide	µg/L	grab	quarterly	b
Carbon Tetrachloride	µg/L	grab	monthly	b
Pentachlorophenol	µg/L	24-hour composite	monthly	b
Benzo(a)pyrene	µg/L	24-hour composite	monthly	b
Benzo(b)fluoranthene	µg/L	24-hour composite	monthly	b
Benzo(k)fluoranthene	µg/L	24-hour composite	monthly	b
Dibenzo(a,h)anthracene	µg/L	24-hour composite	monthly	b
Indeno(1,2,3-cd)pyrene	µg/L	24-hour composite	monthly	b
Heptachlor	µg/L	24-hour composite	semiannually	b
Bis(2-ethylhexyl) phthalate	µg/L	grab or 24-hour composite	quarterly	b and n
PCBs as aroclors	µg/L	24-hour composite	annually	b and j
PCBs as congeners	pg/L	24-hour composite	annually	b and j
TCDD equivalents	pg/L	grab or 24-hour composite	semiannually	b and n
Diazinon	µg/L	24-hour composite	annually	b
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	24-hour comp.	annually	b
2,4,5-TP (Silvex)	µg/L	24-hour comp.	annually	b
Pesticides	µg/L	24-hour comp.	annually	b and p
Bromoform	µg/L	grab	semiannually	b
Chloroform	µg/L	grab	semiannually	b
Dibromochloromethane	µg/L	grab	semiannually	b
Dichlorobromomethane	µg/L	grab	semiannually	b
Total Trihalomethanes	µg/L	grab/calculated sum	semiannually	b
Chronic toxicity *Ceriodaphnia dubia* Survival and Reproduction endpoints	Pass or Fail (TST), % Effect	24-hour composite	monthly	b and i
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 & uranium)	pCi/L	24-hour composite	semiannually	k

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Remaining EPA priority pollutants excluding asbestos	µg/L	24-hour composite; grab for VOCs	semiannually	b and m

Footnotes for Table E-3

a. Where continuous monitoring of a constituent is required, the following shall be reported:

- Total waste flow – Total daily and peak daily flow (24-hr basis).
- Turbidity – Maximum daily value, total amount of time each day the turbidity exceeded 5 NTU, flow proportioned average daily value. A grab sample can be used to determine compliance with the 10 NTU limit. A flow-weighted 24-hour composite sample may be collected for turbidity in place of the recorder to determine the flow-proportioned average daily value.

b. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

c. Coliform and turbidity samples shall be obtained at some point in the treatment process at a time when wastewater flow and characteristics are most demanding on the treatment facilities, filtration, and disinfection procedures.

d. Total residual chlorine shall be recorded continuously. The recorded data shall be maintained by the Permittee for at least five years. The Permittee shall extract the maximum daily peak, minimum daily peak and average daily values from the recorded media and shall be made available upon request of the Los Angeles Water Board. The continuous monitoring data are not intended to be used for compliance determination purposes.

e. Daily grab samples shall be collected during peak flow at monitoring location EFF-001A Monday through Friday only, except for holidays. Analytical results of daily grab samples will be used to determine compliance with total residual chlorine effluent limitation at EFF-001A. Furthermore, additional monitoring requirements specified in section 4.2. shall be followed.

f. *E. coli* testing shall be conducted only if total coliform testing is positive. If the total coliform analysis results in no detection, a result of less than (<) the reporting limit for total coliform will be reported for *E. coli*. Daily grab samples for total coliform and *E.coli* shall be collected at monitoring location EFF-001B, Monday through Friday only, except for holidays.

g. Nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, total Kjeldahl nitrogen, pH, and temperature sampling shall be conducted on the same day or as close to concurrently as possible.

h. If the result of the weekly BOD_5 20°C analysis yields a value greater than the average monthly effluent limitation (AMEL), the frequency of analysis shall be increased to daily

within one week of knowledge of the test result for at least 30 days and until compliance with the average weekly effluent limitation (AWEL) and AMEL BOD_5 20°C limits is demonstrated; after which the frequency shall revert to weekly.

i. The Discharger shall conduct whole effluent toxicity monitoring using the *Ceriodaphnia dubia* as the test species, as outlined in section 5 of this MRP. For the *Ceriodaphnia dubia* reproduction endpoint, the median monthly effluent limitation (MMEL) summary result shall be reported as "Pass" or "Fail" and the maximum daily single result shall be reported as "Pass" or "Fail" and "% Effect." For the *Ceriodaphnia dubia* survival endpoint, the MMEL and the MDEL results shall be reported as "% Effect." If the chronic aquatic toxicity routine monitoring test results in a "Fail" at the instream waste concentration (IWC), then the Discharger shall complete a maximum of two MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine monitoring test was initiated that resulted in the "Fail" at the IWC. If the first chronic MMEL compliance test results in a "Fail" at the IWC, then the second MMEL compliance test is not necessary because the "Fail" results from the first two tests constitutes a violation of the chronic toxicity MMEL.

j. PCBs as aroclors shall be analyzed using USEPA method 608.3. PCBs as congeners shall be analyzed using method 1668c. USEPA recommends that until the USEPA proposed method 1668c is incorporated into 40 CFR 136, permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608.3 for monitoring data, reported as aroclor results, that will be used for determining compliance with WQBELs (if applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes.

k. Analyze these radiochemicals by the following USEPA methods: method 900.0 for gross alpha and gross beta, method 903.0 or 903.1 for radium-226, method 904.0 for radium-228, method 906.0 for tritium, method 905.0 for strontium-90, and method 908.0 for uranium. Analysis for combined radium-226 & 228 shall be conducted only if gross alpha results for the same sample exceed 15 pCi/L or beta greater than 50 pCi/L. If radium-226 & 228 exceeds the stipulated criteria, analyze for tritium, strontium-90 and uranium.

l. Emerging chemicals include 1,4-dioxane (USEPA 8270M test method), perchlorate (USEPA 314 test method, or USEPA method 331 if a detection limit of less than 6 µg/L is achieved), 1,2,3-trichloropropane (USEPA 504.1, 8260B test method, or USEPA 524.2 in SIM mode), and methyl tert-butyl ether (USEPA 8260B test method or USEPA method 624 if a detection level of less than 5 µg/L is achieved, and if the Permittee received ELAP certification to run USEPA method 624).

m. Priority pollutants are those constituents referred to in 40 CFR part 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

n. The 40 CFR Part 136 method for phthalate esters, including bis (2-ethylhexyl) phthalate, and TCDD equivalents requires samples to be collected in glass sample containers to avoid interference, which can lead to artifacts and/or elevated baselines in gas chromatograms. Sample collection must be done using glass sample containers for all phthalate esters, including bis (2-ethylhexyl) phthalate, and TCDD equivalents unless analytical methods for these pollutants in 40 CFR Part 136 specify that other means of sample collection are approved. Grab sample type is recommended, but an automatic sampler (composite

sample) can be used to collect samples for all phthalate esters, including bis (2-ethylhexyl) phthalate, and TCDD equivalents as long as the sample bottles are glassware.

o. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 ng/L, shall be used to analyze total mercury. If an alternative method with an equivalent or more sensitive method detection limit is approved in 40 CFR part 136, the Discharger may use that method in lieu of USEPA Method 1631E.

p. Pesticides are, for purposes of this order, those six constituents referred to in 40 CFR part 125.58(p) (demeton, guthion, malathion, methoxychlor, mirex, and parathion).

q. Daily grab samples shall be collected at monitoring location EFF-001A, Monday through Friday only, except for holidays.

End of Footnotes for Table E-3

4.2 Total Residual Chlorine Additional Monitoring

Continuous monitoring of total residual chlorine at the current location shall serve as an internal trigger for the increased grab sampling at effluent sampling points if either of the following occurs, except as noted in item 4.2.3 below:

4.2.1. Total residual chlorine concentration excursions of up to 0.3 mg/L lasting greater than 15 minutes; or

4.2.2. Total residual chlorine concentration peaks in excess of 0.3 mg/L lasting greater than 1 minute.

4.2.3. Additional grab samples need not be taken if it can be demonstrated that a stoichiometrically appropriate amount of dechlorination chemical has been added to effectively dechlorinate the effluent to 0.1 mg/L or less for peaks in excess of 0.3 mg/L lasting more than 1 minute, but not for more than five minutes.

5. CHRONIC WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

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

The aquatic chronic toxicity IWC for this discharge is 100 percent effluent.

5.2. Sample Volume and Holding Time

The total sample volume shall be determined by the specific toxicity test method used. Sufficient sample volume shall be collected to perform the required toxicity test. For the receiving water, sufficient sample volume shall also be collected for subsequent TIE studies, if necessary, at each sampling event. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

5.3. Chronic Freshwater Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity <1 ppt, the Discharger shall conduct the following chronic toxicity tests on effluent samples at the in-stream waste concentration 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). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

5.3.1. A static renewal toxicity test with the fathead minnow, *Pimephales promelas* (Larval Survival and Growth Test Method 1000.0).

5.3.2. A static renewal toxicity test with the daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).

5.3.3. A static toxicity test with the green alga, *Selenastrum capricornutum* (also named *Raphidocelis subcapitata*) (Growth Test Method 1003.0).

5.4. Species Sensitivity Screening

The Permittee shall begin a species sensitivity screening for chronic aquatic toxicity prior to Order reissuance, but no later than 18 months prior to the expiration date of this Order. For continuous dischargers, a species sensitivity screening includes four sets of tests completed in the span of one year, with one set collected in each of the four quarters. In each of the four sets, the Discharger shall collect a single effluent sample to initiate and concurrently conduct three toxicity tests using the fish, an invertebrate, and the alga species previously referenced. This sample shall also be analyzed for the parameters required on a monthly frequency for the discharge during that given month. As allowed under the test method for the *Ceriodaphnia dubia* and the *Pimephales promelas*, a second and third sample may be collected for use as test solution renewal water as the seven-day toxicity test progresses. However, that same sample shall be used to renew both the *Ceriodaphnia dubia* and the *Pimephales promelas*. For non-continuous dischargers, a set of testing shall be conducted in each quarter in which there is expected to be at least 15 days of discharge. For non-continuous dischargers that discharge in only one quarter of the year in which there is expected to be at least 15 days of discharge, two sets of testing shall be conducted within the same quarter.

If the results of all 12 valid tests conducted during the species sensitivity screening is “Pass,” then the species that exhibited the highest percent effect in any single test shall be used for routine monitoring during the following Order cycle. Likewise, if the results of all 12 valid tests conducted during the species sensitivity screening is “Fail,” then the species that exhibited the highest percent effect in any single test shall be used for routine monitoring during the following Order cycle. If the result of only one of the 12 valid tests conducted during the species sensitivity screening is “Fail,” then the species used in that test shall be used for routine monitoring during the following Order cycle. If there are multiple valid tests conducted during the species sensitivity screening that result in “Fail,” the species that resulted in a “Fail” the most often during the species sensitivity screening shall be used in routine monitoring during the following Order cycle. If two species had the same number of tests that result in “Fail,” the species that exhibited the highest percent effect in any single test that resulted in a “Fail” shall be used during routine monitoring during the following Order cycle. During the calendar month, toxicity tests used to determine the most sensitive test species shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL.

5.5. Quality Assurance and Additional Requirements

5.5.1. Quality assurance measures, instructions, and other recommendations and requirements are found in the test methods manual previously referenced. Additional requirements are specified below. The discharge is subject to determination of "Pass" or "Fail" and "Percent Effect" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach 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, Table A-1 and Appendix B, Table B-1. The null hypothesis (H_o) for the TST approach is: Mean discharge IWC response ≤ 0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail." The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100. 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.

5.5.2. To comply with the Median Monthly Effluent Limit (MMEL) for chronic toxicity, up to three independent toxicity tests shall be conducted during a calendar month. If the initial toxicity test, conducted in a given month, results in "Fail" at the IWC, then the Discharger shall initiate up to two additional chronic aquatic toxicity tests in the remainder of the month to determine compliance with the MMEL. If the second test conducted in the month is also a "Fail," then that constitutes a violation of the MMEL. However, if the second and third tests result in a "Pass" then the discharge is in compliance with the MMEL.

5.5.3. If the effluent toxicity test does not meet all test acceptability criteria (TAC) and all required test conditions specified in the referenced WET methods manual (*Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013) (See Table E-4 for TAC below)), then the Discharger must re-sample and re-test within 14 days. Deviations from recommended test conditions, specified in the referenced test method *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013), must be evaluated on a case-by-case basis to determine the validity of test results. The Discharger shall consider the degree of the deviation and the potential or observed impact of the deviation on the test results in consultation with Los Angeles Water Board staff before rejecting or accepting a test result as valid, and shall report the results of the validity determination with supporting evidence for that decision in their monthly report.

Table E-4. USEPA Methods and Test Acceptability Criteria

Species & USEPA Test Method Number	Test Acceptability Criteria
Fathead Minnow, *Pimephales promelas*, Larval Survival and Growth Test Method 1000.0. (Table 1 of Test Method, referenced above)	80% or greater survival in controls; average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg. (required)
Daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test Method 1002.0. (Table 3 of Test Method, referenced above)	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 the surviving control females must produce three broods. (required)
Green Alga, *Selenastrum capricornutum*, Growth Toxicity Test Method 1003.0. (Table 3 of Test Method, referenced above)	Mean cell density as least $1x10^6$ cells/mL in the controls; and variability (CV%) among control replicates less than or equal to 20%. (required)

5.5.4. Dilution 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.

5.5.5. When preparing samples for toxicity testing, in addition to the required monitoring for conductivity, etc., it is recommended that total alkalinity and total hardness be measured in the undiluted effluent, receiving water, dilution water, and culture water (following the WET methods manual), as well as the major geochemical ions (see Mount et al., 2018).

5.5.6. Monthly reference toxicant testing is sufficient. All reference toxicant test results shall be reviewed and reported using the EC25, where EC25 is a point estimate of the toxicant concentration that would cause an observable adverse effect (e.g., death, immobilization, or serious incapacitation) in 25 percent of the test organisms.

5.5.7. The Discharger shall perform toxicity tests on final effluent samples. Chlorine and ammonia shall not be removed from the effluent sample prior to toxicity testing, unless explicitly authorized under this section of the Monitoring and Reporting Program and the rationale is explained in the Fact Sheet (Attachment F).

5.6. Preparation of an Initial Investigation TRE Work Plan

The Discharger shall prepare and submit a copy of the Discharger's initial investigation TRE work plan to the Executive Officer of the Los Angeles Water Board for approval within 90 days of the effective date of this Order. If the Executive Officer 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) as guidance, or the most current version, or USEPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, April 1989). At a minimum, the TRE Work Plan must contain the provisions in Attachment G. This work plan shall describe the steps that the

Discharger intends to follow if toxicity is detected. At a minimum, the work plan shall include:

5.6.1. 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.

5.6.2. A description of the Facility'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.

5.6.3. 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).

5.7. Toxicity Reduction Evaluation (TRE) Process

A TRE is required when toxicity is persistent: if 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, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity), then Executive Officer of the Los Angeles Water Board may require a TRE. The discharger shall conduct a TRE in accordance with a TRE Work Plan as approved by Los Angeles Water Board. Routine monitoring shall continue during the TRE process and TST results ("Pass" or "Fail", "Percent Effect") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL. During the TRE process, the major ions (Na^+, K^+, Ca^{2+}, Mg^{2+}, Cl^-, SO_4^{2-}, and HCO_3^-/CO_3^{2-}), shall be analyzed for in effluent IWC, dilution water, and culture water used for toxicity testing. Those results shall be reported in the corresponding monitoring report.

5.7.1. **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) or USEPA manual *Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations* (EPA/600/2-88/070, April 1989) and, within 30 days, submit to the Executive Officer a Detailed TRE Work Plan, which shall follow the TRE Work Plan revised as appropriate for this toxicity event. It shall include the following information, and comply with additional conditions set by the Executive Officer:

a. Further actions by the Discharger to investigate, identify, and correct the causes of toxicity.

b. Actions the Discharger will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.

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

5.7.2. **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); *Chronic TIE Manual: Toxicity Identification Evaluation: Characterization of Chronically Toxic*

*Effluents, Phase I (*EPA/600/6-91/005F, 1992); *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 *Marine Toxicity Identification Evaluation (TIE): Phase I Guidance Document* (EPA/600/R-96-054, 1996). The TIE should be conducted on the species demonstrating the most sensitive toxicity response.

5.7.3. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and stormwater control programs. 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.

5.7.4. The Discharger shall continue to conduct routine effluent monitoring and MMEL compliance monitoring while the TIE and/or TRE process is taking place. Additional TRE work plans are not required once a TRE has begun.

5.7.5. The Los Angeles 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. However, the TRE shall be carried out in accordance with the Executive Officer-approved TRE Work Plan.

5.7.6. The Board may consider the results of any TIE/TRE studies in an enforcement action.

5.8. Reporting

The Self-Monitoring Report (SMR) shall include a full laboratory report for each toxicity test. This report shall be prepared using the format and content of the test methods manual chapter, “Report Preparation,” including:

5.8.1. 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, using *Ceriodaphnia dubia*. 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-10.

5.8.2. A summary of water quality measurements for each toxicity test (e.g., pH, dissolved oxygen, temperature, conductivity, total hardness, salinity, chlorine, ammonia).

5.8.3. 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, Table A-1, and Appendix B, Table B-1.

5.8.4. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TIE/TRE report, the Discharger shall provide status updates in the monthly

monitoring reports, indicating which TIE/TRE steps are underway and which steps have been completed.

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

5.8.6. Tabular data and graphical plots clearly showing the laboratory's performance for the reference toxicant, for each solution, for the previous 20 tests and the laboratory's performance for the control mean, control standard deviation, and control coefficient of variation, for each solution, for the previous 12-month period.

5.8.7. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon request from the Los Angeles Water Board Assistant Executive Officer or the Executive Officer.

5.9. Ammonia Removal

5.9.1. Except with prior approval from the Executive Officer of the Los Angeles Water Board, ammonia shall not be removed from bioassay samples. The Discharger must demonstrate the effluent toxicity is caused by ammonia because of increasing test pH when conducting the toxicity test. It is important to distinguish the potential toxic effects of ammonia from other pH sensitive chemicals, such as certain heavy metals, sulfide, and cyanide. The following steps may be used to demonstrate that the toxicity is caused by ammonia, and not other toxicants, before the Executive Officer would allow for control of pH in the test.

a. There is consistent toxicity in the effluent and the maximum pH in the toxicity test is in the range to cause toxicity due to increased pH.

b. Chronic ammonia concentrations in the effluent are greater than 4 mg/L total ammonia.

c. Conduct graduated pH tests as specified in the TIE methods. For example, mortality should be higher at pH 8 and lower at pH 6.

d. Treat the effluent with a zeolite column to remove ammonia. Mortality in the zeolite-treated effluent should be lower than the non-zeolite treated effluent. Then add ammonia back to the zeolite-treated samples to confirm toxicity is due to ammonia.

5.9.2. When it has been demonstrated that toxicity is due to ammonia because of increasing test pH, pH may be controlled using appropriate procedures which do not significantly alter the nature of the effluent, after submitting a written request to the Los Angeles Water Board, and receiving written permission expressing approval from the Executive Officer of the Los Angeles Water Board.

5.10. Chlorine Removal

Except with prior approval from the Executive Officer of the Los Angeles Water Board, chlorine shall not be removed from bioassay samples. However, chlorine may be removed from the facility's effluent bioassay samples in the laboratory when the recycled water demand is high and there is no effluent water available for sampling over the weir after the dechlorination process.

6. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)

7. RECYCLING MONITORING REQUIREMENTS (NOT APPLICABLE)

8. RECEIVING WATER MONITORING REQUIREMENTS

8.1. Surface Water Monitoring

8.1.1. Monitoring Location – RSW-LATT630

The following analyses shall be conducted on grab samples obtained at Station RSW-LATT630, which is located in the Los Angeles River downstream of all Tillman WRP discharges. Samples shall be taken at a one-foot depth.

Table E-5. Receiving Water Monitoring Requirements at RSW-LATT630

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total flow	cfs	estimated	weekly	---
Turbidity	NTU	grab	quarterly	a
Total residual chlorine	mg/L	grab	weekly	a
Temperature	°F	grab	weekly	b
pH	pH units	grab	weekly	b
Dissolved oxygen	mg/L	grab	weekly	a
E. coli	MPN/100mL or CFU/100mL	grab	weekly	a
Settleable solids	mL/L	grab	quarterly	a
Total Suspended Solids (TSS)	mg/L	grab	quarterly	a
BOD_5 20°C	mg/L	grab	quarterly	a
Total organic carbon	mg/L	grab	quarterly	a
Oil and grease	mg/L	grab	monthly	a
Total hardness ($CaCO_3$)	mg/L	grab	quarterly	a
Conductivity	µmho/cm	grab	quarterly	a
Total Dissolved Solids	mg/L	grab	quarterly	a
Sulfate	mg/L	grab	quarterly	a
Chloride	mg/L	grab	quarterly	a
Boron	mg/L	grab	semiannually	a
Fluoride	mg/L	grab	semiannually	a
Chemical oxygen demand	mg/L	grab	quarterly	a
Ammonia Nitrogen	mg/L	grab	weekly	a, b, and c

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Nitrite nitrogen	mg/L	grab	weekly	a, b, and c
Nitrate nitrogen	mg/L	grab	weekly	a, b, and c
Nitrate + Nitrite (as nitrogen)	mg/L	calculated	weekly	a, b, and c
Organic nitrogen	mg/L	calculated	monthly	a and b
Total nitrogen	mg/L	calculated	monthly	a
Total Kjeldahl Nitrogen (TKN)	mg/L	grab	monthly	a and b
Total phosphorus	mg/L	grab	quarterly	a
Orthophosphate-P	mg/L	grab	quarterly	a
Surfactants (MBAS)	mg/L	grab	quarterly	a
Surfactants (CTAS)	mg/L	grab	quarterly	a
Chronic toxicity *Ceriodaphnia dubia* Survival and Reproduction endpoints	Pass or Fail (TST), % Effect	grab	quarterly	d
Diazinon	µg/L	grab	annually	a
Perchlorate	µg/L	grab	annually	a and e
2,4-Dichlorophenoxyacetic acid (2,4-D)	µg/L	grab	annually	a
Methyl tert-butyl-ether (MTBE)	µg/L	grab	annually	a and e
1,4-Dioxane	µg/L	grab	annually	a and e
1,2,3-Trichloropropane	µg/L	grab	annually	a and e
2,4,5-TP (Silvex)	µg/L	grab	annually	a
Pesticides	µg/L	grab	annually	a and h
PCBs as aroclors	µg/L	grab	annually	a and f
PCBs as congeners	pg/L	grab	annually	a and f
Cadmium	µg/L	grab	monthly	a
Lead	µg/L	grab	monthly	a
Copper	µg/L	grab	monthly	a
Mercury	µg/L	grab	quarterly	a and i
Selenium	µg/L	grab	monthly	a
Zinc	µg/L	grab	monthly	a
Cyanide	µg/L	grab	quarterly	a
TCDD equivalents	pg/L	grab	semiannually	a

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Remaining USEPA priority pollutants excluding asbestos	µg/L	grab	semiannually	a and g

Footnotes for Table E-5

a. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

b. Nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, total Kjeldahl nitrogen, pH, and temperature sampling shall be conducted on the same day or as close to concurrently as possible.

c. The *TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River* requires weekly receiving water monitoring to ensure compliance with the water quality objective. The frequency of monitoring may be re-evaluated at the conclusion of the third year of confirmatory receiving water monitoring described in section 8.3 of this MRP.

d. The Discharger shall conduct toxicity testing using *Ceriodaphnia dubia* as the test species, as outlined in Section 5 of this MRP. For the *Ceriodaphnia dubia* reproduction endpoint, the median monthly effluent limitation (MMEL) summary result shall be reported as "Pass" or "Fail" and the maximum daily single result shall be reported as "Pass or Fail" with a "% Effect." The *Ceriodaphnia dubia* survival endpoint shall be reported as "% Effect." If the chronic aquatic toxicity routine monitoring test results in a "Fail" at the instream waste concentration (IWC), then the Discharger shall complete a maximum of two MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine monitoring test was initiated that resulted in the "Fail" at the IWC. If the first chronic MMEL compliance test results in a "Fail" at the IWC, then the second MMEL compliance test is not necessary because the "Fail" results from the first two tests constitutes a violation of the chronic toxicity MMEL. Receiving water and effluent toxicity testing shall be performed on the same day as close to concurrently as possible.

e. Emerging chemicals include 1,4-dioxane (USEPA test method 8270M), perchlorate (USEPA test method 314, or 331 if a detection limit of less than 6 µg/L is achieved), 1,2,3-trichloropropane (USEPA test method 504.1, 8260B, or 524.2 in SIM mode), and methyl tert-butyl ether (USEPA test method 8260B, or 624 if a detection level of less than 5 µg/L is achieved, and if the laboratory received ELAP certification to conduct USEPA method 624).

f. PCBs as aroclors shall be analyzed using USEPA method 608.3. PCBs as congeners shall be analyzed using method 1668c. USEPA recommends that until the USEPA proposed method 1668c is incorporated into 40 CFR 136, permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608.3 for monitoring data, reported as aroclor results, that will be used for determining compliance with WQBELs (if

applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes.

g. Priority pollutants are those constituents referred to in 40 CFR § 401.15; a list of these pollutants is provided as Appendix A to 40 CFR Part 423.

h. Pesticides are, for purposes of this order, those six constituents referred to in 40 CFR part 125.58(p) (demeton, guthion, malathion, methoxychlor, mirex, and parathion).i. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 ng/L, shall be used to analyze total mercury. If an alternative method with an equivalent or more sensitive method detection limit is approved in 40 CFR part 136, the Discharger may use that method in lieu of USEPA Method 1631E.

End of Footnotes for Table E-5

8.1.2. Monitoring Locations – RSW-LATT622, RSW-LATT612, RSW-LATT616, RSW-LATT614, and RSW-LATT628

The receiving water monitoring program for receiving waters upstream and downstream of Lake Balboa and the Wildlife Lake shall be conducted on grab samples obtained at Stations RSW-LATT622, RSW-LATT612, RSW- LATT616, RSW-LATT614, and RSW-LATT628. Samples shall be taken at a one-foot depth. Flow measurements shall be per the flow meters 5A, 5B, 5C, and 5D indicated in Attachment B.

Table E-6. Lake Balboa and Wildlife Lake Receiving Water Monitoring Requirements at RSW-LATT622, RSW-LATT612, RSW-LATT616, RSW-LATT614, and RSW-LATT628

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total flow	cfs	estimated	weekly	---
pH	pH units	grab	weekly	a and b
Temperature	°F	grab	weekly	a and b
Dissolved oxygen	mg/L	grab	weekly	a
Total residual chlorine	mg/L	grab	weekly	a
E.coli	MPN/100 ml	grab	weekly	a
Turbidity	NTU	grab	quarterly	a
BOD_5 20°C	mg/L	grab	quarterly	a
Total dissolved solids	mg/L	grab	quarterly	a
Conductivity	μmhos/cm	grab	quarterly	a

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Chloride	mg/L	grab	quarterly	a
Ammonia nitrogen	mg/L	grab	weekly	a, b, and c
Nitrate nitrogen	mg/L	grab	weekly	a, b, and c
Nitrite nitrogen	mg/L	grab	weekly	a, b, and c
Nitrate + Nitrite nitrogen	mg/L	calculated	weekly	a, b, and c
Organic nitrogen	mg/L	calculated	monthly	a and b
Total Kjeldahl nitrogen	mg/L	grab	monthly	a and b
Total nitrogen	mg/L	calculated	monthly	a and b
Total phosphorus	mg/L	grab	quarterly	a
Orthophosphate-P	mg/L	grab	quarterly	a
Surfactants (MBAS)	mg/L	grab	quarterly	a
Surfactants (CTAS)	mg/L	grab	semiannually	a
Chemical oxygen demand	mg/L	grab	semiannually	a
Oil and grease	mg/L	grab	monthly	a
Settleable solids	ml/L	grab	quarterly	a
Total suspended solids	mg/L	grab	quarterly	a
Total hardness ($CaCO_3$)	mg/L	grab	quarterly	a
Chronic toxicity	Pass or Fail (TST), and % Effect	grab	quarterly	a and d
Perchlorate	μg/L	grab	annually	a and i
1,4-Dioxane	μg/L	grab	annually	a and i
1,2,3-Trichloropropane	μg/L	grab	annually	a and i
MTBE	μg/L	grab	annually	a and i

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Cadmium	µg/L	grab	quarterly	a
Copper	µg/L	grab	quarterly	a
Lead	µg/L	grab	quarterly	a
Mercury	µg/L	grab	quarterly	a and e
Selenium	µg/L	grab	monthly	a
Zinc	µg/L	grab	quarterly	a
Cyanide	µg/L	grab	monthly	a
Diazinon	µg/L	grab	annually	a and j
2,4-D	µg/L	grab	annually	a
2,4,5-TP (Silvex)	µg/L	grab	annually	a
Pesticides	µg/L	grab	annually	a and f
PCBs as arochlors	µg/L	grab	annually	a and g
PCBs as congeners	pg/L	grab	annually	a and g
Remaining USEPA priority pollutants excluding asbestos and PCBs	µg/L	grab	semiannually	a and h

Footnotes for Table E-6

a. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

b. Nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, total Kjeldahl nitrogen, pH, and temperature sampling shall be conducted on the same day or as close to concurrently as possible.

c. The *TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River* requires weekly receiving water monitoring to ensure compliance with the water quality objective. The frequency of monitoring may be re-evaluated at the conclusion of the third year of confirmatory receiving water monitoring described in section 8.3 of this MRP.

d. The Discharger shall conduct toxicity testing using *Ceriodaphnia dubia* as the test species, as outlined in Section 5. For the *Ceriodaphnia dubia* reproduction endpoint, the median monthly effluent limitation (MMEL) summary result shall be reported as “Pass” or “Fail” And

the maximum daily single result shall be reported as "Pass or Fail" with a "% Effect." The *Ceriodaphnia dubia* survival endpoint shall be reported as "% effect." If the chronic aquatic toxicity routine monitoring test results in a "Fail" at the instream waste concentration (IWC), then the Discharger shall complete a maximum of two MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine monitoring test was initiated that resulted in the "Fail" at the IWC. If the first chronic MMEL compliance test results in a "Fail" at the IWC, then the second MMEL compliance test is not necessary because the "Fail" results from the first two tests constitutes a violation of the chronic toxicity MMEL. Receiving water and effluent toxicity monitoring shall be performed on the same day as close to concurrently as possible.

e. USEPA Method 1631E, per 40 CFR part 136, with a quantification level lower than 0.5 ng/L, shall be used to analyze total mercury. If an alternative method with an equivalent or more sensitive method detection limit is approved in 40 CFR part 136, the Discharger may use that method in lieu of USEPA Method 1631E.f.Pesticides are, for purposes of this order, those six constituents referred to in 40 CFR part 125.58(p) (demeton, guthion, malathion, methoxychlor, mirex, and parathion).

g. PCBs as aroclors shall be analyzed using USEPA method 608.3. PCBs as congeners shall be analyzed using method 1668c. USEPA recommends that until the USEPA proposed method 1668c is incorporated into 40 CFR 136, permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608.3 for monitoring data, reported as aroclor results, that will be used for determining compliance with WQBELs (if applicable) and (2) USEPA proposed method 1668c for monitoring data, reported as 41 congener results, that will be used for informational purposes.

h. Priority pollutants are those constituents referred to in 40 CFR § 401.15; a list of these pollutants is provided as Appendix A to 40 CFR Part 423.

i. Emerging chemicals include 1,4-dioxane (USEPA 8270M test method), perchlorate (USEPA 314 test method, or USEPA method 331 if a detection limit of less than 6 µg/L is achieved), 1,2,3-trichloropropane (USEPA 504.1, 8260B test method, or USEPA 524.2 in SIM mode), and methyl tert-butyl ether (USEPA 8260B test method or USEPA method 624 if a detection level of less than 5 µg/L is achieved, and if the Permittee received ELAP certification to run USEPA method 624).

j. Diazinon and chronic effluent toxicity shall be sampled on the same day or as close to concurrently as possible.

End of footnotes for Table E-6

8.1.3. Monitoring Locations – RSW-4 and RSW-W2

Grab samples shall be collected at discharges from Lake Balboa and Wildlife Lake at Stations RSW-4 and RSW-W2, respectively. Samples shall be taken from a one-foot depth.

Table E-7. Lake Balboa and Wildlife Lake Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
pH	pH units	grab	weekly	a
Temperature	°F	grab	weekly	a
Dissolved oxygen	mg/L	grab	weekly	a
E. Coli	MPN/100 ml	grab	monthly	a and c
Suspended Solid	mg/L	grab	monthly	a and c
Conductivity	µmhos/cm	grab	monthly	a and c
Total nitrogen	mg/L	calculated	weekly	a
Total Kjeldahl nitrogen	mg/L	grab	weekly	a
Ammonia nitrogen	mg/L	grab	weekly	a
Organic nitrogen	mg/L	calculted	weekly	a
Nitrate nitrogen	mg/L	grab	weekly	a
Nitrite nitrogen	mg/L	grab	weekly	a
Total phosphorus	mg/L	grab	seasonally	a and b
Organic phosphorus	mg/L	grab	seasonally	a and b
Condensed phosphorus	mg/L	grab	seasonally	a and b
Orthophosphorus	mg/L	grab	seasonally	a and b

Footnotes for Table E-7

a. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

b. This chemical shall be analyzed monthly during the quiescent months of December to May and weekly during the biologically productive months of June to November.

c. These parameters are only required to be monitored at RSW-4 with samples collected at a one-foot depth.

End of footnotes for Table E-7

8.1.4. Receiving water samples shall not be collected during or within 72 hours following the flow of rainwater runoff into the Los Angeles River. Sampling may be rescheduled at receiving water stations if weather and/or flow conditions would endanger personnel collecting receiving water samples. The monthly monitoring report shall note such occasions.

8.2. Sediment Monitoring

8.2.1. Monitoring Locations – RSW-4, RSW-W2, and RSW-LATT622

Representative sediment/bottom samples shall be collected at the monitoring locations RSW-4, RSW-W2, and RSW-LATT622 as shown in Table E-8.

Table E-8. Sediment Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Notes
Total organic nitrogen	mg/kg	grab	quarterly	a
Total organic carbon	mg/kg	grab	quarterly	a
Sediment grain size distribution	weight % vs. grain size in phi units	grab	quarterly	a
Cadmium	mg/kg	grab	quarterly	a
Copper	mg/kg	grab	quarterly	a
Lead	mg/kg	grab	quarterly	a
Mercury	mg/kg	grab	quarterly	a
Selenium	mg/kg	grab	quarterly	a
Zinc	mg/kg	grab	quarterly	a
Cyanide	mg/kg	grab	quarterly	a
Diazinon	μg/kg	grab	annually	a
Pesticides	μg/kg	grab	annually	a and b
Remaining USEPA priority pollutants excluding asbestos	mg/kg for metals, BNAs, and VOCs; μg/kg for pesticides and PCBs	grab	semiannually	a and c

Footnotes for Table E-8

a. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136; where no methods are specified for a given pollutant, by methods approved by the Los Angeles Water Board or State Water Resources Control Board. For any pollutant whose effluent limitation is lower than all the minimum levels (MLs) specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

b. Pesticides are, for purposes of this order, those six constituents referred to in 40 CFR part 125.58(p) (demeton, guthion, malathion, methoxychlor, mirex, and parathion).
c. Priority pollutants are those constituents referred to in 40 CFR § 401.15; a list of these pollutants is provided as Appendix A to 40 CFR Part 423.

End of Footnotes for Table E-8

8.2.2. Receiving water samples shall not be collected during or within 72 hours following the flow of rainwater runoff into the Los Angeles River.

8.2.3. Sampling may be rescheduled at the receiving water stations if weather and flow conditions would endanger the personnel collecting receiving water samples. The monthly monitoring reports shall note such occasions.

8.3. TMDL Stream Flow Monitoring

The Permittee shall report the maximum daily flow of the Los Angeles River at TMDL Wet-Weather Flow Monitoring Station (Latitude: 33.81598°N, Longitude -118.20552°W), which is located at the County of Los Angeles Department of Public Works' Wardlow Gage Station Number F319-R, in the Los Angeles River, just downstream Wardlow River Road. This information is necessary to determine the wet-weather condition of the river as defined by the LA River Metals TMDL. If the gauging station is not operational, an estimated maximum daily flow may be submitted.

Table E-9. TMDL Stream Flow Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Maximum Daily Flow	cubic feet per second(cfs)	recorder	daily

8.4. Ammonia Receiving Water Confirmatory Monitoring

The *TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River* requires the Permittee to evaluate the effects of the application of the ammonia SSO to the TMDL WLAs on the receiving water. The Permittee submitted a workplan in October 2017. The Permittee shall submit an updated workplan no later than 90 days after the effective date of this Order for approval by the Executive Officer. The workplan shall include the following requirements per the TMDL:

8.3.1. The Permittee shall conduct confirmatory receiving water monitoring to verify that water quality conditions are similar to those of the 2003 ammonia SSO study period. This study used *Pimephales promelas* as the vertebrate and *Hyallela azteca* as the invertebrate species. Since the calculated water effects ratio (WER) for *Pimephales promelas* was sufficiently close to 1.0, the technical advisory committee only recommended developing an SSO for *Hyalella azteca.* Confirmatory monitoring shall include concurrent chemistry and toxicity receiving water monitoring. This required confirmatory toxicity monitoring is in addition to compliance monitoring (including the species sensitivity screening) included in section 5.4. Since the SSOs are based on studies using *Hyallela azteca* as the test organism, the Discharger **shall** utilize *Hyallela azteca* as the test organism for

this confirmatory monitoring. Temperature, pH, and ammonia receiving water data shall be collected at the time and location of collection of the toxicity samples.

The 2003 ammonia SSO study site was located at station RSW-LATT630, downstream of Sepulveda Basin. Please see Table 2 and Table 11 of the Final Staff Report for Resolution No. 2007-005, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Incorporate Site-specific Objectives in Select Waterbodies in the Santa Clara, Los Angeles and San Gabriel River Watersheds*.

8.3.2. Monitoring of chemistry and toxicity testing shall include a minimum of three sample events per year for three years. Monitoring sites shall be representative of those investigated in the Los Angeles River during the SSO study, as well as one location in the reach immediately downstream of where the SSO is applied. Two of the three sample events shall be conducted during dry weather. Following the first three-year monitoring cycle, if there is no increase in toxicity attributable to ammonia, monitoring may be reduced to once per year at each site, as appropriate. The number and type of events during the year shall be as described above.

8.3.3. Chemistry monitoring shall include all nitrogen species, including total ammonia, pH, hardness, temperature, sodium, potassium, calcium, BOD, sulfate, total dissolved solids, and chloride.

8.3.4. If confirmatory monitoring indicates toxicity due to ammonia or a change in the waterbody that could impact the calculation or application of the SSOs, including either its chemical characteristics or the aquatic species present, including early life stages of fish, the POTW shall develop and submit a plan for reevaluating the SSOs to the Executive Officer.

8.3.5. In the event that ammonia concentrations are consistently at levels below effluent limitations that would be set without use of the SSO, monitoring to confirm the SSOs is not necessary. The effluent limitation for AMEL without use of SSO is equal to 3.0 mg/L.

9. OTHER MONITORING REQUIREMENTS

9.1. Watershed Monitoring

9.1.1. The goals of the Watershed-wide Monitoring Program for the Los Angeles River Watershed are to evaluate and assess:

a. compliance with receiving water quality objectives;

b. trends in surface water quality;

c. impacts to beneficial uses;

d. data needs for modeling contaminants of concern;

e. water quality including seasonal variation of surface waters within the watershed;

f. the health of the biological community;

g. whether the goals of the TMDLs for the Los Angeles River are being attained; and

h. mixing dynamics of effluent and receiving waters.

9.1.2. To achieve the goals of the Watershed-wide Monitoring Program, the Permittee shall undertake the responsibilities delineated under an approved watershed-wide monitoring plan in the implementation of the Watershed-wide Monitoring Program for the Los Angeles River (Los Angeles River Watershed Monitoring Program or LARWMP), which was approved by the Los Angeles Water Board on August 8, 2008.

9.1.3. Bioassessment Monitoring Program

In coordination with interested stakeholders in the Los Angeles River Watershed, the Discharger shall conduct a bioassessment program annually in the spring/summer period (unless an alternate sampling period is approved by the Executive Officer) and include an analysis of the community structure of the instream macroinvertebrate assemblages, the community structure of the instream algal assemblages, chlorophyll a and biomass for instream algae, and physical habitat assessment at the 10 random monitoring stations designated by the Los Angeles River Watershed Monitoring Program. Over time, bioassessment monitoring will provide a measure of the physical condition of the water body and the integrity of its biological communities.

a. This program shall be implemented by appropriately trained staff. Alternatively, a professional subcontractor qualified to conduct bioassessments may be selected to perform the bioassessment work for the Discharger. Analyses of the results of the bioassessment monitoring program, along with photographs of the monitoring site locations taken during sample collection, shall be submitted in the corresponding annual report. If another stakeholder or interested party in the watershed subcontracts a qualified professional to conduct bioassessment monitoring during the same season and at the same location as specified in the MRP, then the Discharger may, in lieu of duplicative sampling, submit the data, a report interpreting the data, photographs of the site, and related QA/QC documentation in the corresponding annual report.

b. The Discharger must provide a copy of their Standard Operation Procedures (SOPs) for the Bioassessment Monitoring Program to the Los Angeles Water Board upon request. The document must contain step-by-step field, laboratory, data entry, and related QA/QC procedures. The SOP must also include specific information about each bioassessment program including: assessment program description, its organization and the responsibilities of all its personnel; assessment project description and objectives; qualifications of all personnel; and the type of training each member has received.

c. Field sampling must conform to the SOP established in the Surface Water Ambient Monitoring Program's (SWAMP) *Standard Operating Procedures for the Collection of Field Data for Bioassessment of California Wadeable Streams: Benthic Macroinvertebrates, Algae and Physical Habitat*. Field crews shall be trained on aspects of the protocol and appropriate safety issues. All field data and sample Chain of Custody (COC) forms must be examined for completion and gross errors. Field inspections shall be planned with random visits and shall be performed by the Discharger or an independent auditor. These visits shall report on all aspects of the field procedure with corrective action occurring immediately.

d. A taxonomic identification laboratory shall process the biological samples that usually consist of subsampling organisms, enumerating and identifying taxonomic groups and entering the information into an electronic format. The Los Angeles Water Board may require QA/QC documents from the taxonomic laboratories and examine their records regularly. Intra-laboratory QA/QC for subsampling, taxonomic validation and corrective actions shall be conducted and documented. Biological laboratories shall also maintain reference collections, vouchered specimens (the Discharger may request the return of their sample voucher collections) and remnant collections. The laboratory should participate in an (external) laboratory taxonomic validation program at a recommended level of 10% or 20%. External QA/QC may be arranged through the California Department of Fish and Wildlife's Aquatic Bioassessment Laboratory located in Rancho Cordova, California.

e. The Executive Officer of the Los Angeles Water Board may modify Monitoring and Reporting Program to accommodate the watershed-wide monitoring.

9.2. Tertiary Filter Treatment Bypasses

9.2.1. During any day that filters are bypassed, the Discharger shall monitor the effluent daily for BOD, suspended solids, settleable solids, and oil and grease, until it is demonstrated that the filter "bypass" has not caused an adverse impact on the receiving water.

9.2.2. The Discharger shall maintain a chronological log of tertiary filter treatment process bypasses, to include the following:

a. Date and time of bypass start and end;
b. Total duration time; and,
c. Estimated total volume bypassed

9.2.3. The Permittee shall notify Los Angeles Water Board staff by telephone within 24 hours of the filter bypass event.

9.2.4. The Discharger shall submit a written report to the Los Angeles Water Board, according to the corresponding monthly self-monitoring report schedule. The report shall include, at a minimum, the information from the chronological log. Results from the daily effluent monitoring, required by 9.2.1. above, shall be verbally reported to the Los Angeles Water Board as the results become available and submitted as part of the monthly SMR.

9.3. Monitoring of Volumetric Data for Wastewater and Recycled Water

The State Water Board adopted the "Water Quality Control Policy for Recycled Water" (Recycled Water Policy) on December 11, 2018 and the Recycled Water Policy became effective on April 8, 2019. The Recycled Water Policy requires wastewater and recycled water dischargers to annually report monthly volumes of influent, wastewater produced, and effluent, including treatment level and discharge type. As applicable, dischargers are additionally required to annually report recycled water use by volume and category of reuse. The State Water Board issued a Water Code Section 13267 and 13383 Order, Order WQ 2019-0037-EXEC, on July 24, 2019 (amended on January 14, 2020) to amend MRPs for NPDES permits, WDRs, Water Reclamation Requirements (WRRs), Master

Recycling, and General WDRs. Annual reports are due by April 30 of each year, and the report must be submitted to GeoTracker. This Order implements the Recycled Water Policy by incorporating the volumetric monitoring reporting requirements in accordance with Section 3 of the Recycled Water Policy (https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf). The State Water Board's Order WQ 2019-0037-EXEC will no longer be applicable to the Discharger upon the effective date of this Order.

9.3.1. Influent: The Discharger shall monitor the monthly total volume of wastewater collected and treated by the wastewater treatment plant.

9.3.2. Production: The Discharger shall monitor the monthly volume of wastewater treated, specifying level of treatment.

9.3.3. Discharge: The Discharger shall monitor the monthly volume of treated wastewater discharged to specific water bodies as categorized in the Section 3.2.3 of the Recycled Water Policy. The level of treatment shall also be specified.

9.3.4. Reuse: The Discharger shall monitor the monthly volume of recycled water distributed, and annual volume of treated wastewater distributed for beneficial use in compliance with California Code of Regulations, Title 22 in each of the use categories specified in Section 3.2.4 of the Recycled Water Policy.

10. REPORTING REQUIREMENTS

10.1. General Monitoring and Reporting Requirements

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

10.1.2. If there is no discharge during any reporting period, the report shall so state.

10.1.3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.

10.1.4. The Discharger shall inform the Los Angeles Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.

10.2. Self-Monitoring Reports (SMRs)

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

10.2.2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections 3 through 9. The Discharger shall submit monthly, quarterly, semiannual, and annual SMRs including the results of all required

monitoring using USEPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger samples and performs analyses more frequently than required by this Order (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this MRP using approved analytical methods, the results of this monitoring shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with the limitations set forth in this Order.

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

Table E-10. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Order effective date	All	Submit with monthly SMR
Daily	Order effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling	Submit with monthly SMR
Weekly	Sunday following Order effective date or on permit effective date if on a Sunday	Sunday through Saturday	Submit with monthly SMR
Monthly	First day of calendar month following Order effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	By the 15th day of the third month after the month of sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) Order effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	June 15 September 15 December 15 March 15
Semiannually	Closest of January 1 or July 1 following (or on) Order effective date	January 1 through June 30 July 1 through December 31	September 15 March 15
Annually	January 1 following (or on) Order effective date	January 1 through December 31	April 30

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Annually (Volumetric Reporting)	Order Effective Date	January 1 through December 31	April 30
Annually (Pretreatment Program)	January 1 following (or on) Order effective date	January 1 through December 31	April 30

10.2.4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (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:

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

b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

d. 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.

10.2.5. **Compliance Determination.** Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Section 7 of the Order. For purposes of reporting and administrative enforcement by the Los Angeles Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the reporting level (RL).

10.2.6. **Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Permittee shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Permittee shall compute the median in place of the arithmetic mean in accordance with the following procedure:

a. 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.

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

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

a. 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.

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

10.3. Discharge Monitoring Reports (DMRs)

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

10.4. Other Reports

10.4.1. The Discharger shall report the results of any special studies, chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – Section 6.3 in the Order. This includes submittals required by the compliance schedule requirements listed in the next table. The Discharger shall submit reports in compliance with SMR reporting requirements described in subsection 10.2. above.

10.4.2. Annual Summary Report

By April 30 of each year, the Discharger shall submit an annual report containing a discussion of the previous year's influent/effluent analytical results and receiving water monitoring data. The annual report shall contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, or the outfall system. The Discharger shall submit an annual report to the Los Angeles Water Board in accordance with the requirements described in subsection 10.2.7 above.

Each annual monitoring report shall contain a separate section titled “Reasonable Potential Analysis” which discusses whether reasonable potential was triggered for pollutants which do not have a final effluent limitation in the NPDES permit. This section shall contain the following statement: “The analytical results for this sampling period did/ did not trigger reasonable potential.” If reasonable potential was triggered, then the following information should also be provided:

a. A list of the pollutant(s) that triggered reasonable potential;

b. The Basin Plan or CTR criteria that was exceeded for each given pollutant;

c. The concentration of the pollutant(s);

d. The test method used to analyze the sample; and,

e. The date and time of sample collection.

10.4.3. The Discharger shall submit to the Los Angeles Water Board, together with the first monitoring report required by this Order, a list of all chemicals and proprietary additives which could affect this waste discharge, including quantities of each. Any subsequent changes in types and/or quantities shall be reported promptly.

10.4.4. The Los Angeles Water Board requires the Discharger to file with the Los Angeles Water Board, within 90 days after the effective date of this Order, a technical report on preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. The technical report shall:

a. Identify the possible sources of accidental loss, untreated waste bypass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks, and pipes should be considered.

b. Evaluate the effectiveness of present facilities and procedures and state when they become operational.

c. Describe facilities and procedures needed for effective preventive and contingency plans.

d. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule contingent interim and final dates when they will be constructed, implemented, or operational.

10.4.5. Climate Change Effects Vulnerability Assessment and Mitigation Plan

The Discharger shall consider the impacts of climate change as they affect the operation of the treatment facility due to flooding, wildfire, or other climate-related changes. The Permittee shall develop a Climate Change Effects Vulnerability Assessment and Mitigation Plan (Climate Change Plan) to assess and manage climate change-related effects that may impact the wastewater treatment facility’s operation, water supplies, its collection system, and water quality, including any projected changes to the influent water temperature and pollutant concentrations, and beneficial uses. The permittee shall also identify new or increased threats to the sewer system resulting from climate change that may impact desired levels of service in the next 50 years. The permittee shall project upgrades to existing assets

or new infrastructure projects, and associated costs, necessary to meet desired levels of service. Climate change research also indicates the overarching driver of climate change is increased atmospheric carbon dioxide from human activity. The increased carbon dioxide emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges, lead to more erratic rainfall and local weather patterns, trigger a gradual warming of freshwater and ocean temperatures, and trigger changes to ocean water chemistry. As such, the Climate Change Plan shall also identify steps being taken or planned to address greenhouse gas emissions attributable to wastewater treatment plants and effluent discharge processes. For facilities that discharge to the ocean including desalination plants, the Climate Change Plan shall also include the impacts from sea level rise. The Climate Change Plan is due 24 months after the effective date of this Order.

10.4.6. Annual Volumetric Reporting of Wastewater and Recycled Water

The Discharger shall electronically submit annual volumetric reports to the State Water Board by April 30 each year covering data collected during the previous calendar year using the State Water Board's GeoTracker website (geotracker.waterboards.ca.gov) under site-specific global identification number WDR100001153. The annual volumetric report shall include information specified in section 9.3, above. A report upload confirmation from the GeoTracker data system, or other indication of completed submittals, shall be included in the annual report, which shall be submitted into CIWQS, by the report due date to demonstrate compliance with this reporting requirement.

10.4.7. Annual Pretreatment Reporting

The Permittee shall electronically submit annual pretreatment reports to the Los Angeles Water Board and to the USEPA Region 9 by April 30th of each year, covering data collected during the previous calendar year, in accordance with the Pretreatment Reporting Requirements (Attachment H).

10.4.8. State Water Board Resolution 2009-0011, *Adoption of a Policy for Water Quality Control for Recycled Water* (Revised January 22, 2013, effective April 25, 2013.), directs the Los Angeles Water Board to encourage recycling. Consistent with the Policy, the Permittee shall submit an update to the feasibility investigation in section 4.3 of the Order as part of the submittal of the Report of Waste Discharge (ROWD) for the next order cycle.

ATTACHMENT F– FACT SHEET

TABLE OF CONTENTS

TABLE OF TABLES

ATTACHMENT F – FACT SHEET

As described in section 2.2 of this Order, the Los Angeles Water Board incorporates this Fact Sheet as findings of the Los Angeles 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. DISCHARGER INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B190106004
Discharger	City of Los Angeles
Name of Facility	Donald C. Tillman Water Reclamation Plant
Facility Address	6100 Woodley Avenue, Van Nuys, CA 91406
Facility Contact, Title and Phone	Fernando Gonzalez , Plant Manager, (818) 778-4120
Authorized Person to Sign and Submit Reports	Fernando Gonzalez
Mailing Address	1149 S. Broadway St., 9th Floor, Los Angeles CA 90015
Billing Address	Same as above
Type of Facility	Publicly-Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Recycling Requirements	Producer
Facility Permitted Flow	80 Million Gallons per Day (MGD)
Facility Design Flow	80 MGD
Watershed	Los Angeles River
Receiving Water	Los Angeles River
Receiving Water Type	Inland surface water

1.1. The City of Los Angeles, Bureau of Sanitation (hereinafter City, Discharger, or Permittee) owns and operates a Publicly-Owned Treatment Works (POTW) comprised of the Donald C. Tillman Water Reclamation Plant (hereinafter Tillman WRP or Facility) and its associated wastewater collection system and outfalls. 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 Permittee herein.

1.2. The Facility discharges wastewater to the Los Angeles River, a water of the United States. The Discharger was previously regulated by Order Number R4-2017-0062, National Pollutant Discharge Elimination System (NPDES) Permit Number CA0056227, adopted by the Los Angeles Water Board on March 2, 2017. This Order expired on April 30, 2022.

Regulations at 40 CFR section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. However, pursuant to 40 CFR 122.6(d) and California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits. The Discharger filed a report of waste discharge (ROWD) and applied for reissuance of its Waste Discharge Requirements (WDRs) and NPDES permit on October 29, 2021. Supplemental information was requested on November 19, 2021 and received on December 20, 2021. The application was deemed complete on December 27, 2021. A site visit was conducted on May 25, 2022, to observe operations and collect additional data to develop permit limitations and conditions. The terms and conditions of the previous Order have been automatically continued and remain in effect until new WDRs and an NPDES permit are adopted pursuant to this Order. Attachments B1-B3 provide maps of the area around the Facility and site layouts. Attachments C1 and C2 provide flow schematics of the Facility.

2. FACILITY DESCRIPTION

2.1. Description of Wastewater and Biosolids Treatment and Controls

2.1.1. The Tillman WRP is part of the City's integrated network of facilities, known as the Hyperion Treatment System, which includes the wastewater collection system and four treatment plants. This system allows biosolids, solids, and excess flows to be diverted from the upstream treatment plants (including this POTW (Tillman WRP), Los Angeles-Glendale WRP, and Burbank WRP) to the Hyperion Water Reclamation Plant for treatment and disposal. All solids removed from the Tillman WRP treatment process are returned untreated to the Additional Valley Outfall sewer (AVORS) for downstream treatment at the Hyperion Water Reclamation Plant. If the Tillman WRP has operational problems or needs shutdown, wastewater can be diverted back to the AVORS for treatment at the Hyperion Water Reclamation Plant.

The City maintains and operates the Hyperion Treatment System, which collects, treats, and processes municipal wastewater from domestic, commercial, and industrial sources from the entire city (except the Terminal Island Service Area surrounding the Los Angeles Harbor area) and from a number of other cities and

agencies under contractual agreements, including the City of San Fernando, the Las Virgenes Municipal Water District, and the Triunfo Canyon Sanitation District. Sewage enters the Tillman WRP via both the AVORS and the East Valley Interceptor Sewer (EVIS). The Hyperion Treatment System serves more than 4 million people living in the Hyperion Service Area with approximately 1.1 million people in the northern and western San Fernando Valley served by the Tillman WRP.

2.1.2. The Discharger evaluates local limits on industrial and commercial sources for the treatment plants within the Hyperion Treatment System to determine if local limits are sufficient to protect the City's treatment plants, compliance with permit limitations, recycled water and biosolid reuses, worker safety, and public health. The Discharger conducted a local limits evaluation after the NPDES permit renewal as required and submitted the report on September 2017. The Discharger found that changes to existing local limits were not necessary to meet the NPDES permit limitations for its facilities. In accordance with 40 CFR 122.44(j)(2)(ii), the Discharger is required to submit a written technical evaluation of the need to revise local limits following the effective date of this Order. The Local Limits Evaluations for this facility are conducted concurrently with the Local Limits Evaluations for the Hyperion Water Reclamation Plant and the Los Angeles-Glendale Water Reclamation Plant.

2.1.3. The treatment system at the Tillman WRP consists of grit removal, screening, flow equalization, primary sedimentation, nitrification and denitrification (NDN) activated sludge biological treatment with fine pore aeration, secondary clarification, coagulation, aqua diamond cloth filtration, disinfection by chlorination with the addition of ammonium hydroxide, and dechlorination. No facilities are provided for solids processing at the Tillman WRP. Solids from the Facility are returned to the collection system for processing at the Hyperion Water Reclamation Plant. Solids returned to the sewer consist of grit, screenings, primary and secondary sludge and skimmings, and filter backwash. The Discharger has included ozonation using a containerized packaged system prior to filtration as a part of an Ozone Demonstration Project (ODP). The ODP, which has a design capacity of 10 MGD, was originally intended to be a part of a groundwater replenishment project at Hansen Spreading Grounds but will now only be temporarily used as a study. The Los Angeles Water Board issued a letter on April 27, 2021, acknowledging commissioning of the ODP. The ODP began operation in May 2022 and ceased operation on August 19, 2022. There are currently no plans to resume operation. Operation of the ODP is not required to meet effluent limitations in this Order. Attachment C includes a process flow diagram of the Tillman WRP, including the ODP.

2.1.4 In order to achieve compliance with the ammonia water quality objectives (WQOs) specified in the Water Quality Control Plan for the Los Angeles Region (Basin Plan), the Discharger installed a nitrogen denitrification process (NDN), the Enhanced Modified Ludzack-Ettinger (eMLE) Process, in September 2007. Since the installation of this additional treatment, the Discharger has been able to meet ammonia final effluent limitations in the existing Order.

2.2. Discharge Points and Receiving Waters

2.2.1. The Facility is located within the Sepulveda Dam Basin and the receiving water is located within the Los Angeles River Watershed. The Tillman WRP discharges tertiary-treated wastewater from monitoring point EFF-001 to the Los Angeles River directly (Type 1 Discharge, Discharge Points 002, 003, and 008) and indirectly (Type 2 Discharge, Discharge Points 004, 005, 006, and 007) through numerous outfalls in nearby waterways and lakes. The City is using treated effluent to maintain the waterways and ponds of the Sepulveda Basin, including the Japanese Garden, Lake Balboa, and Wildlife Lake. Treated effluent flows from these waters as well as from Bull Creek, Hayvenhurst Channel, and Haskell Creek, to Reach 5 of the Los Angeles River, upstream of the Sepulveda Dam. The Facility also uses Discharge Point 008 for direct discharge to the Los Angeles River, located just downstream of the Sepulveda Dam in Reach 4. Prior to construction of the outfall at discharge point 008 in Reach 4 in 1993, an outfall structure (marked as 001 in Attachment B3) was used to discharge directly to the Los Angeles River in Reach 5 but has been capped off and is no longer used. Effluent is only measured at monitoring point EFF-001 for compliance with effluent limitations for all Type 1 Discharges (Discharge Points 002, 003, and 008). Type 2 Discharges (Discharge Points 004, 005, 006, and 007) are not subject to effluent limitations since these are discharges from surface waters to the Los Angeles River. Wildlife Lake and Lake Balboa are operated and maintained by the City's Department of Recreation and Parks in accordance with “Lake Management: A Guide for the Wildlife Lake and Lake Balboa”.

The 100-year flood water surface elevation in the "U.S. Corps of Engineers Modified Spillway Gate Operating Plan" for the Sepulveda Dam Basin is 714.4 feet. The City's Department of Public Works completed construction of a berm surrounding the Tillman WRP in 1994 to a finished elevation of 715 feet. The berm and outfall structure 008 downstream of the berm were constructed to protect the Tillman WRP from flood conditions within the Sepulveda Flood Control Basin.

There are two types of discharges specified in this Order. Type 1 discharges are discharges conveyed directly from Tillman WRP to surface waters. Treated effluent flows from the southwest area of the plant into a weir which distributes the effluent into different outfall structures within the Sepulveda Basin as described below. These structures manage the movement of water through the basin. Type 2 discharges are discharges from surface waters (downstream of any Type 1 discharge) to the Los Angeles River. The discharge points to surface waters (see Attachment B) are described below:

Type 1 Discharges (subject to effluent limitations):

Discharge Point 002 (approximate coordinates: 34.183565° N, 118.494493° W): Discharge to Lake Balboa.

The treated effluent is discharged from the Tillman WRP to Lake Balboa located southeast of the corner of Victory and Balboa Boulevards. The effluent water quality at this discharge point is measured at monitoring point EFF-001 at Tillman WRP.

Discharge Point 003 (approximate coordinates: 34.177666° N, 118.473388° W)**:** Discharge to Wildlife Lake

The Department of Recreation and Parks receives treated effluent to refill Wildlife Lake. The water flows by gravity to Wildlife Lake located northeast of Burbank Boulevard and Woodley Avenue.

Discharge Point 008 (approximate coordinates: 34.164805° N, 118.471805° W): Direct discharge from Tillman WRP to the Los Angeles River, Reach 4.

This outfall structure was constructed in 1993 to replace the outfall for Discharge Point 001. The outfall structure for Discharge Point 008 is located 878 feet downstream of the Sepulveda Dam Spillway.

Type 2 Discharges (not subject to effluent limitations):

Discharge Points 004A, 004B, 005, and 006 (subsequent discharges from Discharge Point 002): (approximate coordinates: 004A: 34.180801° N, 118.497767° W; 004B: 34.185471° N, 118.497766° W; 005: 34.181360° N, 118.492695° W; 006: 34.177038° N, 118.492639° W) Discharge to Los Angeles River, Reach 5 via Lake Balboa, Bull Creek, and Hayvenhurst Channel.

The treated effluent from Tillman WRP flows through Lake Balboa and eventually discharges through weirs, spillways, and a bottom drain at Bull Creek (004A and 004B), Hayvenhurst Channel (005), and the Los Angeles River (006). Bull Creek and Hayvenhurst Channel are tributaries to the Los Angeles River in Reach 5.

Discharge Point 007 (subsequent discharges from Discharge Point 003): (approximate coordinates: Discharge from Wildlife Lake to Haskell Creek and on to Los Angeles River, Reach 5.

The treated effluent from Tillman WRP flows through the 10-acre Wildlife Lake and is discharged to Haskell Creek at 007 and on to the Los Angeles River, Reach 5.

During the summer months, Wildlife Lake may be drained (for maintenance and to minimize nuisance resulting from mosquito breeding), resulting in an increased discharge of treated effluent to Haskell Creek.

2.2.2. During dry weather (May 1 – October 31), the primary sources of water flow in the Los Angeles River downstream of the discharge points are the Tillman WRP, the Burbank WRP, and other NPDES-permitted discharges, including urban runoff conveyed through the municipal separate storm sewer systems (MS4). Stormwater and dry-weather urban runoff from MS4 are regulated under a separate NPDES permit, NPDES Permit No. CAS004004.

2.2.3. The Los Angeles County Flood Control District channelized portions of the Los Angeles River to convey and control floodwater, and to prevent damage to homes located adjacent to the river. The Los Angeles River is unlined within the Sepulveda Basin and further downstream at its confluence with the Burbank Western Channel, in what is known as the Glendale Narrows. Groundwater recharge occurs incidentally, in these unlined areas of the Los Angeles River. At times when the groundwater table is high, groundwater rises and contributes flow to the Los Angeles

River and springs which support willows, sycamores, and cottonwood trees. South of the Glendale Narrows, the Los Angeles River is concrete-lined to Willow Street, in Long Beach.

2.2.4. The Los Angeles River Watershed is one of the largest in the Los Angeles Region. It also has some of the most diverse land use patterns. Approximately 324 square miles of the watershed are covered by forest or open space land including the area near the headwaters which lie in the Santa Monica, Santa Susana, and San Gabriel Mountains. The rest of the watershed is highly developed. The river flows through the San Fernando Valley past heavily developed residential and commercial areas. From the Arroyo Seco, north of downtown Los Angeles, to the confluence with the Rio Hondo, the river flows through industrial and commercial areas and is bordered by railyards, freeways, and major commercial and government buildings. From the Rio Hondo to the Pacific Ocean, the river flows through industrial, residential, and commercial areas, including major refineries and petroleum products storage facilities, major freeways, rail lines, and railyards serving the Ports of Los Angeles and Long Beach.

2.3. Summary of Existing Requirements and SMR Data

Effluent limitations contained in the existing Order for discharges from Effluent Transfer Stations EFF-001A and EFF-001B and representative monitoring data from the term of the previous Order collected from May 2017 to June 2022 are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data at EFF-001

Parameter	Units	Current AMEL	Current AWEL	Current MDEL	Highest Avg. Monthly Conc.	Highest Avg. Weekly Conc.	Max. Daily Conc.
$BOD_5 20^oC$	mg/L	20	30	45	5.53	6.86	10
Total Suspended Solids (TSS)	mg/L	15	40	45	2.24	3.19	12.2
$BOD_5 20^oC$ Removal Efficiency	%	85	---	---	99.1	---	---
TSS Removal Efficiency	%	85	---	---	100	---	---
Turbidity	NTU	2	---	5	1.8	---	5
pH	Std units	---	---	6.5 - 8.5	---	---	6.6 - 7.6
Temperature	°F	---	---	86	---	---	87
Oil and Grease	mg/L	10	---	15	1 (DNQ)	---	3 (DNQ)
Settleable Solids	mL/L	0.1	---	0.3	< 0.1	---	< 0.1
Combined Radium-226 and Radium 228	pCi/L	5	---	---	1.142	---	---

Parameter	Units	Current AMEL	Current AWEL	Current MDEL	Highest Avg. Monthly Conc.	Highest Avg. Weekly Conc.	Max. Daily Conc.
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15	---	---	2.04	---	---
Uranium	pCi/L	20	---	---	5.09	---	---
Gross Beta/photon emitters	Millirem/year	4	---	---	2.03 (pCi/L)	---	---
Strontium-90	pCi/L	8	---	---	0.389	---	---
Tritium	pCi/L	20,000	---	---	285	---	---
Total Coliform	MPN/100 mL	23	2.2	240	< 1	3	200
E. coli	MPN/100 mL	126	2.2	235	< 1	< 1	1
Total Residual Chlorine	mg/L	---	---	0.1	---	---	< 0.1
Total Dissolved Solids	mg/L	950	---	---	598	---	598
MBAS	mg/L	0.5	---	---	0.37	---	0.37
Chloride	mg/L	190	---	---	146	---	146
Sulfate	mg/L	300	---	---	131	---	131
Nitrite (as N)	mg/L	0.9	---	---	0.42	---	0.42
Nitrate (as N)	mg/L	7.2	---	---	7.04	---	7.36
Nitrate plus Nitrite as Nitrogen	mg/L	7.2	---	---	7.04	---	7.36
Ammonia Nitrogen (as N)	mg/L	3	---	6.4	2.95	---	4.31
Cadmium (wet weather)	µg/L	2.1	---	6.9	1.35	---	1.35
Copper (year round)	µg/L	27	---	31	77.1	---	77.1
Lead (year round)	µg/L	8.4	---	16	1.6	---	1.6
Selenium	µg/L	3.9	---	8.7	1.03	---	1.03
Zinc (wet weather)	µg/L	205	---	236	160	---	160
Cyanide	µg/L	4.3	---	8.5	4 (DNQ)	---	4 (DNQ)
Dibenzo(a,h) Anthracene	µg/L	0.024	---	0.049	0.328	---	0.328
Indeno(1,2,3-cd)pyrene	µg/L	0.024	---	0.049	0.2	---	0.2

Parameter	Units	Current AMEL	Current AWEL	Current MDEL	Highest Avg. Monthly Conc.	Highest Avg. Weekly Conc.	Max. Daily Conc.
Heptachlor	µg/L	0.00011	---	0.0002	< 0.004	---	< 0.004
Chronic Toxicity	Pass or Fail, % Effect (TST)	Pass	---	Pass or % Effect < 50	Pass	---	Percent Effect of 22.5%

Table F-2 above summarizes the effluent limitations in the previous permit and the associated monitoring data. In some instances, the maximum daily concentration for a pollutant exceeded the objective, however these were not considered exceedances as described below:

Temperature: The maximum daily temperature exceeded the maximum daily effluent limitation for temperature; however the previous permit included an exception to the effluent limitation if the effluent temperature was elevated as a result of external ambient temperature. The Discharger reported that this temperature should not be considered a violation due to the high ambient temperature; however, this determination has not yet been made by the enforcement unit at the Los Angeles Water Board.

Nitrate and nitrate plus nitrite: The maximum daily effluent concentration exceeded the objective for nitrate and nitrate plus nitrite, but since the Discharger collected multiple samples during the month, the average monthly effluent limitation was not exceeded.

Dibenzo(a,h) anthracene: There were seven effluent limitation violations for dibenzo(a,h)anthracene in 2017 and 2019. Penalties were initially assessed on February 14, 2018 for the violations in June and September 2017 but were waived since evidence suggested the exceedances were due to large brushfires in the area outside of the Discharger's control pursuant to Cal. Water Code section 13385(j)(1)(B). Violations that occurred in February 2019 were also dismissed per Cal. Water Code section 13385(j)(1)(B) due to rain events following the Woolsey fire.

2.4. Compliance Summary

The following table lists the Facility's exceedances of effluent limitations in Order R4-2017-0062 that occurred during the period between May 2017 to June 2022.

Table F-3. Summary Table of Exceedances

Date of Exceedance	Pollutant	Effluent Limitation	Reported value
11/5/17	Indeno(1,2,3-cd)Pyrene	MDEL 0.049 µg/L	0.059 µg/L
11/30/17	Indeno(1,2,3-cd)Pyrene	AMEL 0.024 µg/L	0.059 µg/L

Date of Exceedance	Pollutant	Effluent Limitation	Reported value
12/31/17	Total Coliform	AMEL 23 CFU/100 mL	61 CFU/100 mL
3/6/18	Turbidity	Avg 2 NTU in 24 hrs	2.9 NTU
3/8/18	Turbidity	Avg 2 NTU in 24 hrs	2.9 NTU
3/9/18	Turbidity	Avg 2 NTU in 24 hrs	3.2 NTU
3/10/18	Turbidity	Avg 2 NTU in 24 hrs	2.8 NTU
5/6/18	Indeno(1,2,3-cd)Pyrene	MDEL 0.049 µg/L	0.11 µg/L
5/31/18	Total Coliform	AMEL 23 MPN/100 mL	50 MPN/100 mL
1/1/19	Total Coliform	AMEL 23 MPN/100 mL	27 MPN/100 mL
3/1/19	Turbidity	Avg 2 NTU in 24 hrs	3.6 NTU
6/7/19	Total Coliform	AWEL 2.2 MPN/100 mL	3.1 MPN/100 mL
6/8/19	Total Coliform	AWEL 2.2 MPN/100 mL	3.1 MPN/100 mL
7/1/19	Copper	MDEL 31 µg/L	77.1 µg/L
7/31/19	Copper	AMEL 27 µg/L	77.1 µg/L
6/17/20	Total Coliform	AMEL 23 MPN/100 mL	27 MPN/100 mL

Indeno(1,2,3-cd)pyrene: There were 11 violations for indeno(1,2,3-cd)pyrene in 2017-2019. Penalties were assessed on May 29, 2019 and amended on January 14, 2020 to dismiss all violations except for one that occurred on May 6, 2018. The June and September 2017 violations were dismissed pursuant to Cal. Water Code section 13385(j)(1)(B). Large brush fires were burning in the area at the time, including the La Tuna Canyon Fire, which were out of the Discharger's control. The December 2018 and February 2019 violations were also dismissed per Cal. Water Code section 13385(j)(1)(B) due to rain events following the Woolsey fire. A settlement offer was paid by the Discharger for the May 2018 violation. The Discharger could not identify the cause of the exceedance in May 2018 but notes the pollutant has the same prevalence in the

environment as explained previously for dibenzo(a,h)anthracene. To help prevent monthly average exceedances, the Discharger will sample earlier in the month to enable time for more sampling in the event of a high measured result.

Copper: Both the maximum daily and average monthly limits were exceeded for copper in July 2019. Penalties were assessed on January 14, 2020, and a settlement offer was paid by the Discharger. The Discharger did not provide reasoning for the maximum daily limitation exceedance but commented in the monthly report that the analyst did not notice the exceedance and missed opportunities to collect extra samples during the month. The analyst was counseled on comparing sample results to limitations and a reference sheet was provided to prevent future occurrences. Copper was not monitored in the influent in July 2019 so a comparison with effluent data cannot be made.

Total Coliform: The total coliform limits were exceeded 6 times between 2017 to 2021. The cause of the exceedances could not always be determined. The December 2017 exceedance may have been caused by birds nesting near the chlorine effluent channel, so extensive housekeeping was conducted around the effluent sampling area to prevent future exceedances. The Discharger reported that the May 2018 exceedance most likely resulted from starting up the chlorine contact basin after it was shut down for approximately 8 hours for maintenance and construction work. To prevent future exceedances, the Discharger reviewed and revised their Chlorination Standard Operating Procedures. The Discharger reported that the January 2019 exceedance may have been caused by a rupture in the pipeline in the effluent channel that occurred on December 22, 2018. Although the chlorine dosage was increased to prevent exceedances, a violation occurred on December 24, 2018 when repairs were completed. Another exceedance occurred January 1, 2019, for which the discharger was not able to find a cause although the discharger notes there were high winds on this day which could have possibly brought more dust to the sample collection points. Exceedances also occurred in June 2019 and 2020, for which the discharger was not able to find an exact cause. A couple of possible causes suggested for the June 2019 exceedance were foam buildup in the final chlorine contact channel or a loose unsealed cover near the effluent chlorine contact channel. After the June 2019 exceedance, the discharger checked the covers on the chlorine contact tanks for the proper watertight seal and performed extra housekeeping around the sample port at the South Channel. In response to the June 2020 exceedance, the discharger inspected the chlorine contact tank effluent channel for solids and debris buildup. In all total coliform exceedances, the sample results showed *E.coli* to be less than 1 MPN/100 mL.

Turbidity: The discharger noted that the multiple days of turbidity exceedances in March 2018 were due to colder wastewater temperatures and inadequate amounts of biomass resulting in the activated sludge process not adequately reducing turbidity for multiple days. A similar incident also occurred in March 2019. The discharger took corrective actions to build up microorganisms and bring the treatment back to normal operation in five days. To help prevent reoccurrence, the discharger prepared a standard operating procedure for process parameter monitoring and adjustments during winter conditions.

In addition to the exceedances noted above, there were 49 violations associated with deficient monitoring in effluent and receiving water sampling, including missed sampling

events and incorrect sample holding times, some of which were due to the COVID-19 emergency and staff shortages, and malfunctioning equipment. A monitoring location for Lake Balboa requires a boat for sample collection and no properly functioning boats were available, causing some sampling deadlines to be missed. The discharger requested an alternate sampling location and the Los Angeles Water Board approved the alternate sampling location on the shoreline to be used in emergency or unsafe conditions. Steps have been taken to prevent reoccurrence of these incidences such as lab staff counseling on proper sample handling and lab review procedures, including properly reading sample labels and appropriately scheduling analyses based on sample holding times. In addition, lab staff will consistently check that all required samples have been taken and will improve communication between plant and lab personnel.

2.5. Planned Changes

The Discharger has numerous capital improvement projects scheduled for the facility. The following table summarizes planned changes at the facility:

Table F-4: Summary of Capital Improvement Projects

Project Name	Description	Status	Start Date	End Date
Advanced Water Purification Facility (AWPF)	Construct a 35 MGD AWPF at the Tillman WRP that produces advanced treated recycled water for the Hansen and Pacoima Spreading Grounds.	Bid & Award	Spring 2024	Fall 2025
AWPF Primary Flow Equalization Basin	Construct 6.75 MG primary flow equalization storage for the AWPF	Bid & Award	3/1/22	2/28/25
Japanese Garden Lake Effluent Bypass	Divert effluent from Japanese Garden Lake that currently goes to LA River to AVORS pipe and to facility headworks using bypass pipe and installing check valve and flowmeter	Bid & Award	3/1/22	2/28/25
Primary Treatment Upgrades	Install new spargers, air return lines from Channel 1, two new sluice gates in Channel 1, and replace the new primary sludge collector system	Design	4/1/24	12/31/26

Project Name	Description	Status	Start Date	End Date
Backup Power	Demolish existing backup generator and underground fuel tank and install two new emergency diesel fuel generators	Bid & Award	3/1/22	2/28/25
Berm Improvements	Install parapet flood walls, flood gates, and access ramps and extend berm height	Bid & Award	3/31/22	9/30/23
Influent & Effluent Flow Monitoring Infrastructure	Construct four new maintenance vaults for flow metering equipment	Construction	12/1/21	11/30/22
AVORS & EVIS Gates Replacement	Replace nine gates at AVORS, EVIS, and isolation area	Bid & Award	3/1/22	2/28/25
Screw Pumps Inlet Gates	Replace eight screw pump inlet sluice gates at lower level of the headworks building	Bid & Award	3/1/22	2/28/25
Niwa Road Sewer Installation	Install 8-inch diameter 450 linear foot sewer and sewer lateral for ancillary buildings restrooms and abandoning existing septic system	Design	1/1/22	7/1/22
Electrical Power System DCS Integration	Programming and hardware installation of Honeywell Distributed Control System at the Electrical Power System	Pre-design	5/1/22	9/30/22
Tank Rehabilitation	Inspect, rehabilitate, and repair the concrete walls of the primary tanks, aeration tanks, and filters	Construction	12/1/21	12/31/22
Preliminary Treatment Odor Control System	Install two AC units with ducting and instrumentation and	Pre-design	5/1/22	10/31/22

Project Name	Description	Status	Start Date	End Date
	integration into control system			
Channel 1, Gate No. 9 Structural Rehabilitation	Add bracket and repair concrete at Gate No. 9 in Channel 1	Design	4/4/22	10/4/22

In addition to the projects listed above, there are more anticipated projects that are yet to be scheduled which involve improving the chlorination system, Phase 1 bar screens, Phase 1 secondary clarifiers, secondary aeration, and secondary clarifiers.

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 (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the USEPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge locations described in Table 2 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 for an existing facility is exempt from 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 Water Quality Control Plan for the Los Angeles Region (Basin Plan) designates beneficial uses, establishes WQOs, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan.

Beneficial uses applicable to the relevant reaches of the Los Angeles River are as follows:

Table F-5. Basin Plan Beneficial Uses and Features – Surface Waters

Discharge Point	Watershed Boundary Dataset (WBD) Number	Receiving Water Name	Beneficial Use(s)
002, 003, and 008	180701050208 (formerly Calwater Hydro Unit 405.21)	Los Angeles River Reach 5 (Between Balboa Blvd. and Sepulveda Dam)	**Existing:** Groundwater recharge (GWR), warm freshwater habitat (WARM), wildlife habitat (WILD), wetland habitat (WET, note a), water contact recreation (REC-1), and non-contact water recreation (REC-2) **Potential:** Industrial service supply (IND) and municipal and domestic supply (MUN, note b)
002, 003, and 008	180701050208 (formerly Calwater Hydro Unit 405.21)	Los Angeles River Reach 4 (Between Sepulveda Dam and Riverside Dr.)	**Existing:** GWR, WARM, WILD, WET (note a), REC-1, and REC-2 **Potential:** IND and MUN (note b)
002, 003, and 008	180701050210 (formerly Calwater Hydro Unit 405.21)	Los Angeles River Reach 3 (Between Riverside Dr. and Figueroa St.)	**Existing:** GWR, WARM, WILD, WET (note a), REC-1, and REC-2**Potential:** IND and MUN (note b)
002, 003, and 008	180701050402 (formerly Calwater Hydro Unit 405.15)	Los Angeles River Reach 2 (Between Figueroa St. and Carson St.)	**Existing:** GWR, WARM, REC-1, and REC-2 **Potential:** IND, WILD, and MUN (note b)
002, 003, and 008	180701050402 (formerly Calwater Hydro Unit 405.12)	Los Angeles River Reach 1 (Between Carson St. and Los Angeles Estuary)	**Existing:** GWR, WARM, Marine habitat (MAR), WILD, rare, threatened, or endangered species (RARE), REC-1 (note c), and REC-2 **Potential:** IND, industrial process supply (PROC), migration of aquatic organisms (MIGR), spawning, reproduction, and/or early development (SPWN), shellfish harvesting (SHELL, note c), and MUN (note b)

Discharge Point	Watershed Boundary Dataset (WBD) Number	Receiving Water Name	Beneficial Use(s)
002, 003, and 008	180701050402 (formerly Calwater Hydro Unit 405.12)	Los Angeles River Estuary	**Existing:** IND, Navigation (NAV), commercial and sport fishing (COMM), estuarine habitat (EST), MAR, WILD, RARE (note d), MIGR, SPWN, WET, REC-1, and REC-2 **Potential:** SHELL

Footnotes for Table F-5

a. Waterbodies designated as WET may have wetlands associated with only a portion of the waterbody.

b. The potential municipal and domestic supply (MUN) beneficial use for the water body is consistent with the Sources of Drinking Water Policy (page 5-13 of the Basin Plan). However, the Los Angeles Water Board has only conditionally designated the MUN beneficial use. Therefore, the Los Angeles Water Board is not establishing effluent limitations based on the potential MUN designation at this time.

c. Access prohibited by Los Angeles County Department of Public Works in the concrete-channelized areas.

d. One or more rare species utilize all ocean, bays, estuaries and coastal wetlands for foraging and/or nesting. (Basin Plan, Chapter 2, Table 2-1)

e. Aquatic organisms utilize all bays, estuaries, lagoons and coastal wetlands, to a certain extent, for spawning and early development. This may include migration into areas which are heavily influenced by freshwater inputs. (Basin Plan, Chapter 2, Table 2-1)

End of footnotes for Table F-5

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. This Order implements the NTR and CTR.

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 Los Angeles 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. Compliance Schedule Policy. On April 15, 2008, the State Water Board adopted Resolution Number 2008-0025, Policy for Compliance Schedule in National Pollutant Discharge Elimination System Permits (Compliance Schedule Policy). The Compliance Schedule Policy became effective on December 17, 2008. The Compliance Schedule Policy is a statewide water quality control policy that authorizes compliance schedules in NPDES permits that implement CWA section 301(b)(1)(C). The Compliance Schedule Policy supersedes all existing provisions authorizing NPDES compliance schedules with the exception of: (1) existing compliance schedule provisions in Total Maximum Daily Load (TMDL) implementation plans in Regional Water Quality Control Plans; and (2) the provisions authorizing compliance schedules for California Toxics Rule criteria in the SIP. This Order implements the Compliance Schedule Policy by establishing a compliance schedule for the temperature effluent limitation.

3.3.5. Domestic Water Quality. In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order implements this policy by ensuring the discharge meets requirements protective of the beneficial uses of the receiving waters.

3.3.6. Alaska Rule. On March 30, 2000, USEPA revised its regulation that specifies when new and revised state and tribal water quality standards become effective for CWA purposes (40 CFR section 131.21, 65 Federal Register 24641 (April 27, 2000)). Under the revised regulation (also known as the Alaska Rule), new and revised standards submitted to USEPA after May 30, 2000, must be approved by USEPA before being used for CWA purposes. The final rule also provides that standards already in effect and submitted to USEPA by May 30, 2000, may be used for CWA purposes, whether or not approved by USEPA. This Order implements this rule by implementing standards developed after May 30, 2000 that have been approved by USEPA and/or implementing standards that were in effect and submitted to the USEPA by May 30, 2000.

3.3.7. Stringency of Requirements for Individual Pollutants. This Order contains both technology-based effluent limitations (TBELs) and water quality-based effluent limitations (WQBELs) for individual pollutants. The TBELs consist of restrictions on BOD, TSS, and percent removal of BOD and TSS. Restrictions on BOD and TSS are discussed in section 4.2.2. of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, to comply with federal anti-backsliding requirements, this Order contains effluent limitations that are more stringent than the minimum federal technology-based requirements that are carried over from the previous Order.

WQBELs have been scientifically derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. All beneficial uses and WQOs contained in the Basin Plan and statewide water quality control plans 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). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA and the applicable water quality standards for purposes of the CWA. The final effluent limitations for these pollutants are described in additional detail in section 4.3.2 of the Fact Sheet.

3.3.8. Antidegradation Policy. Federal regulations at 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 Los Angeles Water Board's Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge and this Order are consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16, as discussed in section 4.4.2 of the Fact Sheet.

3.3.9. 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. This Order complies with the anti-backsliding provisions by ensuring the effluent limitations are as stringent as those in the previous Order, unless one of the exceptions applies.

3.3.10. Endangered Species Act Requirements. This Order prohibits 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 (ESA) (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 USC §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable ESA.

3.3.11. Water Rights. 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 surface or subterranean stream, the Discharger must file a petition with

the State Water Board, Division of Water Rights, and receive approval for such a change from the State Water Board. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211. The Discharger intends to change the place and purpose of use of up to 4,820 acre-feet per year of treated wastewater from the facility that flows to the Japanese Garden Lake and into the Los Angeles River. The redirected flow of treated wastewater is proposed to be recirculated from the Japanese Garden Lake back to the facility and conveyed via pipeline to the Los Angeles Department of Water and Power to recharge the San Fernando Groundwater Basin to increase local water supplies. The Discharger plans to submit a petition under Water Code, Section 1211 for approval of this change.

3.3.12. Water Recycling. In accordance with statewide policies concerning water reclamation, the Los Angeles Water Board strongly encourages, wherever practicable, water recycling, water conservation, and use of stormwater and dry-weather urban runoff. (See, e.g., Water Code sections 13000 and 13550-13557, State Water Board Resolution Number 77-1 (*Policy with Respect to Water Reclamation in California*), and State Water Board Resolution Numbers 2009-0011, 2013-0003, and 2018-0057 (*Water Quality Control Policy for Recycled Water* (Recycled Water Policy).) The Permittee shall investigate the feasibility of recycling, conservation, and/or alternative disposal methods for wastewater, and/or capture and treatment of dry-weather urban runoff and stormwater, on a permissive basis for beneficial reuse. This Order requires the Permittee to submit an update to this feasibility investigation as part of the submittal of the ROWD for the next permit renewal.

The State Water Board adopted the Recycled Water Policy on February 3, 2009 and amended it most recently on December 11, 2018. The most recent amendments became effective on April 8, 2019. The Recycled Water Policy requires wastewater and recycled water dischargers to annually report monthly volumes of influent, wastewater produced, and effluent, including treatment level and discharge type. As applicable, dischargers are additionally required to annually report recycled water use by volume and category of reuse. The State Water Board issued a Water Code Section 13267 and 13383 Order, Order WQ 2019-0037-EXEC, on July 24, 2019 (amended January 14, 2020) to amend MRPs for all NPDES permits, WDRs, Water Reclamation Requirements (WRRs), Master Recycling Requirements, and General WDRs. Annual reports are due by April 30 of each year, and the report must be submitted to GeoTracker. This Order implements the Recycled Water Policy by incorporating the volumetric monitoring reporting requirements in accordance with Section 3 of the Recycled Water Policy (https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf). The State Water Board's Order WQ 2019-0037-EXEC will no longer be applicable to the Discharger upon the effective date of this Order.

3.3.13. Monitoring and Reporting. 40 CFR part 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code section 13383 authorizes the Los Angeles Water Board to require technical and

monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements. This MRP is provided in Attachment E.

3.3.14. Sewage Sludge and Biosolids Requirements.

Section 405 of the CWA and implementing regulations at 40 CFR part 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The state has not been delegated the authority by USEPA to implement this program. The Permittee is responsible for meeting all applicable requirements of 40 CFR Part 503 that are under USEPA's enforcement authority.

3.3.15. Pretreatment Requirements. The application of pretreatment requirements is monitored by the Discharger and the Order will be reopened when additional pretreatment requirements are determined to be applicable to the discharge. The Permittee has developed and is implementing a Pretreatment Program that was previously approved by USEPA. This Order requires implementation of the approved Pretreatment Program. The Discharger's Pretreatment Program has 171 significant industrial user (SIU) permittees and 18,365 other industrial users.

Any change to the Pretreatment Program shall be reported to the Los Angeles Water Board in writing and shall not become effective until approved by the Executive Officer in accordance with the procedures established in 40 CFR § 403.18. The Discharger shall comply with requirements contained in Attachment H – Pretreatment Reporting Requirements.

3.3.16. Mercury Provisions. The State Water Board adopted *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) through Resolution Number 2017-0027, which was approved by the Office of Administrative Law (OAL) on June 28, 2017, and became effective upon USEPA approval on July 14, 2017. The Mercury Provisions established one narrative and four numeric water quality objectives for mercury and three new beneficial use definitions, implemented through NPDES permits issued pursuant to CWA section 402, waste discharge requirements, or waivers of waste discharge requirements. The Provisions included implementation provisions for individual non-stormwater NPDES permits for municipal and industrial dischargers; stormwater discharges including MS4 discharges and discharges regulated by *General Permit for Storm Water Discharges Associated with Industrial Activities* (NPDES No. CAS000001); mine site remediation; nonpoint source discharges; dredging activities; and wetland projects.

The Mercury Provisions contain provisions that apply to POTWs and individual industrial discharges. The Mercury Provisions converted the fish tissue-based water quality objectives to water column values, denoted as "C". The implementation section of the Mercury Provisions requires the application of section 1.3 of SIP with modifications to determine whether a discharge has reasonable potential to cause or contribute to an exceedance of the water column concentration for mercury and the development of effluent limitations for mercury based on the water quality objective

applicable to the receiving water in accordance with Chapter IV.D.2.b in Mercury Provisions (See Section 4.3.3 of Fact Sheet for RPA SIP procedures).

The Mercury Provisions convert the fish tissue-based water quality objectives into water column values to be used for reasonable potential analysis and development of effluent limitations. The objective for the Los Angeles River, which is a flowing water body, is 12 ng/L total mercury. The annual averages of effluent sample testing results ranged from 1.2 ng/L to 2.0 ng/L during the monitoring period from May 2017 to June 2022. According to the Mercury Provisions, a water quality-based effluent limitation is not required unless the highest observed annual average effluent mercury concentration is greater than the applicable objective (water column concentration, 12 ng/L). Since the data indicated that there is no reasonable potential to cause or contribute to an excursion above the water quality standard, no effluent limitations for mercury are established in this Order. However, monitoring requirements for mercury in the effluent and receiving water are included in Attachment E with the new detection limit of 0.5 ng/L, which the Mercury Provisions specify as a quantification limit for the water samples.

3.3.17. Bacteria Provisions. The State Water Board adopted the *Bacteria Provisions and Water Quality Standards Variance Policy* (Bacteria Provisions) through Resolution Number 2018-0038, which was approved by OAL on February 4, 2019 and became effective upon USEPA approval on March 22, 2019. The Bacteria Provisions establish *Escherichia coli* (*E. coli*) as the sole indicator of pathogens in freshwater. These *E. coli* water quality objectives supersede any numeric water quality objectives for bacteria for the protection of the REC-1 beneficial use in Los Angeles Water Board Basin Plans prior to the effective date of the Bacteria Provisions, except in certain circumstances, such as where there are site-specific numeric water quality objectives for bacteria. Further, where there is a TMDL to implement prior bacteria objectives, these TMDLs remain in effect. The Los Angeles River Bacteria TMDL establishes WLAs for the DCTWRP equal to a 7-day median of 2.2 MPN/100 mL of *E. coli* or a daily max of 235 MPN/100 mL to ensure zero days of allowable exceedances. No exceedances of the geometric mean, which is 126/100 mL of *E. coli*, shall be permitted. Thus, the existing WLA-based effluent limitations for E. coli are retained for the protection of the REC-1 beneficial use.

This Order also includes effluent limitations for *E. coli* based on the Los Angeles River Bacteria TMDL and for total coliform based on Title 22 disinfected tertiary recycled water requirements for the protection of human health. In addition, USEPA states in their *NPDES Water Quality Based Permit Limits for Recreational Water Quality Criteria* (2015) that it expects the direct application of criteria values at the end-of-pipe approach where the objective is applied directly as permit limits at the discharge point. Since the effluent limitations are applied at the discharge point (end-of-pipe) based on Title 22, which are more stringent than the Bacteria Provisions, additional receiving water limitations are not established.

3.3.18. Toxicity Provisions. Beginning in May 2013, the Los Angeles Water Board began incorporating into the NPDES permits for POTWs and industrial facilities numeric water quality objectives for both acute and chronic toxicity, using the Test of

Significant Toxicity (TST), and a program of implementation to control toxicity. As explained later in the Fact Sheet, this approach is a preferred statistical method because it provides a higher confidence in results classifying in-waste stream concentrations as toxic or non-toxic and it is supported by USEPA. This methodology is used in the existing Order and is carried over into this Order.

On December 1, 2020, the State Water Board adopted statewide numeric water quality objectives for both acute and chronic toxicity, using the TST, and a program of implementation to control toxicity, which are collectively known as the Toxicity Provisions. On October 5, 2021, the State Water Board adopted a resolution rescinding the December 1, 2020 establishment of *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* and confirming that the Toxicity Provisions were adopted as a State Policy for Water Quality Control, for all inland surface waters, enclosed bays, estuaries, and coastal lagoons of the state, regardless of their status as waters of the United States. The Toxicity Provisions establish a uniform regulatory approach to provide consistent protection of aquatic life beneficial uses and protect aquatic habitats and life from the effects of known and unknown toxicants. The Toxicity Provisions were approved by OAL on April 25, 2022. The Toxicity Provisions will take effect upon approval by the USEPA for purposes of federal law. The toxicity requirements in this Order are consistent with the current iteration of the Toxicity Provisions, so the Los Angeles Water Board does not anticipate a need for any changes to the Order.

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

The State Water Board adopted the 2020-2022 California Integrated Report based on a compilation of the Los Angeles Water Boards' Integrated Reports. These Integrated Reports contain both the Clean Water Act (CWA) section 305(b) water quality assessment and section 303(d) list of impaired waters. In developing the Integrated Reports, the Water Boards solicit data, information and comments from the public and other interested persons.

On January 19, 2022 the State Water Board approved the CWA Section 303(d) List portion of the State's 2020-2022 Integrated Report (State Water Board Resolution Number 2022-0006). On May 11, 2022, the USEPA approved California's 2020-2022 Integrated Report. The CWA section 303(d) List can be found at the following link: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html.

The Los Angeles River is on the 303(d) list. The following are the identified pollutants impacting the receiving water:

Los Angeles River Reach 5 (Balboa Blvd. to Sepulveda Dam) – Calwater Watershed 4412.210000 (USGS HUC Number 18070105)

Pollutants: Ammonia, trash, oil, nutrients (algae), copper, lead, benthic community effects, toxicity

Los Angeles River Reach 4 (Sepulveda Dam to Riverside Dr.) – Calwater Watershed 4412.210000 (USGS HUC Number 18070105)

Pollutant: Trash, indicator bacteria, nutrients (algae), toxicity

Los Angeles River Reach 3 (Riverside Dr. to Figueroa St.) – Calwater Watershed 4412.100000 and 4412.210000 (USGS HUC Number 18070104)

Pollutants: Trash, ammonia, nutrients (algae), copper, indicator bacteria, toxicity

Los Angeles River Reach 2 (Figueroa St. to Carson St.) – Calwater Watershed 4412.100000 (USGS HUC Number 18070104)

Pollutants: Trash, nutrients (algae), ammonia, indicator bacteria, oil, copper, lead

Los Angeles River Reach 1 (Carson St. to Los Angeles River Estuary) - Calwater Watershed 4412.100000 (USGS HUC Number 18070104)

Pollutants: Copper (dissolved), cadmium, ammonia, zinc (dissolved), pH, cyanide, nutrients (algae), indicator bacteria, trash, lead

Los Angeles River Estuary - Calwater Watershed 40512000 (USGS HUC Number 18070104)

Pollutants: Chlordane, PCBs, trash, DDT (sediment), toxicity

The limits in this Order address each of these impairments.

3.5. Other Plans, Polices and Regulations

3.5.1. Climate Change Adaptation and Mitigation

On March 07, 2017, the State Water Board adopted a resolution responding to the challenges posed by climate change and requiring a proactive approach to climate change in all State Water Board actions, including drinking water regulation, water quality protection, and financial assistance (Resolution Number 2017-0012). The Los Angeles Water Board also adopted “A Resolution to Prioritize Actions to Adapt and Mitigate the Impacts of Climate Change on the Los Angeles Region’s Water Resources and Associated Beneficial Uses” (Resolution Number R18-004) on May 10, 2018. The resolution summarizes the steps taken so far to address the impacts of climate change within the Los Angeles Water Board’s programs, and lists a series of additional steps, including the identification of potential regulatory adaptation and mitigation measures that could be implemented on a short-term and long-term basis by each of the Los Angeles Water Board’s programs to mitigate the effects of climate change on water resources and associated beneficial uses where possible. This kind of study and management is an important part of planning for the future, as “[m]unicipalities across the country are facing the challenging obligation to manage their aging sewer and stormwater systems at a time of urban population growth, more stringent water quality protection requirements, and increased exposure to climate change-related risks.” USEPA, *Asset Management: Incorporating Asset Management Planning Provisions into NPDES Permits* (December 2014).

This Order contains provisions to require planning and actions to address climate change impacts in accordance with both the State and Los Angeles Water Boards’ resolutions.

The Permittee shall develop and submit a Climate Change Effects Vulnerability Assessment and Management Plan (Climate Change Plan) it to the Los Angeles Water Board for the Executive Officer's approval no later than 24 months after the effective date of this Order. The Climate Change Plan shall include an assessment of short- and long-term vulnerabilities of facilities and operations as well as plans to address vulnerabilities of collection systems, facilities, treatment systems, and outfalls for predicted impacts in order to ensure that facility operations are not disrupted, compliance with Order conditions is achieved, and receiving waters are not adversely impacted by discharges. Control measures shall include, but are not limited to, emergency procedures, contingency plans, alarm/notification systems, training, backup power and equipment, and the need for planned mitigations to ameliorate climate-induced impacts including, but not limited to, changing influent and receiving water quality and conditions, as well as the impact of rising sea level (where applicable), wildfires, storm surges, and back-to-back severe storms, which are expected to become more frequent. The Permittee shall also identify new or increased threats to the sewer system resulting from climate change that may impact desired levels of service in the next 50 years. The permittee shall project upgrades to existing assets or new infrastructure projects, and associated costs, necessary to meet desired levels of service. Climate change research also indicates the overarching driver of climate change is increased atmospheric carbon dioxide from human activity. The increased carbon dioxide emissions trigger changes to climatic patterns, which increase the intensity of sea level rise and coastal storm surges, lead to more erratic rainfall and local weather patterns, trigger a gradual warming of freshwater and ocean temperatures, and trigger changes to ocean water chemistry. As such, the Climate Change Plan shall also identify steps being taken or planned to address greenhouse gas emissions attributable to wastewater treatment plants and effluent discharge processes.

These requirements are consistent with 40 CFR section 122.41(e), requiring permittees to ensure compliance through proper operation and maintenance of facilities, including installation and operation of appropriate auxiliar and backup facilities; and they are authorized pursuant to Water Code section 13383. (*In re the City of Oceanside, Fallbrook Public Utilities Dist. And the Southern California Alliance of Publicly Owned Treatment Works*, State Water Board Order WQ 2021-0005, February 12, 2021 at p. 26.) The Los Angeles Water Board understands that the cost of preparing such a plan could be significant (estimated cost range of $25,000-$60,000), but "the costs of ensuring resilient infrastructure to protect water quality against the effects of climate change is warranted." (*Fallbrook,* at p. 27.)

3.5.2. Sources of Drinking Water Policy. On May 19, 1988, the State Water Board adopted Resolution Number 88-63, *Sources of Drinking Water Policy* (SODW Policy), which established a policy that all surface and ground waters, with limited exemptions, are suitable or potentially suitable for municipal and domestic supply. To be consistent with the State Water Board's SODW Policy, on March 27, 1989, the Los Angeles Water Board adopted Resolution Number 89-03, *Incorporation of Sources of Drinking Water Policy into the Water Quality Control Plans (Basin Plans) – Santa Clara River Basin*

(4A)/ Los Angeles River Basin (4B). This permit is consistent with this policy because it incorporates requirements to protect the beneficial uses of the receiving water.

3.5.3. Title 22 of the California Code of Regulations (CCR Title 22). The State Water Resources Control Board, Division of Drinking Water, established primary and secondary maximum contaminant levels (MCLs) for inorganic, organic, and radioactive contaminants in drinking water. These MCLs are codified in Title 22. The Basin Plan (Chapter 3) incorporates Title 22 primary MCLs by reference. This incorporation by reference is prospective, including future changes to the incorporated provisions as the changes take effect. Title 22 primary MCLs have been used as bases for effluent limitations in WDRs and NPDES permits to protect groundwater recharge (GWR) beneficial use. Also, the Basin Plan specifies that "Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." Since reaches downstream of the discharge have designated GWR beneficial use, this Order establishes effluent limitations based on primary MCLs of CCR Title 22 to protect GWR beneficial use of the surface water, which is intended to protect groundwater quality where surface water recharges groundwater.

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

3.5.5. Stormwater. CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for stormwater discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR § 122.26, establishing requirements for stormwater discharges under an NPDES program. To facilitate compliance with federal regulations, on November 1991, the State Water Board issued a statewide general permit, *General Permit for Storm Water Discharges Associated with Industrial Activities* (Order Number 2014-0057-DWQ amended by Order 2015-0122-DWQ and Order 2018-0028-DWQ, NPDES No. CAS000001). Order Number 2014-0057-DWQ has been amended and reissued several times since 1991, and most recently on November 6, 2018. The latest amendment became effective on July 1, 2020.

The Permittee filed an initial Notice of Intent (NOI) in 1992 and another in 1997 to comply with the requirements of the general permit. On May 14, 2015, the Permittee submitted a new NOI to comply with the requirement of the amended general permit. The Permittee developed and currently implements a Stormwater Pollution Prevention Plan (SWPPP), to comply with the State Water Board's General NPDES permit Number CAS000001.

3.5.6. Sanitary Sewer Overflows (SSOs). The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 USC §§ 1311 and 1342). The Discharger must separately comply with State Water Board Water Quality Order Number 2006-0003-DWQ, Statewide *General Waste Discharge Requirements for Sanitary Sewer Systems* (SSS WDRs), as amended by State Water Board Order Number WQ 2008-0002-EXEC and WQ 2013-0058-EXEC and any subsequent order updating these requirements. These statewide

WDRs require public agencies that own or operate sanitary sewer systems with greater than one mile of sewer lines to enroll for coverage, comply with requirements to develop and implement sewer system management plans, and report all SSOs to the State Water Board's online SSO database. The Permittee enrolled in the SSS WDRs in 2006, and the collection systems of the Permittee are covered under the SSS WDRs. The NPDES permit also contains requirements pertaining to the Permittee's collections system. The Discharger must properly operate and maintain its collection system (40 CFR § 122.41 (e)), report any noncompliance (40 CFR § 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR § 122.41(d)).

The requirements contained in this Order in sections 6.3.3.b. (Spill Cleanup Contingency Plan section), 6.3.4. (Construction, Operation and Maintenance Specifications section), and 6.3.6. (Spill Reporting Requirements section) are intended to be consistent with the requirements of the SSS WDRs. The Los Angeles Water Board recognizes that there may be some overlap between these NPDES permit provisions and SSS WDRs requirements, related to the collection systems. The requirements of the SSS WDRs are considered the minimum thresholds (see Finding 11 of State Water Board Order Number 2006-0003-DWQ). To encourage efficiency, the Los Angeles Water Board will accept the documentation prepared by the permittees under the SSS WDRs for compliance purposes as satisfying the requirements in sections 6.3.3.b, 6.3.4, and 6.3.6, provided the more stringent provisions contained in this NPDES permit are also addressed. Pursuant to SSS WDRs, section D, provision 2(iii) and (iv), the provisions of this NPDES permit supersede the SSS WDRs, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative. The requirements of this permit are more stringent than the SSS WDRs because in addition to the SSS WDRs requirements, this NPDES permit requires water quality monitoring of the receiving water when the spill reaches the surface water.

3.5.7. Watershed Management. The Los Angeles Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles Region. Information about watersheds in the region can be obtained at the Los Angeles Water Board's website at http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/watershed/index.shtml. The WMA emphasizes cooperative relationships between regulatory agencies, the regulated community, environmental groups, and other stakeholders in the watershed to achieve the greatest environmental improvements with the resources available.

This Order fosters the implementation of this approach by protecting beneficial uses in the watershed and requiring the Permittee to participate with other stakeholders, in the development and implementation of a watershed-wide monitoring program. The Monitoring and Reporting Program (Attachment E) requires the Permittee to undertake the responsibilities delineated under an approved watershed-wide monitoring plan in the implementation of the Watershed-wide Monitoring Program for the Los Angeles River, which was approved by the Los Angeles Water Board on August 8, 2008.

3.5.8. Relevant TMDLs. Section 303(d) of the CWA requires states to identify water bodies that do not meet water quality standards and then to establish TMDLs for each water body for each pollutant of concern. TMDLs identify the maximum amount of pollutants that can be discharged to water bodies without causing violations of water quality standards.

a. Los Angeles River and Tributaries Metals TMDL - On June 2, 2005, the Los Angeles Water Board established a *Total Maximum Daily Load for Metals for the Los Angeles River and its Tributaries* (LA River Metals TMDL) (Basin Plan Chapter 7-13). The TMDL was revised on September 6, 2007, May 6, 2010, and April 9, 2015. The effective date of the latest version of the TMDL is December 12, 2016. The Los Angeles River Metals TMDL contains waste load allocations for copper, lead, cadmium, and zinc.

The TMDL includes WLAs for the Donald C. Tillman, Los Angeles-Glendale, and Burbank WRPs that are based on a water effect ratio (WER) and recalculated lead criteria. The TMDL includes language stating that regardless of the WER, the WRPs must perform at a level that can be attained by existing treatment technologies at the time of permit issuance, reissuance or modification.

On December 12, 2016, USEPA approved the latest version of the TMDL with the understanding "… that the Regional Board is applying both the anti-backsliding and anti-degradation provisions. The anti-backsliding provision ensures that effluent concentrations do not increase above levels that can be maintained by wastewater facilities at the time of permit reissuance. The antidegradation provision requires permittees to track trends in water quality, and where increases are predicted or observed, evaluate the cause and identify control measures to arrest increases. Therefore, the amendments will have no effect on the discharge effluent limits for facilities that are currently discharging copper or lead at concentrations that are below the existing CTR values."

b. Los Angeles River Nitrogen Compounds and Related Effects TMDL - On July 10, 2003, the Los Angeles Water Board adopted the *TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River* (Nitrogen Compounds TMDL) (Basin Plan Chapter 7-8). The TMDL was revised on December 4, 2003 and December 6, 2012. The effective date of the latest version of the TMDL is August 7, 2014.

The TMDL incorporates 30-day average site-specific objectives (SSO) for ammonia along with corresponding site-specific early life stage (ELS) implementation provisions per Table 3-4 of the Basin Plan, with the condition that implementation actions to achieve applicable site-specific objectives must also result in compliance with downstream water quality objectives for ammonia and nitrogen compounds. In addition, the TMDL contains language stating that, regardless of the SSO and SSO-derived WLAs, for discharges regulated under the Nitrogen Compounds TMDL with concentrations below site-specific water quality objectives, effluent limitations shall ensure effluent concentrations do not exceed the level of water quality that can be reliably maintained by the facility's applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding requirements in Clean Water Act section 402(o) and anti-degradation requirements are

met. The ammonia nitrogen limitations for ELS present and ELS absent in this Order are derived consistent with the Nitrogen Compounds TMDL and its associated amendments.

c. Los Angeles River Bacteria TMDL - On July 9, 2010, the Los Angeles Water Board adopted the *Total Maximum Daily Load for Indicator Bacteria in the Los Angeles River Watershed* (LA River Bacteria TMDL) (Basin Plan Chapter 7-39). The LA River Bacteria TMDL contains WLAs for Tillman, Los Angeles-Glendale, and Burbank WRPs, which are set equal to a 7-day median of 2.2 MPN/100 mL of *E. coli* and/or a daily max of 235 MPN/100mL to ensure zero days of allowable exceedances. No exceedances of the geometric mean TMDL numeric target of 126/100 mL *E.coli* are permitted within the month. The LA River Bacteria TMDL became effective on March 23, 2012. Effluent limitations for *E. coli* are included in this permit and are consistent with the TMDL.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 CFR section 122.44(a) requires that NPDES permits include applicable technology-based limitations and standards; and 40 CFR section 122.44(d) requires that permits include water quality-based effluent limitations to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water.

The variety of potential pollutants found in the Facility discharge presents a potential for aggregate toxic effects to occur. Whole effluent toxicity (WET) is an indicator of the combined effect of pollutants contained in the discharge. Chronic toxicity is a more stringent requirement than acute toxicity. Therefore, chronic toxicity is considered a pollutant of concern for protection and evaluation of narrative Basin Plan objectives for toxicity.

4.1. Discharge Prohibitions.

Effluent and receiving water limitations in this Order are based on the CWA, Basin Plan, State Water Board's plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. This order authorizes the discharge of tertiary-treated wastewater from Discharge Points 002, 003, and 008. It does not authorize any other type of discharges to receiving water.

4.2. Technology-based Effluent Limitations

4.2.1. Scope and Authority. Technology-based effluent limits require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the Discharger to use any available control techniques to meet the effluent limits. The 1972 CWA required POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level, referred to as "secondary treatment," which all POTWs were required to meet by July 1, 1977. More specifically, section 301(b)(1)(B) of the CWA required that USEPA develop secondary treatment standards

for POTWs as defined in section 304(d)(1). Based on this statutory requirement, USEPA developed national secondary treatment regulations which are specified in 40 CFR part 133. These technology-based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of $BOD_5$20°C and TSS.

4.2.2. Applicable TBELs

This Facility is subject to the technology-based regulations for the minimum level of effluent quality attainable by secondary treatment in terms of $BOD_5$20°C and TSS. The principal design parameters for wastewater treatment plants are the daily BOD and TSS loading rates and the corresponding removal rate of the system. In applying 40 CFR Part 133 for weekly and monthly average BOD and TSS limitations, the application of tertiary treatment processes results in the ability to achieve lower levels of BOD and TSS than the secondary standards. This Facility is also subject to TBELs contained in similar NPDES permits, for similar facilities, based on the treatment level available by tertiary-treated wastewater treatment systems. In addition to the average weekly and average monthly effluent limitations, daily maximum effluent limitations for BOD and TSS are included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. The Facility can meet these limitations with the existing treatment processes in place. Further, mass-based effluent limitations are based on a design flow rate of 80 mgd (40 CFR §122.45(b)(1), (f)). The removal efficiency for BOD and TSS is set at the minimum level attainable by secondary treatment technology. The following table summarizes the TBELs applicable to the Facility:

Table F-6. Summary of TBELs

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Notes
$BOD_5$20°C	mg/L	20	30	45	---
$BOD_5$20°C	lbs/day	13,340	20,020	30,020	a
TSS	mg/L	15	40	45	---
TSS	lbs/day	10,010	26,690	30,020	a
Removal Efficiency for BOD and TSS	%	≥85	---	---	---

Footnotes for Table F-6

a. The mass emission rate is based on the plant design flow rate of 80.0 MGD, and is calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

End of Footnotes for Table F-6

Additional reasoning upon which the foregoing limits are based is set forth below:

$BOD_5$20°C and TSS

$BOD_5$20°C is a measure of the quantity of the organic matter in the water, and therefore, the water's potential for becoming depleted of dissolved oxygen. As organic degradation occurs, bacteria and other decomposers use the oxygen in the water for respiration. Unless there is a steady resupply of oxygen to the system, the water will quickly become oxygen deficient. Adequate dissolved oxygen levels are required to support aquatic life. Depressions of dissolved oxygen can lead to anaerobic conditions resulting in odors, or in extreme cases, in fish kills.

40 CFR Part 133 describes the minimum level of effluent quality attainable by secondary treatment, for BOD and TSS, as:

- The 30-day average shall not exceed 30 mg/L, and

- The 7-day average shall not exceed 45 mg/L.

The Tillman WRP provides tertiary treatment, so the BOD and TSS limits in the Order are more stringent than secondary treatment requirements and are based on Best Professional Judgment (BPJ) pursuant to 40 CFR § 125.3 subds. (c) and (d)(2). The Facility achieves solids removals that are better than secondary-treated wastewater by filtering the effluent.

Those limits were all included in the previous Order (Order R4-2017-0062) and the Tillman WRP has been able to meet both limits (monthly average and the daily maximum), for both BOD and TSS. Accordingly, these limits are carried over in this Order.

In addition to having mass-based and concentration-based effluent limitations for BOD and TSS, the Tillman WRP also has a percent removal requirement for these two constituents. In accordance with 40 CFR sections 133.102(a)(3) and 133.102(b)(3), the 30-day average percent removal shall not be less than 85 percent. Percent removal is defined as a percentage expression of the removal efficiency across a treatment plant for a given pollutant parameter, as determined from the 30-day average values of the raw wastewater influent pollutant concentrations to the Facility and the 30-day average values of the effluent pollutant concentrations for a given time period.

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 NPDES permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements more stringent than secondary treatment requirements necessary to meet applicable water quality standards. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements or other provisions, is discussed beginning in section 4.3.2. of this Fact Sheet.

40 CFR section 122.44(d)(1)(i) 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, water quality-based effluent limitations (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 section 122.44(d)(1)(vi). WQBELs must also be consistent with the assumptions and requirements of TMDL WLAs approved by USEPA. (33 USC § 1313(d); 40 CFR §§ 122.44(d)(vii)(B) and 130.7.)

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 establishes the beneficial uses for surface water bodies in the Los Angeles region. The beneficial uses of the Los Angeles River affected by the discharge have been described previously in this Fact Sheet. The Basin Plan also specifies narrative and numeric WQOs applicable to surface water as described below:

a. pH

The hydrogen ion activity of water (pH) is measured on a logarithmic scale, ranging from 0 to 14. While the pH of "pure" water at 25°C is 7.0, the pH of natural waters is usually slightly basic due to the solubility of carbon dioxide from the atmosphere. Minor changes from natural conditions can harm aquatic life. 40 CFR § 133.102(c) requires that effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the POTW demonstrates that (1) inorganic chemicals are not added to the waste stream as part of the treatment process; and (2) contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0. The effluent limitations for pH in this Order are more stringent than those in 40 CFR because they are based on the Basin Plan water quality objectives (page 3-40) which reads: "the pH of inland surface waters shall not be depressed below 6.5 or raised above 8.5 as a result of waste discharge." These effluent limitations have been carried over from the previous Order.

b. Settleable Solids

Excessive deposition of sediments can destroy spawning habitat, blanket benthic (bottom dwelling) organisms, and abrade the gills of larval fish. The limits for settleable solids are based on the Basin Plan (page 3-44) narrative WQO: "Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses." The numeric limits are empirically based on results obtained from the settleable solids 1-hour test, using an Imhoff cone.

It is impracticable to use a 7-day average limitation, because short-term spikes of settleable solid levels that would be permissible under a 7-day average scheme would not be adequately protective of all beneficial uses. The monthly average and

daily maximum limits were both included in the previous Order (Order No. R4-2017-0062) and the Tillman WRP has been able to meet both limits. These effluent limitations have been carried over from the previous Order.

c. Oil and Grease

Oil and grease are not readily soluble in water and form a film on the water surface. Oily films can coat birds and aquatic organisms, impacting respiration and thermal regulation, potentially causing death. Oil and grease can also cause nuisance conditions (odors and taste), are aesthetically unpleasant, and can restrict a wide variety of beneficial uses. The limits for oil and grease are based on the Basin Plan (page 3-34) narrative WQO, “Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses.”

The numeric limits are empirically based on concentrations at which an oily sheen becomes visible in water. It is impracticable to use a 7-day average limitation, because spikes that occur under a 7-day average scheme could cause a visible oil sheen. A 7-day average scheme would not be sufficiently protective of beneficial uses, and therefore a maximum daily limit and average monthly limits were used. Both limits were included in the previous Order (Order Number R4-2017-0062) and the Facility has been able to meet both limits. These effluent limitations have been carried over from the previous permit.

d. Residual Chlorine

Disinfection of wastewaters with chlorine produces a residual. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is a maximum daily limit of 0.1 mg/L, and it is based on the Basin Plan (page 3-30) narrative WQO, “Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses.” It is impracticable to use a 7-day average or a 30-day average limitation, because it is not as protective of beneficial uses as a daily maximum limitation. Chlorine is very toxic to aquatic life and short-term exposures of chlorine may cause fish kills. The Tillman WRP has been able to meet this limit. These effluent limitations have been carried over from the previous Order.

e. TDS, Chloride, Sulfate, and Boron

The most stringent water quality objectives along the main stem of the Los Angeles River for total dissolved solids, chloride, and sulfate are 950 mg/L, 190 mg/L, and 300 mg/L, respectively (Basin Plan Table 3-10 (page 3-36)). There are no boron water quality objectives along the main stem of the Los Angeles River. The TDS and sulfate final effluent limitations (950 mg/L and 300 mg/L, respectively) are equivalent to the most stringent water quality objectives in the Basin Plan. Since there are no water quality objectives in the Basin Plan for boron along the main stem of the Los Angeles River, this Order does not include final effluent limitations for boron. The chloride effluent limitation is 190 mg/L, consistent with Los Angeles Water Board

Resolution No. 97-02, *Amendment to the Water Quality Control Plan to incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters*. Resolution 97-02 was adopted by Los Angeles Water Board on January 27, 1997; approved by the State Water Board in Resolution 97-094; and, approved by OAL on January 8, 1998; and served to revise the chloride water quality objective in the Los Angeles River and other surface waters. It is practicable to express these limitations as monthly averages since they are not expected to cause acute effects on beneficial uses.

f. Methylene Blue Activated Substances (MBAS)

The existing Order effluent limitation of 0.5 mg/L for MBAS was developed based on the Basin Plan incorporation of Title 22, Drinking Water Standards. The effluent limitation for MBAS is included to protect the existing GWR beneficial use that is designated for the surface receiving waters downstream of the discharge. The Los Angeles River is unlined in several reaches downstream of the points of wastewater discharge and is designated with the beneficial use of groundwater recharge (GWR) in the Basin Plan. Section 1.3, Step 7 of the SIP lists the type of information that can be used to determine RP. Page 7 of the SIP states, “Information that may be used to aid in determining if a water quality-based effluent limitation is required includes: the facility type, the discharge type, solids loading analysis, lack of dilution, history of compliance problems, potential toxic impact of discharge, fish tissue residue data, water quality beneficial uses of the receiving water, CWA 303(d) listing of the pollutant, the presence of endangered or threatened species or critical habitat, and other information.” Given the nature of the Facility, which accepts domestic wastewater into the sewer system and treatment plant, and the characteristics of the pollutants discharged, the discharge has reasonable potential to exceed both the numeric MBAS WQO and the narrative WQO for the prohibition of floating material such as foams and scums. Therefore, the effluent limitation for MBAS in the previous Order is carried over into this Order. The MBAS limit also protects the recreational, aquatic life, and wildlife beneficial uses of the surface receiving water downstream of the discharge against foam and implements the Basin Plan WQO for floating material. Volume 44, Number 179 of the Federal Register (on page 53467) explains that foaming is a characteristic of water which has been contaminated by the presence of detergents and similar substances. The 0.5 mg/L limit for foaming agents is based on the fact that at higher concentrations, the water may exhibit undesirable taste and foaming properties.

Cobalt thiocyanate active substances (CTAS) are monitored in the same way as MBAS. The presence or absence of CTAS during sampling assists permit writers and the Discharger in diagnosing the source of floating materials, such as foam or scum, which are prohibited by the Basin Plan when they cause nuisance or adversely affect beneficial uses. There is no limitation or compliance requirement for CTAS because it has no established water quality objective.

g. Total Inorganic Nitrogen (NO_2 + NO_3 as N), Nitrite as Nitrogen, and Nitrate as Nitrogen

Total inorganic nitrogen is the sum of Nitrate-nitrogen and Nitrite-nitrogen. High nitrate levels in drinking water can cause health problems in humans. Infants are particularly sensitive and can develop methemoglobinemia (blue-baby syndrome). Nitrogen is also considered a nutrient. Excessive amounts of nutrients can lead to other water quality impairments such as algal growth. Excessive growth of algae and/or other aquatic plants can degrade water quality. Algal blooms sometimes occur naturally, but they are often the result of excess nutrients (i.e., nitrogen, phosphorus) from waste discharges or nonpoint sources. These algal blooms can lead to problems with tastes, odors, color, and increased turbidity and can depress the dissolved oxygen content of the water, leading to fish kills. Floating algal scum and algal mats are also an aesthetically unpleasant nuisance.

The Basin Plan provides water quality objectives for nitrogen to protect surface waters and groundwaters, but the effluent limitations in this Order for nitrate nitrogen, nitrite nitrogen, and nitrate + nitrite nitrogen are based on the WLAs in the Nitrogen Compounds TMDL, which is more protective than the Basin Plan water quality objectives. No mass-based limits are included since no mass-based WLAs were specified in the TMDL.

Watershed-wide monitoring will track concentration levels of phosphorus and all nitrogen species present in the effluent and receiving waters, pursuant to 40 CFR part 122.44(d)(1)(vi)(C)(3).

h. Total Ammonia

i. Water Quality Objectives

Ammonia is a pollutant routinely found in the wastewater effluent of POTWs, in landfill-leachate, as well as in runoff from agricultural fields where commercial fertilizers and animal manure are applied. Ammonia exists in two forms – un-ionized ammonia (NH_3) and the ammonium ion (NH_4^+). They are both toxic, but the neutral, un-ionized ammonia species (NH_3) is much more toxic, because it diffuses across the epithelial membranes of aquatic organisms much more readily than the charged ammonium ion. The form of ammonia is primarily a function of pH, but it is also affected by temperature and other factors. Additional impacts can also occur as the oxidation of ammonia lowers the dissolved oxygen content of the water, further stressing aquatic organisms. Oxidation of ammonia to nitrate may lead to groundwater impacts in areas of recharge. There is groundwater recharge in these reaches. Ammonia also combines with chlorine (often both are present in POTW treated effluent discharges) to form chloramines – persistent toxic compounds that extend the effects of ammonia and chlorine downstream.

The Basin Plan, incorporating the Nitrogen Compounds TMDL, includes one-hour, 30-day average, and four-day objectives for ammonia nitrogen in inland surface waters that are freshwaters. The freshwater one-hour average objective is dependent on pH and fish species (salmonids present or absent), but not temperature. It is assumed that salmonids may be present in waters designated in the Basin Plan as “COLD” or “MIGR” and that salmonids are absent in waters not designated in the Basin Plan as “COLD” or “MIGR,” in the absence of additional

information to the contrary. The freshwater 30-day average objective is dependent on pH, temperature, and the presence or absence of early life stages of fish (ELS). Early life stages of fish are presumptively present and must be protected at all times of the year unless the water body is listed under the ELS "Absent" condition in Table 3-5 of the Basin Plan or unless a site-specific study is conducted, which justifies applying the ELS absent condition or a seasonal ELS present condition. A watershed may have some reaches and tributaries with ELS present conditions and others with ELS absent conditions. Implementation actions to achieve applicable ammonia objectives must implement downstream objectives. The freshwater four-day average objective is 2.5 times the 30-day average objective.

As discussed earlier in Section 3.5.8.b. of the Factsheet, the Basin Plan was amended to incorporate the Los Angeles River Nitrogen Compounds TMDL (Basin Plan Chapter 7-8) which includes site-specific objective-derived WLAs. The TMDL states:

"Regardless of the SSO and SSO-derived WLAs, for discharges regulated under this TMDL with concentrations below site-specific water quality objectives, effluent limitations shall ensure effluent concentrations do not exceed the level of water quality that can be reliably maintained by the facility's applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding requirements in Clean Water Act section 402(o) and anti-degradation requirements are met. When developing effluent limitations in these circumstances, consideration shall include, but is not limited to, existing and projected facility flows for the permit term and the corresponding effect on the facility's capability to reduce ammonia concentrations and, where chlorine disinfection is used, the addition of ammonia during the treatment process to control the formation of trihalomethanes (THMs), if relied upon by the facility. It is not the intent for these performance-based limitations to have the effect of de-rating Water Reclamation Plants that are operating below their permitted design capacities. Los Angeles Water Board staff may consider recommendations from a Los Angeles Water Board-led workgroup that will be charged with evaluating alternative methodologies for calculating effluent limitations for discharges with concentrations below site-specific water quality objectives. Permit compliance with anti-degradation and anti-backsliding requirements shall be documented in permit fact sheets."

To address this issue, a Los Angeles Water Board staff-led workgroup had a series of meetings in 2013 and 2014 to evaluate alternative methodologies for calculating effluent limitations for discharges with concentrations below site-specific water quality objectives. This workgroup consisted of representatives of permittees, USEPA, Los Angeles Water Board, and non-government organizations. The permittees in the workgroup, including the City of Los Angeles, the County Sanitation Districts of Los Angeles, and the City of Burbank, prepared a memorandum dated November 12, 2014, identifying plant performance issues that would impact treatment performance. In a subsequent memorandum dated January 13, 2015, the permittees in the workgroup proposed effluent limitations similar to the translation of objectives given below in subsection ii. The calculations

and justification for the performance-based WQBELs are included in subsection iii. A discussion of antidegradation and anti-backsliding requirements for the two effluent limitation scenarios are included in Section 4.4.

In accordance with the requirements of the existing permit, Order R4-2017-0062, the Permittee submitted "Final Los Angeles River Ammonia Site-Specific Objective Confirmation Work Plan" dated October 2017. This plan specifies monitoring procedures for evaluating the effects of the ammonia site specific objective (SSO) in the receiving water to meet confirmatory receiving water monitoring requirements of the TMDL. The existing permit specifies that if ammonia concentrations are consistently at levels below effluent limitations that would be set without use of the SSO, monitoring to confirm the SSOs is not necessary. The ammonia WLA of 3.0 mg/L for DCTWRP, as stated in Nitrogen Compounds TMDL, will be used as the base monthly effluent limitation. Based on effluent data from the Permittee from May 2017 to June 2022, only two effluent concentrations exceeded 3.0 mg/L - an effluent sample taken on April 4, 2021, had a concentration of 4.31 mg/L and another taken on December 3, 2021 had a concentration of 4.26 mg/L. The monthly average concentrations in April and December 2021 were below the 3.0 mg/L limitation. Since the monitoring data shows consistent levels below effluent limitations, the confirmatory monitoring proposed in the workplan has not been initiated.

The procedures for calculating the ammonia nitrogen effluent limitations and the WQBELs, are discussed below:

ii. Translation of Ammonia Nitrogen Objectives into Effluent Limitations Applicable to Discharge Points 002, 003, and 008

This procedure to translate the WLAs into permit effluent limitations is specified in Chapter 3 of the Basin Plan:

Step 1 – Identify applicable water quality objective.

The Discharger's effluent data is summarized below. Aquatic Early Life Stage (ELS) are absent all year long:

pH = 7.1 at 50th percentile and temperature = 25.6°C

pH = 7.3 at 90th percentile

From Resolution Basin Plan Chapter 7-8, Nitrogen Compounds TMDL:

One-hour Average Objective

The Facility discharges into a receiving waterbody that has no "MIGR" beneficial use designation. According to the Basin Plan, it is assumed that salmonids may be present in waters designated in the Basin Plan as "COLD" or "MIGR." In a letter dated June 19, 2003, the USEPA approved the 2002 Ammonia Basin Plan Amendment and clearly stated that the acute criteria are dependent on pH and whether or not sensitive cold-water fish are present. The Los Angeles River has no MIGR or COLD beneficial use designations at the point of discharge for this facility. There are no cold-water fish present in the receiving water. Therefore, the

applicable ammonia water quality objective is the one that corresponds to "Waters not Designated COLD or MIGR." The one-hour average objective is dependent on pH and whether salmonid fish species are present, but is independent of temperature.

For waters not designated COLD or MIGR, the one-hour average concentration of total ammonia as nitrogen (in mg N/L) shall not exceed the values in Table 3-1 of the Basin Plan or as described in the equation below:

$$\text{One-hour Average Concentration} = \frac{0.411}{1+10^{7.204-pH}} + \frac{58.4}{1+10^{pH-7.204}}$$

Using the 90th percentile pH = 7.3 in the formula above, the resulting One-hour Average Objective is equal to **26.2 mg/L**.

30-day Average Objective

The 30-day Average SSO ELS Absent is calculated using the formula stated in the TMDL for Los Angeles River Reach 4 (Sepulveda Drive to Riverside Drive) ELS Absent year-round:

$$CCC = \left(\frac{0.0676}{1+10^{7.688-pH}} + \frac{2.912}{1+10^{pH-7.688}} \right) * 0.854 * 2.85 * 10^{0.028*(25-Max(T,7))}$$

Where T = temperature expressed in degrees Celsius; CCC = criteria continuous concentration (chronic criteria)

Substituting the values of the 50th percentile pH and temperature in the above formula, the 30-day Average SSO ELS Absent = **5.5 mg/L**

4-day Average Objective

Resolution No. R12-010 specifies that the highest four-day average within a 30-day period may not exceed 2.5 times the 30-Day Average Objective.

4-day Average Objective = 2.5 x 5.5 = **13.7 mg/L**

Step 2 - For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not been allowed by the Los Angeles Water Board, this equation applies:

ECA = WQO

Step 3 – Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with a factor (multiplier) that adjusts for variability. By using Table 3-6 or multiplier calculations in the Basin Plan and calculated CV (i.e., standard deviation/mean for ammonia), the following are the ECA multipliers:

ECA multiplier when CV = 0.3637 (ELS Absent)
ECA multiplier$_{1\text{-hour }99}$ = 0.4687
ECA multiplier$_{4\text{-day }99}$ = 0.6681
ECA multiplier$_{30\text{-day }99}$ = 0.8589

Using the LTA equations:

$LTA_{1\text{-hour99 ELS Absent}} = ECA_{1\text{-hour}} \times \text{ELS Absent ECA multiplier}_{1\text{-hour99}}$
$= 26.2 \times 0.4687 = 12.287$ mg/L
$LTA_{4\text{-day99 ELS Absent}} = ECA_{4\text{-day}} \times \text{ELS Absent ECA multiplier}_{4\text{-day99}}$
$= 13.7 \times 0.6681 = 9.132$ mg/L
$LTA_{30\text{-day99 ELS Absent}} = ECA_{30\text{-day}} \times \text{ELA Absent ECA multiplier}_{30\text{-day99}}$
$= 5.5 \times 0.8589 = 4.696$ mg/L

Step 4 – Select the lowest (most limiting) of the LTAs derived in Step 3 (LTA_{min})

LTA_{min} = **4.696** mg/L

Step 5 – Calculate water quality based effluent limitations MDEL and AMEL by multiplying LTA_{min} as selected in Step 4, with a factor (multiplier) found in Table 3-7 or calculated using equations in the Basin Plan.

The minimum LTA is $LTA_{30\text{-day99 ELS Absent}}$. Monthly sampling frequency (n) is at least once per month, therefore n = 30. CV = 0.3637.

$\text{MDEL multiplier}_{99} = 2.1335$
$\text{AMEL multiplier}_{95} = 1.1128$

$MDEL = LTA_{min} \times \text{MDEL multiplier}_{99} = 4.696 \times 2.1335 = 10.019$
≈ 10.0 mg/L
$AMEL = LTA_{min} \times \text{AMEL multiplier}_{95} = 4.696 \times 1.1128 = 5.226$
≈ 5.2 mg/L

The explicit 10% margin of safety is allocated for ammonia in the TMDL to address uncertainty in the sources and linkage analysis. As shown above, the calculated AMEL and MDEL shall be multiplied by 90% to arrive at an MDEL of **9.0 mg/L** and an AMEL of **4.7 mg/L** for ELS Absent.

iii. Calculation of Ammonia Nitrogen WQBELs with Margin of Safety Factor (MOSF) Reflective of Performance

As indicated above, the Nitrogen Compounds TMDL states that if the discharges regulated under the TMDL have concentrations below site-specific water quality objectives, effluent limitations shall ensure effluent concentrations do not exceed the level of water quality that can be reliably maintained by the facility's applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding requirements in Clean Water Act section 402(o) and antidegradation requirements are met. Since the facility is operating with ammonia discharge concentrations below the ammonia as nitrogen thirty-day site specific water quality objective, this Order includes performance-based final WQBELs for the monthly limitation. The existing permit established limitations based on evaluating several options and incorporating one of the options that was discussed during the Los Angeles Water Board staff-led stakeholder workgroup meetings. This calculation entailed conducting a statistical analysis of the recent data considering the narrow range of values that comprised the ammonia dataset, and calculated an MOSF that would be added to the maximum effluent concentration (MEC). As the existing permit notes, the

approach was not intended to be precedent-setting. Instead, it was intended to address two key components of the Los Angeles River Nitrogen Compounds TMDL:

1) Regardless of the SSO and SSO-derived WLAs, for discharges regulated under this TMDL, with concentrations below site-specific water quality objectives, effluent limitations shall ensure effluent concentrations do not exceed the level of water quality that can be reliably maintained by the facility's applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding requirements in Clean Water Act section 402(o) and anti-degradation requirements are met.

2) It is not the intent for these performance-based limitations to have the effect of de-rating Water Reclamation Plants that are operating below their permitted design capacities.

To comply with the TMDL requirement to consider existing and projected facility flows during the Order term and the corresponding effect on the facility's capability to reduce ammonia concentrations and the addition of ammonia during the chlorine disinfection treatment process to control the formation of trihalomethanes (THMs), staff evaluated the facility's performance data associated with the removal of ammonia nitrogen. Based on discharger submitted data from May 2017 to June 2022, nearly all effluent concentrations were below the 3.0 mg/L monthly limit except for two samples on April 4, 2021 and December 3, 2021 that were 4.31 mg/L and 4.26 mg/L, respectively. The monthly limitation was not exceeded after multiple samples were taken and averaged to be 2.9 mg/L in April 2021 and 2.5 mg/L in December 2021. The Facility flow data from May 2017 to June 2022 show flows to be comparable to those treated during the previous permit term, with flows ranging from 30 to 64 MGD. Influent flows are not expected to increase during the next permit term.

As previously mentioned, the approach for determining the performance-based limit was not intended to set precedent but was developed to meet the two factors of the TMDL mentioned above. If the previous approach is utilized for the more recent effluent data and based on the MEC of 4.31 mg/L, it will yield an effluent limitation that is less stringent than the SSO-based limitation and considerably higher than the AMEL WQBEL from the existing permit. The most stringent effluent limitations listed in Table F-7 are included in this Order as final effluent limitations to prevent backsliding and to maintain the effluent quality currently achieved at the Tillman WRP. The average monthly and maximum daily effluent limitations in this Order for ammonia nitrogen are based on the average monthly effluent limitations in Order No. R4-2017-0062 since the discharge has been able to meet these final effluent limitations and to prevent backsliding.

Figure F-1: Ammonia Performance and Limitations

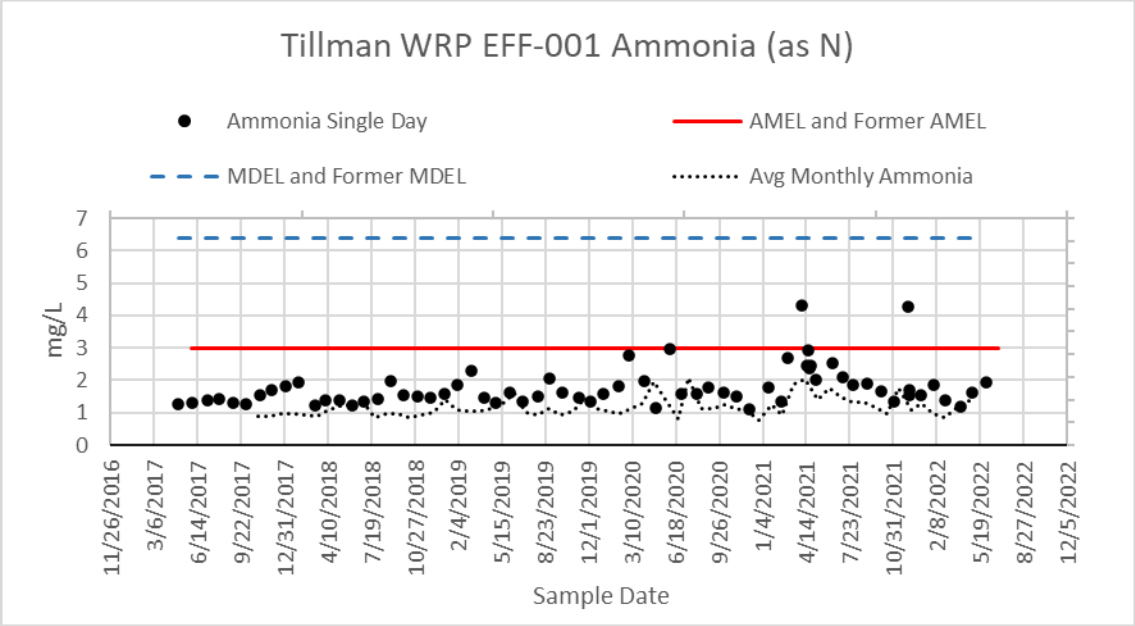


Table F-7. Summary of Ammonia Effluent Limitations for 002, 003, and 008

Parameter (ELS Absent)	Units	SSO and WLA-based (AMEL)	SSO and WLA-based (MDEL)	WQBEL with MOSF in Order No. R4-2017-0062 (AMEL)	WQBEL with MOSF in Order No. R4-2017-0062 (MDEL)	New WQBEL with MOSF (AMEL)	Final AMEL for this Order	Final MDEL for this Order
Ammonia Nitrogen	mg/L	4.7	9.0	3.0	6.4	5.7	3.0	6.4
Ammonia Nitrogen	lbs/ day	3,100	6,000	---	---	3,800	2,000	4,300

iv. Ammonia Receiving Water Confirmatory Monitoring

The Los Angeles River Nitrogen Compounds TMDL requires the Permittee to evaluate the effects of the ammonia SSO on the receiving water. Order R4-2017-0062 required the Permittee to submit a work plan, specifying the particular test method that would be used. The Permittee submitted Final Los Angeles River Ammonia Site-Specific Objective Confirmation Work Plan on October 23, 2017. The work plan specifies as required by Resolution Number R12-010 and Order R4-2017-0062 a monitoring plan that would be implemented should conditions trigger the need for confirmatory monitoring. If ammonia concentrations are consistently at levels below effluent limitations that would be set without use of the SSO (i.e., the performance-based AMEL of 3.0 mg/L), monitoring to confirm the SSOs is not necessary. If confirmatory monitoring

indicates toxicity due to ammonia or a change in the waterbody that could impact the calculation or application of the SSOs, including either its chemical characteristics or the aquatic species present, including early life stages of fish, the Permittee shall develop and submit a plan for re-evaluating the SSOs to the Executive Officer. Since effluent limits have met the monthly ammonia limit, confirmatory monitoring has not yet been triggered.

i. Bacteria Indicators (Total Coliform and *E. coli*)

Total coliform bacteria are used to indicate the likelihood of pathogenic bacteria in surface waters. Given the nature of the Facility, a wastewater treatment plant, pathogens are likely to be present in the effluent if the disinfection process is not operating adequately. In addition, these requirements are established to protect the GWR beneficial use of the surface water. As such, the permit contains the following effluent limitations:

i. The 7-day median number of total coliform bacteria at some point in the treatment process must not exceed a Most Probable Number (MPN) or Colony Forming Units (CFU) of 2.2 per 100 milliliters,

ii. The number of total coliform bacteria must not exceed an MPN or CFU of 23 per 100 milliliters in more than one sample within any 30-day period; and

iii. No sample shall exceed an MPN for CFU of 240 total coliform bacteria per 100 milliliters.

These disinfection-based effluent limitations for total coliform are for human health protection and are consistent with requirements established by the State Water Resource Control Board, Division of Drinking Water in Title 22 of the California Code of Regulations for disinfected tertiary recycled water. These limits for total coliform must be met at the point of the treatment train immediately following disinfection, as a measure of the effectiveness of the disinfection process. These limitations meet requirements of the ISWEBE Bacteria Provisions which allow existing, more stringent limitations to be used in lieu of statewide limitations.

In addition to total coliform, this Order also incorporates *E. coli* WLAs from the Los Angeles River Bacteria TMDL. The Los Angeles River Bacteria TMDL contains *E. coli* Waste Load Allocations (WLAs) for the Tillman WRP expressed as allowable exceedance days. The WLAs for Tillman WRP are set equal to a 7-day median of 2.2 MPN/100 mL of *E. coli* or a daily max of 235 MPN/100mL to ensure zero (0) days of allowable exceedances. No exceedances of the geometric mean TMDL numeric target of 126/100 mL *E. coli* are permitted.

j. Temperature

The Basin Plan contains the following water quality objective for temperature:

The natural receiving water temperature of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses. Alterations that are allowed must meet the requirements below.

For waters designated WARM, water temperature shall not be altered by more than 5°F above the natural temperature. At no time shall these WARM-designated waters be raised above 80°F as a result of waste discharges.

Temperature can adversely affect beneficial uses. The USEPA document, *Quality Criteria for Water 1986* [EPA 440/5-86-001, May 1, 1986], also referred to as the *Gold Book*, discusses temperature and its effects on beneficial uses, such as recreation and aquatic life.

i. The Federal Water Pollution Control Administration in 1967 called temperature "a catalyst, a depressant, an activator, a restrictor, a stimulator, a controller, a killer, and one of the most important water quality characteristics to life in water." The suitability of water for total body immersion is greatly affected by temperature. Depending on the amount of activity by the swimmer, comfortable temperatures range from 20°C to 30°C (68 °F to 86 °F).

ii. Temperature also affects the self-purification phenomenon in water bodies and therefore the aesthetic and sanitary qualities that exist. Increased temperatures accelerate the biodegradation of organic material both in the overlying water and in bottom deposits which makes increased demands on the dissolved oxygen resources of a given system. The typical situation is exacerbated by the fact that oxygen becomes less soluble as water temperature increases. Thus, greater demands are exerted on an increasingly scarce resource which may lead to total oxygen depletion and obnoxious septic conditions. Increased temperature may increase the odor of water because of the increased volatility of odor-causing compounds. Odor problems associated with plankton may also be aggravated.

iii. Temperature changes in water bodies can alter the existing aquatic community. Coutant (1972) has reviewed the effects of temperature on aquatic life reproduction and development. Reproductive elements are noted as perhaps the most thermally restricted of all life phases assuming other factors are at or near optimum levels. Natural short-term temperature fluctuations appear to cause reduced reproduction of fish and invertebrates.

The prior Order (Order Number R4-2017-0062) contained 86°F as a temperature effluent limitation. The Order stated that "[t]he temperature of wastes discharged shall not exceed 86°F except as a result of external ambient temperature." This Order revises the temperature effluent limitation to 80ºF to be consistent with the temperature water quality objectives in the Basin Plan, which is a new interpretation compared to the previous order.

The Facility's temperature data during the previous permit term shows that effluent and receiving water temperatures exceed the newly interpreted 80°F temperature limitation, especially during summer months. From May 2017 to June 2022, effluent temperatures ranged from 69°F to 87°F and all receiving water temperatures ranged from 37°F to 87°F. Temperature data also exceeded the 86°F limitation in Order R4-2017-0062 five times in August and September 2017. Since the facility can't consistently comply with the 80°F newly interpreted temperature effluent limitation, the Discharger submitted a request for a compliance schedule to comply with the

newly interpreted effluent and receiving water limitations for temperature. This Order provides a compliance schedule with tasks in Table 6.

k. Turbidity

Turbidity is an expression of the optical property that causes light to be scattered in water due to particulate matter such as clay, silt, organic matter, and microscopic organisms. Turbidity can result in a variety of water quality impairments. The effluent limitation for turbidity is based on the Basin Plan (page 3-46) and section 60301.320 of Title 22, chapter 3, "Filtered Wastewater" of the CCR., which limit turbidity as follows: "For the protection of the water contact recreation beneficial use, the discharge to water courses shall have received adequate treatment, so that the turbidity of the wastewater does not exceed: (a) a daily average of 2 Nephelometric turbidity units (NTU); (b) 5 NTU more than 5 percent of the time (72 minutes) during any 24 hour period; and (c) 10 NTU at any time"

l. Radioactivity

Radioactive substances are generally present in natural waters in extremely low concentrations. Mining or industrial activities increase the amount of radioactive substances in waters to levels that are harmful to aquatic life, wildlife, or humans. Section 301(f) of the CWA contains the following statement with respect to effluent limitations for radioactive substances, "Notwithstanding any other provisions of this Act, it shall be unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive waste, or any medical waste, into the navigable waters." Chapter 5.5 of the Water Code contains a similar prohibition under section 13375, which reads as follows: "The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is hereby prohibited." In addition to the narrative prohibition on radioactive substances, numeric effluent limitations for radioactivity are included in the Order based on Title 22 CCR, Chapter 15, Article 5, sections 64442 and 64443, The limit is based on the Basin Plan's prohibition of concentrations of chemical constituents in amounts that adversely affect any designated beneficial use. Therefore, this Order retains the narrative prohibition in addition to numeric limitations for radioactive substances to protect the GWR beneficial use of surface water.

4.3.3. CTR and SIP

The CTR and the SIP specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct reasonable potential analysis (RPA) to determine the need for effluent limitations for priority pollutants. The Technical Support Document (TSD) also specifies procedures to conduct reasonable potential analyses for non-priority pollutants.

4.3.4. Determining the Need for WQBELs

The Los Angeles Water Board developed WQBELs for ammonia-nitrogen, nitrite-nitrogen, nitrate-nitrogen, nitrite plus nitrate nitrogen based on the Nitrogen Compounds TMDL as described above.

Other pollutants (copper, lead, cadmium, and zinc) governed by the LA River Metals TMDL have effluent limitations based upon WLAs assigned to the facility.

In accordance with Section 1.3 of the SIP, and noting the exceptions above, the Los Angeles Water Board conducted an RPA for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the Order. The Los Angeles Water Board analyzed effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that demonstrate reasonable potential, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Los Angeles Water Board staff identified the maximum effluent concentration (MEC) and maximum background concentration in the receiving water for each constituent, based on data provided by the Permittee. The monitoring data cover the period from May 2017 to June 2022.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete an RPA:

Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed.

Trigger 2 – If background water quality (B) > C and the pollutant is detected in the effluent, a limitation is needed.

Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, then best professional judgment is used to determine that a limit is needed.

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Discharger will be required to gather the appropriate data for the Los Angeles Water Board to conduct the RPA. Upon review of the data, and if the Los Angeles Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available. The CTR and the SIP specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct reasonable potential analysis (RPA) to determine the need for effluent limitations for priority pollutants. The USEPA Technical Support Document (TSD) also specifies procedures to conduct reasonable potential analyses which are used for pollutants that are not priority pollutants. The TSD RPA may also be used for pollutants that have non-CTR based water quality objectives. Based on receiving water conditions and effluent concentrations, the RPA indicated that limits are

needed for Discharge Points 002, 003, and 008 for cadmium, copper, lead, selenium, zinc, carbon tetrachloride, pentachlorophenol, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene.

The following table summarizes results from the RPA applicable to discharge at 002, 003, and 008. If no receiving water is identified, the value applies to all the receiving waters except RSW630:

Table F-8. Summary of Reasonable Potential Analysis for CTR-Based Priority Pollutants at 002, 003, and 008

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L	RPA Result – Need Limitation?	Reason
10	Selenium	5.0	1.03	13.8 (RSW612)	Yes	B > C
14	Cyanide	5.2	5	5 (RSW622)	Yes	303(d) list
21	Carbon Tetrachloride	0.5	0.67	< 0.1	Yes	MEC > C
53	Pentachlorophenol	1	2.6	< 0.37	Yes	MEC > C
61	Benzo(a)Pyrene	0.049	0.15 (DNQ)	E 0.052 (RSW614)	Yes	MEC > C B > C
62	Benzo(b)Fluoranthene	0.049	0.12 (DNQ)	0.048 (DNQ) (RSW614)	Yes	MEC > C
64	Benzo(k) Fluoranthene	0.049	0.14 (DNQ)	< 0.027	Yes	MEC > C
74	Dibenzo(a,h) anthracene	0.049	0.328	0.29 (RSW 612)	Yes	MEC > C B > C
92	Indeno(1,2,3-cd) Pyrene	0.049	0.2	0.28 (RSW612)	Yes	MEC > C B > C

4.3.5. WQBEL Calculations

a. Calculation Options. Once RPA has been conducted using either the TSD or the SIP methodologies, WQBELs are calculated. Alternative procedures for calculating WQBELs include:

i. Use WLA from applicable TMDL

ii. Use a steady-state model to derive MDELs and AMELs.

iii. Where sufficient data exist, use a dynamic model which has been approved by the State Water Board.

b. Los Angeles River Metals TMDL Calculation Procedure

Discharge Points 002, 003, and 008 discharge into the Los Angeles River, Reaches 4 and 5 as described by the LA River Metals TMDL (Chapter 7-13 of the Basin Plan). The Tillman WRP has wet-weather WLAs for cadmium, copper, lead, and zinc (4.7 µg/L, 103 µg/L, 83 µg/L, and 212 µg/L, respectively). The Tillman WRP has dry-weather WLAs only for copper and lead (103 µg/L and 83 µg/L, respectively). Wet-weather allocations are based on dry-weather in-stream numeric targets because the POTWs exert the greatest influence over in-stream water quality during dry weather, and collectively they contribute minimally to the total wet-weather loading. During dry weather, the concentration-based and mass-based waste load allocations apply. In wet weather, the mass-based WLAs do not apply when the influent flows exceed the design capacity of the treatment plants.

According to the LA River Metals TMDL implementation section, permit writers may translate applicable WLAs into effluent limitations by applying the effluent limitation procedures in Section 1.4 of the SIP or other applicable engineering practices authorized under federal regulations.

i. Copper

Copper has a dry-weather and wet-weather waste load allocation in the LA River Metals TMDL, triggering Tier 3 reasonable potential and requiring limitations in this Order. In addition, Tier 1 and Tier 2 reasonable potential were also triggered since the maximum effluent and background concentrations exceeded the criteria in the CTR (12 µg/L). The maximum effluent and background concentrations observed from May 2017 to June 2022 were 77.1 µg/L and 29.9 µg/L, respectively. The LA River Metals TMDL establishes waste load allocations for copper during dry and wet weather. Therefore, the final effluent limitations for copper apply all-year round.

The LA River Metals TMDL includes WLAs for the Donald C. Tillman, Los Angeles-Glendale and Burbank WRPs based on a water effect ratio (WER). The WER Donald C. Tillman WRP for copper is 3.97. The TMDL also states that:

“Regardless of the WER, for discharges regulated under this TMDL with concentrations below WER-adjusted allocations, effluent limitations shall ensure that effluent concentrations do not exceed the levels of water quality that can be reliably maintained by the facility’s applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding requirements in Clean Water Act section 402(o) and antidegradation requirements are met. Permit compliance with antidegradation and anti-backsliding requirements shall be documented in permit fact sheets.”

To comply with the TMDL requirement above, staff evaluated the facility’s performance data associated with the removal of copper. Historical data shows the treatment plant consistently producing effluent with copper levels below the WER-adjusted allocation. The facility has been in compliance with the current copper AMEL and MDEL of 27 µg/L and 31 µg/L, respectively except for one occasion in July 2019 when the AMEL and MDEL were exceeded with one sample measurement of 77.1 µg/L. Since the permit’s effective date in May 2017, the

treatment plant's performance regarding the average effluent concentration was approximately 12.3 µg/L.

A similar rationale and methodology used in calculating the ammonia performance based WQBELs as previously discussed can also be considered for copper. An AMEL based on performance of the Tillman WRP would be equal to MEC + MOSF (two times the standard deviation of effluent data) and thus result in the following: 77.1 µg/L + (2 x 9.0) = 95.1 µg/L. In comparison, using SIP methodology to apply the TMDL-established WLAs for copper incorporating the previously mentioned WER (103 µg/L) and a coefficient of variation of the effluent data (0.73) results in an AMEL of 81 µg/L and MDEL of 178 µg/L. Considering that both approaches lead to limitations significantly higher than those in the existing permit and facility performance has consistently met the current limitations, and in the absence of an anti-degradation and anti-backsliding analysis of best practicable treatment or control that would allow for a less stringent effluent limitation, the AMEL and MDEL from Order No. R4-2017-0062 are retained in this Order. The existing AMEL was calculated based on previous performance that showed a similar average copper effluent concentration (11µg/L) to recent performance. The existing MDEL is retained from Order No. R4-2017-0062.

Figure F-2 below shows the facility's copper performance data. The figure indicates that when the performance based WQBELs for AMEL and MDEL are set at 27 µg/L and 31 µg/L, respectively, the facility can consistently comply with the copper final effluent limitations without derating the plant's capacity. Maintaining compliance with copper limitations shall ensure that the quality of the receiving water with respect to copper shall not be degraded. Because the Los Angeles River flow during dry weather is effluent dominated, the quality of the discharged effluent will directly influence the level of the receiving water quality. The summary of copper final effluent limitations is presented in Table F-9.

Figure F-2: Copper Performance and Limitations

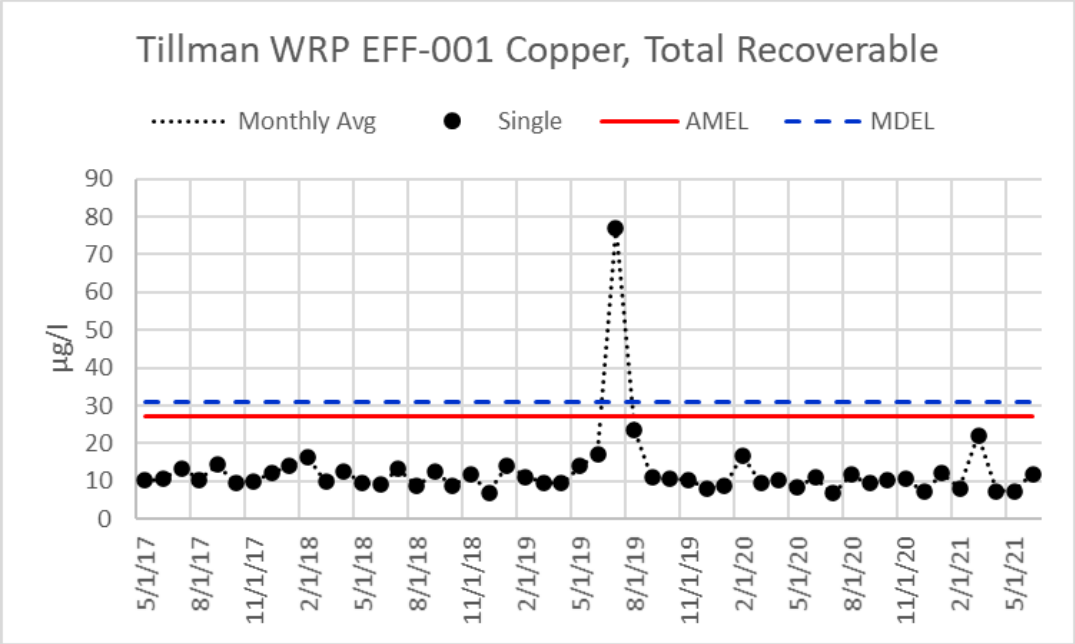


Table F-9: Copper Effluent Limitations Comparison

Parameters	Units	Order No. R4-2017-0062 AMEL	Order No. R4-2017-0062 MDEL	PBEL with MOSF AMEL	WLA-based AMEL	WLA-based MDEL	Final AMEL	Final MDEL
Copper (Year-Round)	µg/l	27	31	95.1	81	178	27	31
Copper (Year-Round)	lbs/day	18	21	63	54	119	18	21

ii. Lead

Tier 1 of the SIP RPA procedures was not triggered for lead. However, Tier 2 and 3 were triggered because of a background receiving water concentration of 14.3 µg/L that exceeded the lowest CTR criterion of 4.9 µg/L and the LA River Metals TMDL established WLAs for this pollutant (83 µg/L). Calculating limits based on the WLA, which includes a default WER equal to 1.0, would result in an AMEL = 67 µg/L and an MDEL = 139 µg/L. As with the other metals in the TMDL, since the performance data shows effluent concentrations to be less than the WLA, the AMEL is based on performance. Using the same performance-based

methodology described earlier for copper, the AMEL is calculated to be 2.12 µg/L based on an MEC of 1.6 µg/L and MOSF of 0.52 (2 x standard deviation of 0.26). The MDEL from Order R4-2017-0062 (16 µg/L) has been carried over in this Order. The final effluent limitations for lead apply to both wet and dry weather conditions and apply all-year round. Effluent data shows the plant can consistently meet these new limitations.

iii. Cadmium

Tier 1 and Tier 2 of the SIP RPA procedures were not triggered for cadmium. However, Tier 3 was triggered because the LA River Metals TMDL established WLAs for this pollutant. As with the other metals in the TMDL, since the performance data shows effluent concentrations to be less than the WLA, the AMEL is based on performance. Using the same performance-based methodology described earlier for copper, the AMEL is calculated to be 2.01 µg/L based on an MEC of 1.35 µg/L and MOSF of 0.70 (2 x standard deviation of 0.35). The MDEL from Order R4-2017-0062 (6.9 µg/L) has been carried over in this Order. The final effluent limitations for cadmium only apply during wet-weather conditions.

iv. Zinc

Tier 3 RP was triggered because zinc WLAs are established in the LA River Metals TMDL. The MEC is less than the WLA of 212 µg/L prompting the need for performance-based limits. However, using the performance-based methodology results in an AMEL of 196 µg/L, which is higher than the WLA-based limit of 152 µg/L. Therefore, the WLA-based limitations are used for the AMEL. The WLA-based limitations are also used for the MDEL since they are lower than the current MDEL (236 µg/L). The WLA-based MDEL is 212 µg/L.

The metals effluent limitations prescribed in this Order are consistent with the SIP Procedures and TMDL WLAs.

c. SIP Calculation Procedure. Section 1.4 of the SIP requires the step-by-step procedure to “adjust” or convert CTR numeric criteria into AMELs and MDELs, for toxics.

Step 3 of Section 1.4 of the SIP (page 8) lists the statistical equations that adjust CTR criteria for effluent variability.

Step 5 of Section 1.4 of the SIP (page 10) lists the statistical equations that adjust CTR criteria for averaging periods and exceedance frequencies of the criteria/objectives. This section also reads, “For this method only, maximum daily effluent limitations shall be used for publicly-owned treatment works (POTWs) in place of average weekly limitations.”.

Sample calculation for benzo(a)pyrene (RP for Discharge Points 002, 003, and 008):

Step 1: Identify applicable water quality criteria.

From California Toxics Rule (CTR), we can obtain the freshwater aquatic life and human health criterion.

Freshwater Aquatic Life Criteria:

Criterion Maximum Concentration (CMC) = NA µg/L (CTR page 31714, column B1)
Criterion Continuous Concentration (CCC) = NA µg/L (CTR page 31714, column B2)
Human Health Criteria for Organisms only = 0.049 µg/L (CTR page 31714, column D2).

Step 2: Calculate effluent concentration allowance (ECA)

ECA = Aquatic life and human health criteria in CTR, since no dilution is allowed.

ECA Acute = NA

ECA Chronic = NA

ECA Human Health = 0.049 µg/L

Step 3: Determine long-term average (LTA) discharge condition for each ECA based on aquatic life

Calculate CV:

CV = Standard Deviation/Mean = 0.6 (at least 80 percent of data is reported as non-detected)

Find the ECA Multipliers from SIP Table 1 (page 9), or by calculating them using equations on SIP page 8. If samples are collected 4 times a month or less, then n=4. CV was determined to be 0.6 since at least 80 percent of the data reported as not detected. When CV = 0.6:

ECA $\text{Multiplier}_{\text{acute99}}$ = 0.321 and

ECA $\text{Multiplier}_{\text{chronic99}}$ = 0.527

$\text{LTA}_{\text{acute}}$ = ECA acute x ECA Multiplier acute = NA x 0.321 µg/L = NA

$\text{LTA}_{\text{chronic}}$ = ECA chronic x ECA Multiplier chronic = NA x 0.527 =NA

Step 4: Select the lowest LTA derived in Step 3

In this case, the lowest LTA is not applicable.

Step 5: Calculate the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for AQUATIC LIFE

AMEL multiplier_{95} = 1.552

MDEL multiplier_{99} = 3.114

$\text{AMEL}_{\text{aquatic life}}$ = LTA * AMEL multiplier_{95} = NA x 1.552 = NA

$\text{MDEL}_{\text{aquatic life}}$ = LTA * MDEL multiplier_{99} = NA x 3.114 = NA

Step 6: Find the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for HUMAN HEALTH

Find factors. Given CV = 0.6 and n = 4.

MDEL/AMEL multiplier = 3.114/1.552 = 2.006

$AMEL_{human\ health}$ = ECA human health = 0.049 µg/L

$MDEL_{human\ health}$ = ECA human health x MDEL/AMEL multiplier

= 0.049 µg/L x 2.006 = 0.098 µg/L

Step 7: Compare the AMELs for Aquatic life and Human health and select the lowest. Compare the MDELs for Aquatic life and Human health and select the lowest

Lowest AMEL = 0.049 µg/L (based on human health protection)

Lowest MDEL = 0.098 µg/L (based on human health protection)

The lowest AMEL and MDEL are applied as effluent limitations.

e. Impracticability Analysis

Federal NPDES regulations contained in 40 CFR § 122.45 (continuous discharges) states that, for POTWs, all permit limitations, standards, and prohibitions, including those to achieve water quality standards, shall unless impracticable be stated as average weekly and average monthly discharge limitations.

As stated by USEPA in its long-standing guidance for developing WQBELs, average limitations alone are not practical for limiting acute, chronic, and human health toxic effects. (See, Section 5.2.3 of USEPA's Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001, March 1991)).

For example, a POTW sampling for a toxicant to evaluate compliance with a 7-day average limitation could fully comply with this average limit, but still be discharging toxic effluent on one, two, three, or up to four of these seven days and not be meeting 1-hour average acute criteria or 4-day average chronic criteria. Similarly, a 7-day average alone would not protect one, two, three, or four days of discharging pollutants in excess of the acute and chronic criteria.

For these reasons, USEPA recommends daily maximum and 30-day average limits for regulating toxics in all NPDES discharges. For the purposes of protecting the acute effects of discharges containing toxicants, daily maximum limitations have been established in this NPDES permit for certain priority pollutants. Thirty-day (or monthly) average effluent limitations have been established for priority pollutants that cause chronic or long-term impacts because they are carcinogenic, bioaccumulative, and/or endocrine disruptors.

f. Mass-based limits. 40 CFR § 122.45(f)(1) requires that, except under certain conditions, or for certain pollutants, all permit limits, standards, or prohibitions be expressed in terms of mass units. 40 CFR § 122.45(f)(2) allows the permit writer, at his/her discretion, to express limits in additional units (e.g., concentration units). The regulations mandate that, where limits are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based

effluent limits, on the other hand, discourage reduction in treatment efficiency during low-flow periods and require proper operation of the treatment units at all times. In the absence of concentration-based effluent limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this permit includes mass and concentration limits for some constituents. The mass-based limits are based on the design capacity.

Table F-10. Summary of WQBELs for Discharge Points 002, 003, and 008

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Notes
Chloride	mg/L	190	---	---	---
Chloride	lbs/day	126,770	---	---	b
Total Dissolved Solids	mg/L	950	---	---	---
Total Dissolved Solids	lbs/day	633,840	---	---	b
Sulfate	mg/L	300	---	---	---
Sulfate	lbs/day	200,160	---	---	b
Cadmium	µg/L	2.0	---	6.9	a
Cadmium	lbs/day	1.3	---	4.6	b and f
Zinc (wet)	µg/L	152	---	212	a
Zinc (wet)	lbs/day	101	---	141	b and f
Copper	µg/L	27	---	31	g
Copper	lbs/day	18	---	21	b and f
Lead	µg/L	2.1	---	16	g
Lead	lbs/day	1.4	---	10.7	b and f
Selenium	µg/L	3.9	---	7.0	---
Selenium	lbs/day	2.6	---	4.7	b
Cyanide	µg/L	4.3	---	8.5	---
Cyanide	lbs/day	2.9	---	5.7	b
Ammonia Nitrogen (ELS Absent)	mg/L	3.0	---	6.4	h
Ammonia Nitrogen (ELS Absent)	lbs/day	2,000	---	4,300	b
Nitrate (as N)	mg/L	7.2	---	---	c
Nitrate (as N)	lbs/day	4,800	---	---	b
Nitrite (as N)	mg/L	0.9	---	---	c
Nitrite (as N)	lbs/day	600	---	---	b
Nitrate + Nitrite (as N)	mg/L	7.2	---	---	c
Nitrate + Nitrite (as N)	lbs/day	4,800	---	---	b
Carbon Tetrachloride	µg/L	0.5	---	---	---
Carbon Tetrachloride	lbs/day	0.3	---	---	b
Pentachlorophenol	µg/L	1.0	---	---	---
Pentachlorophenol	lbs/day	0.7	---	---	b
Benzo(a)pyrene	µg/L	0.049	---	0.098	---
Benzo(a)pyrene	lbs/day	0.033	---	0.065	b

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Notes
Benzo(b)fluoranthene	µg/L	0.049	---	0.098	---
Benzo(b)fluoranthene	lbs/day	0.033	---	0.065	b
Benzo(k)fluoranthene	µg/L	0.049	---	0.098	---
Benzo(k)fluoranthene	lbs/day	0.033	---	0.065	b
Dibenzo(a,h)anthracene	µg/L	0.024	---	0.049	---
Dibenzo(a,h)anthracene	lbs/day	0.02	---	0.03	b
Indeno(1,2,3-cd)pyrene	µg/L	0.024	---	0.049	---
Indeno(1,2,3-cd)pyrene	lbs/day	0.02	---	0.03	b
Chronic Toxicity *Ceriodaphnia dubia* Survival and Reproduction endpoints	Pass or Fail (TST), % Effect	Pass	---	Pass or % Effect <50 (survival endpoint)	d and e

Footnotes for Table F-10

a. The limits are based on the LA River Metals TMDL and only apply during wet weather. Wet-weather effluent limitations apply when the maximum daily flow measured at the Los Angeles River Wardlow station is equal to or greater than 500 cubic feet per second.

b. The mass-based effluent limitations are based on the plant design flow rate of 80 mgd and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

c. This is a final effluent limitation consistent with the waste load allocation (WLA), set forth in the *Amendment to the Water Quality Control Plan for the Los Angeles Region to amend the Total Maximum Daily Load (TMDL) for Nitrogen Compounds and Related Effects in the Los Angeles River by incorporating site-specific ammonia objectives,* Resolution No. R12-010 that became effective on August 7, 2014.

d. A numeric WQBEL for chronic toxicity is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations are established using current USEPA guidance in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June/2010)* and *EPA Regions 8, 9, and 10 Toxicity Training Tool (January 2010),* *https://www.epa.gov/sites/production/files/documents/ToxTrainingTool10Jan2010.pdf*

e. The average monthly result is compared to the Median Monthly Effluent Limitation (MMEL), and shall be reported as “Pass” or “Fail.” The maximum daily result is compared to the Maximum Daily Effluent Limitation (MDEL) and shall be reported as “Pass” or “Fail” and “% Effect.” If the chronic aquatic toxicity routine monitoring test results in a “Fail” at the instream waste concentration (IWC), then the Tillman WRP shall complete a maximum of two MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine monitoring

test was initiated that resulted in the "Fail" at the IWC. If the first chronic MMEL compliance test results in a "Fail" at the IWC, then the second MMEL compliance test is not necessary because the "Fail" results from the first two tests would constitute a violation of the chronic toxicity MMEL.

f. According to LA River Metals TMDL, the mass-based effluent limitations for cadmium, copper, lead, and zinc do not apply during wet weather when the influent exceeds the plant design flow rate of 80 mgd. The mass-based effluent limits continue to apply at all other times, including during dry weather when the maximum daily flow at the Los Angeles River Wardlow station is less than 500 cubic feet per second.

g. The limits are based on the LA River Metals TMDL and apply during dry and wet weather.

h. This water quality-based effluent limitation (WQBEL) incorporates a margin of safety reflective of plant performance in accordance with the *Amendment to the Water Quality Control Plan for the Los Angeles Region to amend the Total Maximum Daily Load (TMDL) for Nitrogen Compounds and Related Effects in the Los Angeles River by incorporating site-specific ammonia objectives*, Resolution No. R12-010 that became effective on August 7, 2014.

End Footnotes for Table F-10

4.3.6. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) testing protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short period and measures mortality. A chronic toxicity test is conducted over a longer period 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 reaches higher concentrations. Therefore, chronic toxicity is considered a pollutant of concern for protection and evaluation of narrative Basin Plan objectives for toxicity.

Because of the nature of industrial discharges into the POTW sewershed, it is possible that toxic constituents could be present in the Tillman WRP effluent or that they could have synergistic or additive effects. As previously stated in section 3.3.14. of this Fact Sheet, the Discharger's sewage system receives wastewater from 171 Significant Industrial Users. A total of 81 chronic toxicity tests were conducted from May 2017 to June 2022. One test failed to meet test acceptability criteria and was determined to be invalid. One sensitivity screening test on *Ceriodaphnia dubia* failed the TST test with a 22.5% effect, although there was no toxicity violation. The nature of the influent wastewater and the test failure show that there is reasonable potential for pollutants to be present in the Tillman WRP discharge at levels that would cause or contribute to a violation of water quality standard for chronic toxicity. Therefore, this Order carried over the chronic toxicity effluent limitation from Order No. R4-2017-0062.

In the past, the State Water Board reviewed circumstances warranting a numeric chronic toxicity effluent limitation for POTWs when there was reasonable potential. (See SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions] (Los Coyotes Order).) On September 16, 2003, at a public hearing, the State Water Board

adopted Order Number 2003-0012, deferring the issue of numeric chronic toxicity effluent limitation for POTWs until adoption of a subsequent Phase of the SIP. In the meantime, the State Water Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits. The Tillman WRP historic NPDES permit contained a similar narrative chronic toxicity effluent limitation, with a numeric trigger for accelerated monitoring, consistent with the State Water Board's Los Coyotes Order.

Since the State Water Board adopted the Los Coyotes Order in 2003, USEPA published two new guidance documents with respect to chronic toxicity; the Los Angeles Water Board adopted numerous NPDES permits for POTWs and industrial facilities incorporating TST-based effluent limitations for chronic toxicity and has adopted numerous permits containing numeric chronic toxicity effluent limitations (including for this Facility). Because the Los Coyotes Order explicitly "declined to make a determination … regarding the propriety of the final numeric effluent limitations for chronic toxicity…," (Los Coyotes Order, p. 9) and because of the differing facts before the Los Angeles Water Board in 2014 as compared to the facts that were the basis for the Los Coyotes Order in 2003, the Los Angeles Water Board concluded that the Los Coyotes Order did not require inclusion of narrative rather than numeric effluent limitations for chronic toxicity. Further, the Los Angeles Water Board found that numeric effluent limitations for chronic toxicity were necessary, feasible, and appropriate. Thus, Order Number R4-2017-0062, which served as the NPDES permit for the Tillman WRP, contained numeric chronic toxicity final effluent limitations expressed in terms of the Test of Significant Toxicity (TST).

Use of the TST approach is consistent with promulgated requirements of the test method, such as specified biological and laboratory procedures (see sections below for a description of USEPA Method Update Rule and USEPA's response). As has been affirmed by USEPA, the TST statistical approach can be used with current USEPA methods that require testing multiple concentrations of effluent.

Because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the water quality objective, and consistent with the previous Order, this Order contains numeric chronic toxicity effluent limitations. Compliance with the chronic toxicity requirement contained in this Order shall be determined in accordance with section 7.10. of this Order. This Order contains a reopener to allow the Los Angeles Water Board to modify the Order, if necessary, to make it consistent with any new policy, law, or regulation. On December 1, 2020, the State Water Board adopted statewide numeric water quality objectives for both acute and chronic toxicity, using the TST, and a program of implementation to control toxicity, which are collectively known as the Toxicity Provisions. On October 5, 2021 the State Water Board adopted a resolution rescinding the December 1, 2020 establishment of Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California and confirming that the Toxicity Provisions were adopted as a State Policy for Water Quality Control, for all inland surface waters, enclosed bays, estuaries, and coastal lagoons of the state, regardless of their status as waters of the United States. The Toxicity Provisions were approved by OAL for purposes of state law on April 25, 2022, and are awaiting approval by the USEPA for purposes of federal law.

For this Order, chronic toxicity in the discharge is evaluated using the Test of Significant Toxicity (TST) hypothesis testing approach utilized in the previous Order. Chronic toxicity limitations are expressed as "Pass" for the median monthly effluent limitation (MMEL) and "Pass" and "<50% Effect" for each maximum daily effluent limitation (MDEL) individual result. The chronic toxicity effluent limitations are as stringent as necessary to protect the statewide Water Quality Objective for aquatic chronic toxicity.

Order No. R4-2017-0062 included the WET final effluent limitations based on the following:

i. In January 2010, USEPA published a guidance document titled, "EPA Regions 8, 9 and 10 Toxicity Training Tool," which among other things discusses permit limit expression for chronic toxicity. The document acknowledges that NPDES regulations at 40 CFR section 122.45(d) requires that all permit limitations be expressed, unless impracticable, as an Average Weekly Effluent Limitation (AWEL) and an Average Monthly Effluent Limitation (AMEL) for POTWs. Following Section 5.2.3 of the TSD, the use of an AWEL is not appropriate for WET. In lieu of an AWEL for POTWs, USEPA recommends establishing an MDEL for toxic pollutants and pollutants in water quality permitting, including WET. This is appropriate for two reasons. The basis for the average weekly requirement for POTWs derives from secondary treatment regulations and is not related to the requirement to assure achievement of water quality standards (WQS). Moreover, an average weekly requirement comprising of up to seven daily samples could average out daily peak toxic concentrations for WET and therefore, the discharge's potential for causing acute and chronic effects would be missed. It is impracticable to use an AWEL, because short-term spikes of toxicity levels that would be permissible under the 7-day average scheme would not be adequately protective of all beneficial uses. The MDEL is the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day. The AMEL is the highest allowable value for the average of daily discharges obtained over a calendar month. For WET, this is the average of individual WET test results for that calendar month. However, in cases where a chronic mixing zone is not authorized, USEPA Regions 9 and 10 continue to recommend that the AMEL for chronic WET should be expressed as a median monthly limit (MMEL).

ii. Later in June 2010, USEPA published another guidance document titled, Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to EPA's WET test methods. Section 9.4.1.2 of the USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013, 2002), recognizes that, "the statistical methods in this manual are not the only possible methods of statistical analysis." The TST approach can be applied to acute (survival) and chronic (sublethal)

endpoints and is appropriate to use for both freshwater and marine EPA WET test methods.

iii. USEPA's WET testing program and acute and chronic WET methods rely on the measurement result for a specific test endpoint, not upon achievement of specified concentration-response patterns to determine toxicity. USEPA's WET methods do not require achievement of specified effluent or ambient concentration-response patterns prior to determining that toxicity is present. See, Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, November 19, 2002. Nevertheless, USEPA's acute and chronic WET methods require that effluent and ambient concentration-response patterns generated for multi-concentration acute and chronic toxicity tests be reviewed - as a component of test review following statistical analysis - to ensure that the calculated measurement result for the toxicity test is interpreted appropriately. (EPA-821-R-02-012, section 12.2.6.2; EPA-821-R-02-013, section 10.2.6.2.). In 2000, USEPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC, LC50's, IC25's) were calculated appropriately (EPA 821-B-00-004).

iv. USEPA designed its 2000 guidance as a standardized step-by step review process that investigates the causes for 10 commonly observed concentration-response patterns and provides for the proper interpretation of the test endpoints derived from these patterns for NOECs, LC50s, and IC25s, thereby reducing the number of misclassified test results. The guidance provides one of three determinations based on the review steps: (1) that calculated effect concentrations are reliable and should be reported, (2) that calculated effect concentrations are anomalous and should be explained, or (3) that the test was inconclusive and should be repeated with a newly collected sample. The standardized review of the effluent and receiving water concentration-response patterns provided by USEPA's 2000 guidance decreased discrepancies in data interpretation for NOEC, LC50, and IC25 test results, thereby lowering the chance that a truly nontoxic sample would be misclassified and reported as toxic.

v. Appropriate interpretation of the measurement result from USEPA's TST statistical approach (pass/fail) for effluent and receiving water samples is, by design, independent from the concentration-response patterns of the toxicity tests for those samples. Therefore, when using the TST statistical approach, application of USEPA's 2000 guidance on effluent and receiving waters concentration-response patterns will not improve the appropriate interpretation of TST results as long as all Test Acceptability Criteria and other test review procedures - including those related to Quality Assurance for effluent and receiving water toxicity tests, reference toxicity tests, and control performance (mean, standard deviation, and coefficient of variation) - described by the WET test methods manual and TST guidance, are followed. The 2000 guidance may be used to identify reliable, anomalous, or inconclusive concentration-response patterns and associated statistical results to the extent that the guidance recommends review of test procedures and laboratory performance already recommended in the WET test methods manual. The guidance does not apply to single-concentration (IWC) and control statistical t-tests and does

not apply to the statistical assumptions on which the TST is based. The Los Angeles Water Board will not consider a concentration-response pattern as sufficient basis to determine that a TST t- test result for a toxicity test is anything other than valid, absent other evidence. In a toxicity laboratory, unexpected concentration-response patterns should not occur with any regular frequency and consistent reports of anomalous or inconclusive concentration-response patterns or test results that are not valid will require an investigation of laboratory practices.

vi. Any Data Quality Objectives or Standard Operating Procedure used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent or receiving water toxicity test measurement results from the TST statistical approach which include a consideration of concentration-response patterns and/or PMSDs must be submitted for review by the Los Angeles Water Board, in consultation with USEPA and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (40 CFR section 122.41(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

4.4. Final Effluent Limitation Considerations

4.4.1. Anti-Backsliding Requirements

Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR section 122.44(l) prohibit backsliding in NPDES permits. 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. The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, except for the removal of effluent limitations for heptachlor. The limitations calculated using SIP procedures and data collected between May 2017 and June 2022 for dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene were less stringent than those in the existing permit. Since these pollutants had exceedances of the effluent limitations in the previous Order, the limitations from the previous Order are carried over into this Order to avoid backsliding and to ensure antidegradation requirements are met.

a. Heptachlor: Attainment Water

The final effluent limitations for heptachlor that were included in the previous order are removed in this Order because the discharges did not show reasonable potential to cause or contribute to an exceedance of the applicable water quality criteria for this pollutant, based on the monitoring data collected from May 2017 to June 2022.

Section 402(o)(2) of the CWA provides statutory exceptions to the general prohibition of backsliding contained in CWA section 402(o)(1). One of these exceptions allows backsliding if "information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit

issuance" and if the revisions are the result of a discharger eliminating or reducing its discharge of the pollutant in compliance with the relevant chapter of the CWA. (33 USC § 1342 subdiv. (o)(B) and subdv. (B)(i); see, also, 40 CFR § 122.44(l). The reasonable potential analysis, using the updated monitoring data, justifies removal of the effluent limitations for heptachlor as long as the cumulative effect of removing the limits results in a decrease in the amount of pollutants discharged into the receiving water. As explained in 4.3.4, the reasonable potential analysis is conducted prior to the renewal of the permit to determine if effluent limitations are needed to prevent an exceedance of a water quality standard in the receiving water. The monitoring process and the routine RPA, with the potential to remove and add effluent limitations, encourage the Discharger to maintain and even improve treatment performance and thus reduce the amount of pollutants discharged into the receiving water, which is what has happened here. The removal of effluent limitations for this pollutant is thus consistent with the anti-backsliding requirements of CWA section 402(o)(2)(B)(i).

Section 303(d)(4)(B) of the CWA allows relaxation of effluent limitations where the quality of the receiving water equals or exceeds the levels necessary to protect the designated uses of the water or otherwise required by applicable water quality standards, if the revision is subject to and consistent with the State's Antidegradation Policy. According to the 2020-2022 303(d) list, the Los Angeles River is not impaired for heptachlor in the reaches of the Los River where the Tillman WRP discharges. In addition, the concentration of this pollutant in the background receiving water does not exceed the applicable water quality standard in the water column. The monitoring data, collected from May 2017 to June 2022, shows that the effluent and receiving water samples were non-detect for heptachlor with detection limits ranging from 0.001 µg/L to 0.004 µg/L. The most stringent CTR criterion for heptachlor is 0.00021 µg/L. As described below, relaxation or removal of effluent limitations for this pollutant is consistent with the state and federal antidegradation policies. Therefore, the exception to the prohibition on relaxation of effluent limitations found in section 303(d)(4)(B) allows the removal of this effluent limitation.

4.4.2. Antidegradation Policies

40 CFR § 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. On October 28, 1968, the State Water Board established California's antidegradation policy when it adopted Resolution Number 68-16, *Statement of Policy with Respect to Maintaining the Quality of the Waters of the State*. Resolution Number 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The State Water Board has, in State Water Board Order Number 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution Number 68-16 to be fully consistent with the federal antidegradation policy contained in 40 CFR section 131.12. Similarly, CWA section 303(d)(4)(B) and 40 CFR section 131.12 require that all permitting actions be consistent with the federal antidegradation policy. Together, the state and federal antidegradation policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. The Los Angeles Water

Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies.

The renewal of this Order is consistent with the anti-degradation policy because it is not expected to allow degradation of receiving water quality. No reduction in the existing level of wastewater treatment is anticipated. In addition, the renewal of the Order will not lower the surface water quality because the conditions in this Order are at least as stringent as the previous Order except for limits described in section 4.4.1 of the Fact Sheet. Relaxation of the effluent limitations as described in section 4.4.1 will continue to assure the attainment of water quality standards where the quality of the receiving water is impaired for that pollutant and will not degrade waters already in attainment.

The reaches of the Los Angeles River receiving discharges from the Tillman WRP are not impaired for heptachlor. The removal of the final effluent limitations for heptachlor is consistent with the antidegradation policy because the discharge did not exhibit reasonable potential to exceed the water quality objective. Effluent and receiving water monitoring for this pollutant continues to be required under this Order to ensure effluent and receiving water concentrations do not exceed the objectives. In addition, this Order includes a reopener provision that permits the Los Angeles Water Board to reopen the permit if the effluent exhibits reasonable potential to exceed the objectives during the permit cycle. The Los Angeles Water Board may modify the terms of this Order to prevent degradation of high-quality waters based on any change in the concentration of these constituents in the effluent or receiving water that indicates that a degradation of receiving water quality may occur. The treatment required by this Order is the best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

4.4.3. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The TBELs consist of restrictions on BOD, TSS, and percent removal of BOD and TSS. Restrictions on BOD, TSS, and percent removal of BOD and TSS are discussed in section 4.2. of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards.

Water quality-based effluent limitations have been scientifically derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved or established (in the case of CTR criteria) pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR and SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and WQOs contained in the Basin Plan or statewide water quality control plans were

approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). This Order's restrictions on individual pollutants are collectively no more stringent than required to implement the requirements of the CWA and the applicable water quality standards for purposes of the CWA.

Table F-11. Summary of Final Effluent Limitations for 002, 003, and 008

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Basis	Notes
$BOD_5 20^oC$	mg/L	20	30	45	Tertiary Treatment	---
$BOD_5 20^oC$	lbs/day	13,340	20,020	30,020	Tertiary Treatment	a
TSS	mg/L	15	40	45	Tertiary Treatment	---
TSS	lbs/day	10,010	26,690	30,020	Tertiary Treatment	a
Turbidity	NTU	2	5	10	Title 22	k
pH	Standard Units	---	---	6.5-8.5	Basin Plan	b
Temperature	°F	---	---	80	Basin Plan	c
Removal Efficiency for BOD and TSS	%	≥85	---	---	Tertiary Treatment	---
Oil and Grease	mg/L	10	---	15	Basin Plan/ BPJ	---
Oil and Grease	lbs/day	6,670	---	10,010	Basin Plan/ BPJ	a
Settleable Solids	ml/L	0.1	---	0.3	Basin Plan/ BPJ	---
Total Residual Chlorine	mg/L	---	---	0.1	Basin Plan	---
Total Coliform	CFU/ 100mL	23	2.2	240	Title 22	d
E. coli	CFU/100 mL	126	2.2	235	TMDL	l
Radioactivity	---	---	---	---	---	m
Combined Radium-226 and Radium-228	pCi/L	5	---	---	Title 22	m

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Basis	Notes
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15	---	---	Title 22	m
Uranium	pCi/L	20	---	---	Title 22	m
Gross Beta/photon emitters	millirem/ year	4	---	---	Title 22	m
Strontium-90	pCi/L	8	---	---	Title 22	m
Tritium	pCi/L	20,000	---	---	Title 22	m
Chloride	mg/L	190	---	---	Basin Plan	---
Chloride	lbs/day	126,770	---	---	Basin Plan	a
Total Dissolved Solids	mg/L	950	---	---	Basin Plan	---
Total Dissolved Solids	lbs/day	633,840	---	---	Basin Plan	a
Sulfate	mg/L	300	---	---	Basin Plan	---
Sulfate	lbs/day	200,160	---	---	Basin Plan	a
MBAS	mg/L	0.5	---	---	Basin Plan	---
MBAS	lbs/day	330	---	---	Basin Plan	a
Nitrate (as N)	mg/L	7.2	---	---	TMDL	f
Nitrate (as N)	lbs/day	4,800	---	---	TMDL/BPJ	a
Nitrite (as N)	mg/L	0.9	---	---	TMDL	f
Nitrite (as N)	lbs/day	600	---	---	TMDL/BPJ	a
Nitrate + Nitrite (as N)	mg/L	7.2	---	---	TMDL	f
Nitrate + Nitrite (as N)	lbs/day	4,800	---	---	TMDL/BPJ	a
Ammonia Nitrogen	mg/L	3.0	---	6.4	TMDL	g
Ammonia Nitrogen	lbs/day	2,000	---	4,300	TMDL/BPJ	a
Cadmium (wet)	µg/L	2.0	---	6.9	TMDL	n
Cadmium (wet)	lbs/day	1.3	---	4.6	TMDL	a and o
Zinc (wet)	µg/L	152	---	212	TMDL	n
Zinc (wet)	lbs/day	101	---	141	TMDL	a and o
Copper	µg/L	27	---	31	TMDL	h
Copper	lbs/day	18	---	21	TMDL	a and o
Lead	µg/L	2.1	---	16	TMDL	h
Lead	lbs/day	1.4	---	10.7	TMDL	a and o
Selenium	µg/L	3.9	---	7.0	SIP/CTR	---
Selenium	lbs/day	2.6	---	4.7	SIP/CTR	a
Cyanide	µg/L	4.3	---	8.5	SIP/CTR	---
Cyanide	lbs/day	2.9	---	5.7	SIP/CTR	a

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Basis	Notes
Carbon Tetrachloride	µg/L	0.5	---	---	Basin Plan/ Title 22	---
Carbon Tetrachloride	lbs/day	0.3	---	---	Basin Plan/ Title 22	a
Pentachlorophenol	µg/L	1.0	---	---	Basin Plan/ Title 22	---
Pentachlorophenol	lbs/day	0.7	---	---	Basin Plan/ Title 22	a
Benzo(a)pyrene	µg/L	0.049	---	0.098	SIP/CTR	---
Benzo(a)pyrene	lbs/day	0.033	---	0.065	SIP/CTR	a
Benzo(b)fluoranthene	µg/L	0.049	---	0.098	SIP/CTR	---
Benzo(b)fluoranthene	lbs/day	0.033	---	0.065	SIP/CTR	a
Benzo(k)fluoranthene	µg/L	0.049	---	0.098	SIP/CTR	---
Benzo(k)fluoranthene	lbs/day	0.033	---	0.065	SIP/CTR	a
Dibenzo(a,h)anthracene	µg/L	0.024	---	0.049	SIP/CTR	---
Dibenzo(a,h)anthracene	lbs/day	0.02	---	0.03	SIP/CTR	a
Indeno(1,2,3-cd)pyrene	µg/L	0.024	---	0.049	SIP/CTR	---
Indeno(1,2,3-cd)pyrene	lbs/day	0.02	---	0.03	SIP/CTR	a
Chronic Toxicity *Ceriodaphnia dubia* Survival and Reproduction endpoints	Pass or Fail (TST), % Effect	Pass	---	Pass or % Effect < 50 (survival endpoint)	Existing	i, j

Footnotes for Table F-11

a. The mass-based effluent limitations are based on the plant design flow rate of 80 mgd and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

b. The effluent values for pH shall be maintained within the limits of 6.5 (instantaneous minimum) and 8.5 (instantaneous maximum).

c. An interim effluent limitation for temperature is included in Section 4.2 of this Order for the duration of the compliance schedule.

d. The wastes discharged to water courses shall always be adequately disinfected. For the purpose of this requirement, the wastes shall be considered adequately disinfected if (1) the median number of total coliform bacteria at some point in the treatment process does not exceed a 7-day median of 2.2 Most Probable Number (MPN) or Colony Forming Units (CFU) per 100 milliliters utilizing the bacteriological results of the last seven (7) days for which an analysis has been completed, (2) the number of total coliform bacteria does not

exceed 23 MPN or CFU per 100 milliliters in more than one sample within any 30-day period, and (3) no sample shall exceed 240 MPN or CFU of total coliform bacteria per 100 milliliters. Samples shall be collected at a time when wastewater flow and characteristics are most demanding on treatment facilities and disinfection processes.

.

f. This is a final effluent limitation consistent with the waste load allocation (WLA), set forth in the *Los Angeles River Nitrogen Compounds and Related Effect TMDL*.

g. The monthly limit is the Water Quality Based limit developed using best professional judgement and according to the *Los Angeles River Nitrogen Compounds TMDL*. The maximum daily limit is based on the WLA in the same TMDL and also includes a margin of safety factor in accordance with the TMDL.

h. The limits are based on the LA River Metals TMDL and apply during dry and wet weather.

i. A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations are established using current USEPA guidance in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June/2010)* and *EPA Regions 8, 9, and 10 Toxicity Training Tool (January 2010), https://www.epa.gov/sites/production/files/documents/ToxTrainingTool10Jan2010.pdf*

j. The average monthly result is compared to the Median Monthly Effluent Limitation (MMEL), and shall be reported as “Pass” or “Fail.” The maximum daily result is compared to the Maximum Daily Effluent Limitation (MDEL) and shall be reported as “Pass” or “Fail” and “% Effect.” If the chronic aquatic toxicity routine monitoring test results in a “Fail” at the instream waste concentration (IWC), then the Tillman WRP shall complete a maximum of two MMEL compliance tests. The MMEL compliance tests shall be initiated within the same calendar month that the first routine monitoring test was initiated that resulted in the “Fail” at the IWC. If the first chronic MMEL compliance test results in a “Fail” at the IWC, then the second MMEL compliance test is not necessary because the “Fail” results from the first two tests would constitute a violation of the chronic toxicity MMEL.

k. For the protection of the water contact recreation beneficial use, the wastes discharged to water courses shall have received adequate treatment, so that the turbidity of the treated wastewater does not exceed any of the following: (a) an average of 2 Nephelometric turbidity units (NTU) within a 24-hour period, (b) 5 NTU more than 5 percent of the time (72 minutes) within a 24-hour period, and (c) 10 NTU at any time.

l. The LA River Bacteria TMDL contains WLAs for DC Tillman, Los Angeles-Glendale, and Burbank WRPs. WLAs are expressed as allowable exceedance days. The WLAs for DCTWRP are set equal to a 7-day median of 2.2 MPN/100 mL of *E. coli* or a daily max of 235 MPN/100mL to ensure zero (0) days of allowable exceedances. No exceedances of the geometric mean TMDL numeric target of 126/100 mL *E.coli* are permitted within the month.

m. The radioactivity final effluent limitations are derived from Title 22, chapter 15, article 5, sections 64442 and 64443, of the California Code of Regulations (CCR). The incorporation by reference is prospective including future changes to the incorporated provisions as the changes take effect.

n. The limits are based on the LA River Metals TMDL and only apply during wet weather. Wet-weather effluent limitations apply when the maximum daily flow measured at the Los Angeles River Wardlow station is equal to or greater than 500 cubic feet per second.

o. According to LA River Metals TMDL, the mass-based effluent limitations for cadmium, copper, lead, and zinc do not apply during wet weather when the influent exceeds the plant design flow rate of 80 mgd. The mass-based effluent limits continue to apply at all other times, including during dry weather when the maximum daily flow at the Los Angeles River Wardlow station is less than 500 cubic feet per second.

End of Footnotes for Table F-11

4.5. Interim Effluent Limitations

The Tillman WRP will be subject to a compliance schedule for the temperature 80°F final effluent limitation, as described further in section 6.2.7 of this Fact Sheet. Since that compliance schedule exceeds one year, the Order includes an 86°F interim effluent limitation for temperature, except as a result of external ambient temperature.

4.6. Land Discharge Specifications – Not Applicable

4.7. Recycling Specifications

In 1991, the City completed a major construction project that doubled the capacity of the Tillman WRP, expanding the facility capacity from 40 MGD to 80 MGD. A portion of the tertiary-treated water is used for recycled water customers and in-plant service water. The remaining water is discharged to the Los Angeles River via Wildlife Lake, Lake Balboa, the Japanese Garden Lake, and an operational safety weir for beneficial reuse to support habitat and recreation. Without a mandate from the State, on February 21, 2019, Los Angeles' Mayor Garcetti pledged that Los Angeles will recycle 100% of its wastewater by 2-35 – a major step to expand water recycling and to reduce reliance on imported water. The Tillman WRP is already producing high levels of recycled water for irrigation and industrial purposes. However, limitations exist on the amount that can be recycled as further proposed reductions in wastewater to the LA River may be conditioned (limited) as necessary to support instream beneficial uses, including new uses that rely on continued wastewater discharges, such as kayaking. About 20 MGD is discharged to the LA River, which is not properly characterized as a waste and unreasonable use of water since that water protects in-stream beneficial uses. Moreover, the maximum amount of recycled water currently authorized is 5.3 MGD and is reused for non-potable recycled water applications such as irrigation, parks and recreation, and industrial uses.

The Permittee included Recycled Water Progress Reports in the 2019, 2020, and 2021 annual reports to meet Monitoring and Reporting Program requirements in Order R4-2017-0062. Currently, the Tillman WRP provides all the recycled water distributed by

the Los Angeles Department of Water and Power to the Valley Service Area Recycled Water System. Recycled water is used for irrigation, dust control, equipment washing, and cooling tower purposes. In 2021, 4,979 acre-feet (1.6 billion gallons) of tertiary-treated water was beneficially reused in the Valley Service Area. The majority of treated wastewater flows through Balboa Lake, Wildlife Lake, the Tillman WRP Japanese Garden before being discharged to the Los Angeles River, and is also used for plant processes and irrigation.

A groundwater replenishment project is under development that would include construction of an Advanced Water Purification Facility (AWPF) at the Tillman WRP to produce up to 30,000 acre-feet per year of advanced treated water for indirect potable reuse in the San Fernando Basin. The Permittee plans to redirect up to 4,820 acre-feet per year of treated water that usually flows from the Japanese Garden Lake to the Los Angeles River back to the Tillman WRP and AWPF for advanced treatment and onto the Hansen and Pacoima Spreading Grounds for recharge. The City of Los Angeles prepared an Initial Study/Negative Declaration for public comment on December 14, 2021, and held a public meeting on January 10, 2022. The City plans to submit a petition under Section 1211 of the California Water Code to the State Water Resources Control Board for authorization to change the place and purpose of discharge to the Los Angeles River.

A few other potential projects include providing reused water to Fulton Middle School, Metro Orange Line at Balboa, and Sepulveda Basin Sports Complex for irrigation. These projects would add another 61 acre-feet per year of reuse bringing the total amount of reuse from the Tillman WRP to 30,061 acre-feet per year.

The Permittee shall continue to investigate the feasibility of recycling, conservation, and/or alternative disposal methods for wastewater (such as groundwater injection), and/or beneficial use of stormwater and dry-weather urban runoff. The Permittee shall submit an update to this feasibility investigation as part of the submittal of the Report of Waste Discharge (ROWD) for the next permit renewal.

The production, distribution, and reuse of recycled water are presently regulated under WRRs Order Number R4-2007-0009, amended by Order Number R4-2011-0032 adopted by this Board on February 3, 2011.

The use of recycled water for irrigation and other nonpotable uses is regulated under Waste Discharge Requirements (WDRs) Order Number R4-2007-0008. The discharger will apply for separate WDRs/WRRs for the groundwater replenishment project previously mentioned.

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

5.1. Surface Water

Receiving water limitations are based on WQOs contained in the Basin Plan and applicable statewide water quality control plans and are a required part of this Order.

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR section 122.42, are provided in Attachment D. The Discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

40 CFR sections 122.41(a)(1) and (b) through (n) 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

These provisions are based on 40 CFR part 123. The Los Angeles Water Board may reopen the permit to modify permit conditions and requirements. Causes for modifications include the promulgation of new regulations, modification in sludge use or disposal practices, new information based on the results of special studies conducted as required by this Order, or adoption of new regulations by the State Water Board or Los Angeles Water Board, including revisions to the Basin Plan.

6.2.2. Special Studies and Additional Monitoring Requirements

a. Antidegradation Analysis and Engineering Report for Any Proposed Plant Expansion. This provision is based on the State Water Board Resolution Number 68-16, which requires the Los Angeles Water Board in regulating the discharge of waste to maintain high quality waters of the state. The Discharger must demonstrate that it has implemented adequate controls (e.g., adequate treatment capacity) to ensure that high quality waters will be maintained. If the Discharger increases the plant's capacity, this provision requires the Discharger to clarify that it has increased plant capacity though the addition of new treatment system(s) to obtain revised effluent limitations for the discharge from the treatment system(s). This provision requires the Discharger to report specific time schedules for the plant's projects being implemented to increase the plant's capacity. This provision requires the Discharger to submit a report to the Los Angeles Water Board including the information included in this section for approval.

b. Operations Plan for Proposed Expansion. This provision is based on section 13385(j)(1)(D) of the Water Code and allows a time period not to exceed 90 days in which the Discharger may adjust and test the treatment system(s). This provision requires the Permittee to submit an Operations Plan describing the actions the Discharger will take during the period of adjusting and testing to prevent violations.

c. Treatment Plant Capacity. The treatment plant capacity study required by this Order shall serve as an indicator for the Los Angeles Water Board regarding Facility's increasing hydraulic capacity and growth in the service area.

6.2.3. Best Management Practices and Pollution Prevention

Pollution Minimization Program (PMP). This provision is based on the requirements of section 2.4.5 of the SIP.

6.2.4. Construction, Operation, and Maintenance Specifications

The requirements in section 6.3.4. (wastewater treatment plant operator certification; climate change plan; back-up power source and maintenance and testing of emergency equipment) are based on the requirements of 40 CFR section 122.41(e) (proper operation and maintenance) and the previous order. 40 CFR section 122.41(e) also requires the operation of back-up or auxiliary facilities or similar systems when the operation is necessary to achieve compliance with the conditions of the Order. For proper and effective operation of such facilities or systems, routine maintenance and operational testing of emergency infrastructure/equipment is necessary. Major sewage spills can cause harm to residents of the Los Angeles Region, such as the closure of beaches, and harm to wildlife and benthic life. The impact of any such incident to the receiving waters can be minimized or prevented if the operation of emergency infrastructure occurs unimpeded by operational challenges and in a timely fashion. Thus, this Order contains requirements for routine maintenance and operational testing of emergency infrastructure/equipment in section 6.3.4.d.

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

a. Biosolids Requirements. To implement CWA section 405(d), on February 19, 1993, USEPA promulgated 40 CFR part 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the Discharger to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program. The Discharger is also responsible for compliance with WDRs and NPDES permits for the generation, transport and application of biosolids issued by the State Water Board, other Regional Boards, Arizona Department of Environmental Quality or USEPA, to whose jurisdiction the Facility's biosolids will be transported and applied.

b. Pretreatment Requirements. This Order contains pretreatment requirements consistent with applicable effluent limitations, national standards of performance, and toxic and performance effluent standards established pursuant to sections 208(b), 301, 302, 303(d), 304, 306, 307, 403, 404, 405, and 501 of the CWA, and amendments thereto. This Order contains requirements for the implementation of an effective pretreatment program pursuant to section 307 of the CWA; 40 CFR 35 and 403; and/or Title 23, CCR section 2233.

c. Filter Bypass Requirements. Conditions pertaining to bypass are contained in Attachment D, Section 1. Standard Provisions – Permit Compliance, subsection 1.7. The bypass or overflow of untreated or partially treated wastewater to waters of the

State is prohibited, except as allowed under conditions stated in 40 CFR section 122.41(m) and (n). During periods of elevated, wet weather flows, a portion of the secondary treated wastewater is diverted around the tertiary filters as a necessary means to avoid loss of life, personal injury or severe property damage. There are no feasible alternatives to this diversion. These anticipated discharges are approved under the bypass conditions when all storage has been utilized and the resulting combined discharge of fully treated (tertiary) and partially treated (secondary) wastewater complies with the effluent and receiving water limitations in this Order. The ROWD and additional information submitted constitutes notice of these anticipated bypasses.

d. Spill Reporting Requirements. This Order establishes a reporting protocol for how different types of spills, overflow or bypasses of raw or partially treated sewage from its collection system or treatment plant covered by this Order shall be reported to regulatory agencies.

The State Water Board issued *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems*, Water Quality Order 2006-0003-DWQ (SSS WDRs) on May 2, 2006. The Monitoring and Reporting Requirements for the SSS WDRs were amended by Water Quality Order WQ 2008-0002-EXEC on February 20, 2008 and by WQ 2013-0058-EXEC on August 6, 2013. The SSS WDRs requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the SSS WDRs. The SSS WDRs requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Furthermore, the SSS WDRs contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section 6.3.5. For instance, the 24-hour reporting requirements in this Order are not included in the SSS WDRs. The Discharger must comply with both the SSS WDRs and this Order. The Discharger and public agencies that are discharging wastewater into the Facility were required to obtain enrollment for regulation under the SSS WDRs by December 1, 2006.

In the past, the region has experienced loss of recreational use at coastal beaches and in recreational areas as a result of major sewage spills. The SSS WDRs requirements are intended to prevent or minimize impacts to receiving waters as a result of spills.

The requirements of this Order are more stringent that the SSS WDRs because in addition to the SSS WDR requirements, this Order requires water quality monitoring of the receiving water when the spill reaches the surface water.

6.2.6. Other Special Provisions (Not Applicable)

6.2.7. Compliance Schedules

In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 CFR part 122.44(d). There are exceptions to this

general rule. State Water Board adopted the *Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Resolution 2008-0025), which is the governing policy for compliance schedules in NPDES permits (hereafter "Compliance Schedule Policy"). The Compliance Schedule Policy allows compliance schedules for new, revised, or newly interpreted WQOs or criteria, or in accordance with a TMDL. All compliance schedules must be as short as possible and may not exceed 10 years from the effective date of the adoption, revision, or new interpretation of the applicable WQO or criterion, unless a TMDL allows a longer schedule. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric effluent limitations for that constituent or parameter, interim requirements and dates toward achieving compliance, and compliance reporting within 14 days after each interim date. The Order may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures.

In accordance with the Compliance Schedule Policy and 40 CFR 122.47, a Discharger who seeks a compliance schedule must demonstrate additional time is necessary to implement actions to comply with a more stringent permit limitation. The Discharger must provide the following documentation as part of the application requirements:

a. Diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream, and the results of those efforts;

b. Source control efforts are currently underway or completed, including compliance with any pollution prevention programs that have been established;

c. A proposed schedule for additional source control measures or waste treatment;

d. Data demonstrating current treatment facility performance to compare against existing permit effluent limits, as necessary to determine which is the more stringent interim permit effluent limit to apply if a schedule of compliance is granted;

e. The highest discharge quality that can reasonably be achieved until final compliance is attained;

f. The proposed compliance schedule is as short as possible, given the type of facilities being constructed or programs being implemented, and industry experience with the time typically required to construct similar facilities or implement similar programs; and

g. Additional information and analyses to be determined by the Los Angeles Water Board on a case-by-case basis.

The permit limitations for temperature in effluent and receiving surface waters are more stringent than the limitations previously implemented. The new limitations are based on a new interpretation of the temperature WQO established in the Basin Plan. The Discharger has complied with the application requirements in paragraph 4 of the Compliance Schedule Policy. Based on information submitted with the Report of Waste Discharge, self-monitoring reports, infeasibility analysis, and other additional submittals, it has been demonstrated to the satisfaction of the Los Angeles Water Board that the Discharger needs time to implement actions to comply with the new effluent and receiving water limitations for temperature and has complied with the

relevant governing authorities concerning compliance schedules. Therefore, Table 6 in section 6.3.7. of this Order includes a compliance schedule to comply with the newly interpreted effluent and receiving water limitations for temperature.

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 Los Angeles Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

7.1. Influent Monitoring

Influent Monitoring is required:

- To determine compliance with the permit conditions for $BOD_5$20°C and suspended solids removal rates.
- To assess treatment plant performance.
- To assess the effectiveness of the Pretreatment Program.
- As a requirement of the PMP.

7.2. Effluent Monitoring

The Discharger is required to conduct monitoring of the permitted discharges in order to evaluate compliance with Order conditions. Monitoring requirements are given in the MRP Attachment E. This provision requires compliance with the MRP, and is based on 40 CFR sections 122.44(i), 122.62, 122.63, and 124.5. The MRP is a standard requirement in almost all NPDES permits (including this Order) issued by the Los Angeles Water Board. In addition to containing definition of terms, it specifies general sampling/analytical protocols and the requirements of reporting spills, violation, and routine monitoring data in accordance with NPDES regulations, the Water Code, and Los Angeles Water Board policies. The MRP also contains sampling program specifics for the Discharger's wastewater treatment plant. It defines the sampling stations and frequency, pollutants to be monitored, and additional reporting requirements. Pollutants to be monitored include all pollutants for which effluent limitations are specified. Further, in accordance with section 1.3 of the SIP, periodic monitoring is required for all priority pollutants defined by the CTR, for which criteria apply and for which no effluent limitations have been established, to evaluate reasonable potential to cause or contribute to an excursion above a water quality standard.

Monitoring for those pollutants expected to be present in the discharge from the Facility, will be required as shown on the MRP and as required in the SIP. Semi-annual monitoring for priority pollutants in the effluent is required in accordance with the Pretreatment requirements.

The accelerated chronic toxicity monitoring, which served as an indicator of persistent toxicity, was not included in the 2022 Order, so that the Discharger may initiate a Toxicity Reduction Evaluation (TRE) sooner than in the 2015 Order. On occasions when the toxicity was intermittent, the accelerated monitoring step delayed the initiation of the TRE, such that when the TRE was initiated, the effluent no longer exhibited toxicity, and subsequently, the cause of toxicity could not be identified. In the 2022 Order, a TRE would be initiated following two consecutive chronic toxicity violations.

Table F-12. Monitoring Frequency Comparison

Parameter	Monitoring Frequency (2017 Order)	Monitoring Frequency (2022 Order)
Total waste flow	Continuous	No change
Total residual chlorine	Continuous	No change
Turbidity	Continuous	No change
Temperature	Daily	No change
pH	Daily	No change
Settleable solids	Daily	No change
Total suspended solids	Daily	No change
Oil and grease	Weekly	No change
BOD	Weekly	No change
Dissolved oxygen	Monthly	No change
Total coliform	Daily	No change
E.coli	Daily	No change
Total Dissolved Solids	Monthly	No change
Sulfate	Monthly	No change
Chloride	Monthly	No change
Boron	Quarterly	No change
Ammonia nitrogen	Monthly	No change
Nitrite nitrogen	Monthly	No change
Total Nitrogen	Monthly	No change
Organic Nitrogen	Monthly	No change
Orthophosphate-P	Quarterly	No change
Surfactants (MBAS)	Monthly	No change
Surfactants (CTAS)	Monthly	No change
Total Hardness ($CaCO_3$)	Monthly	No change
Chronic toxicity	Monthly	No change
Fluoride	Quarterly	No change
Antimony	Quarterly	No change
Arsenic	Quarterly	No change

Parameter	Monitoring Frequency (2017 Order)	Monitoring Frequency (2022 Order)
Cadmium	Monthly	No change
Chromium III	Quarterly	No change
Chromium VI	Quarterly	No change
Copper	Monthly	No change
Lead	Monthly	No change
Mercury	Quarterly	No change
Nickel	Quarterly	No change
Selenium	Monthly	No change
Silver	Quarterly	No change
Thallium	Quarterly	No change
Zinc	Monthly	No change
Cyanide	Monthly	Quarterly
Heptachlor	Monthly	Semiannually
Carbon tetrachloride	Semiannually	Monthly
Pentachlorophenol	Semiannually	Monthly
Benzo(a)Pyrene	Semiannually	Monthly
Benzo(b)fluoranthene	Semiannually	Monthly
Benzo(k)fluoranthene	Semiannually	Monthly
Dibenzo(a,h)anthracene	Monthly	No change
Indeno(1,2,3-cd)pyrene	Monthly	No change
PCBs	Annually	No change
Diazinon	Quarterly	Annually
Bis(2-ethylhexyl)phthalate	Quarterly	No change
Perchlorate	Semiannually	Annually
1,4-Dioxane	Semiannually	Annually
1,2,3-Trichloropropane	Semiannually	Annually
2,4-D	Semiannually	Annually
2,4,5-TP (Silvex)	Semiannually	Annually
Pesticides	Semiannually	Annually
MTBE	Semiannually	Annually
Total Trihalomethanes (TTHMs)	Semiannually	No change
Radioactivity	Semiannually	No change
Remaining USEPA priority pollutants excluding asbestos	Semiannually	No change

This Order has maintained the same monitoring frequency in the previous permit for most constituents except for a few pollutants that exhibit reasonable potential to exceed the

criteria that did not previously have limitations. These pollutants are carbon tetrachloride, pentachlorophenol, benzo(a)pyrene, benzo(b)fluoranthene, and benzo(k)fluoranthene. The monitoring frequency for these constituents has increased to monthly. The monitoring frequency for that pollutant that no longer has reasonable potential, heptachlor, was decreased to semiannually. Monitoring for diazinon in the effluent, receiving waters, and sediment which was required in the previous permit quarterly was reduced to annually in this Order. Monitoring data from May 2017 to June 2022 only show non-detected results for the effluent, receiving waters, and sediment. Since monitoring data indicated diazinon was not detected and is no longer listed in the 303(d) list, the monitoring frequency has been reduced. The monitoring frequency for pesticides was also reduced from semiannually to annually since monitoring data indicate there were no detections in the effluent.

7.3. Whole Effluent Toxicity Testing Requirements

WET testing protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or longer period 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 permit, chronic toxicity in the discharge is evaluated using USEPA's 2010 TST hypothesis testing statistical 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 are as stringent as necessary to protect the statewide Water Quality Objective for aquatic chronic toxicity. The rationale for WET has been discussed extensively in section 4.3.6. of this Fact Sheet.

7.4. Receiving Water Monitoring

7.4.1. Surface Water

Receiving water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water.

7.4.2. Groundwater – (Not Applicable)

7.5. Other Monitoring Requirements

7.5.1. Watershed and Bioassessment Monitoring

The goals of the watershed-wide monitoring program, including the bioassessment monitoring, for the Los Angeles River Watershed are to:

a. Determine compliance with receiving water limits;

b. Evaluate progress in achieving numeric targets and waste load allocations in the Los Angeles River and Tributaries TMDLs

c. Monitor trends in surface water quality;

d. Ensure protection of beneficial uses;

e. Provide data for modeling contaminants of concern;

f. Characterize water quality including seasonal variation of surface waters within the watershed;

g. Assess the health of the biological community; and

h. Determine mixing dynamics of effluent and receiving waters.

7.5.2. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), USEPA requires major and selected minor dischargers under the NPDES Program to participate in the annual 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.

8. CONSIDERATION OF NEED TO PREVENT NUISANCE AND WATER CODE SECTION 13241 FACTORS

One of the provisions/requirements in this Order (subsection 4.3 of the Order) are included to implement state law only. This provision/requirement is not required or authorized under the federal CWA; consequently, violations of this provision/requirement is not subject to the enforcement remedies that are available for NPDES violations. As required by Water Code section 13263, the Los Angeles Water Board has considered the need to prevent nuisance and the factors listed in Water Code section 13241 in establishing the state law provisions/requirements. The Los Angeles Water Board finds, on balance, that the state law requirement in this Order is reasonably necessary to prevent nuisance and to protect beneficial uses identified in the Basin Plan, and the section 13241 factors are not sufficient to justify failing to protect those beneficial uses.

8.1. Need to prevent pollution or nuisance: In establishing effluent limitations in this Order, the Los Angeles Water Board has considered state law requirements to prevent pollution or nuisance as defined in section 13050, subdivisions (l) and (m), of the Water Code. The only requirement in this Order that is based on state law is an investigation of the feasibility of recycling, conservation, an/or alternative disposal methods for wastewater (such as groundwater injection), and/or capture and treatment of dry-weather urban runoff and stormwater on a permissive basis for the beneficial reuse. This investigation will allow the Los Angeles Water Board to determine if and how to

prevent nuisance or pollution from any recycling or conservation program that might be implemented in the future.

8.2. Past, present, and probable future beneficial uses of water: Chapter 2 of the Basin Plan identifies designated beneficial uses for water bodies in the Los Angeles Region. Beneficial uses of water relevant to this Order are also identified above in Section 3.3. The Los Angeles Water Board has taken this factor into account in establishing effluent limitations in the Order, including the requirement set forth in section 4.3. The feasibility investigation will not affect the past or present beneficial uses of water, but it could affect the future beneficial uses of water. Should the Discharger be required to implement actions based on the feasibility investigation, any recycled water that may be produced will have to meet all legal requirements, including those set forth in Title 22 to protect future beneficial uses. The requirements herein protect the past, present and probable future beneficial uses of the water.

8.3. Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto: The environmental characteristics of this watershed are discussed in the Basin Plan, the Region's Watershed Management Initiative Chapter, as well as available in State of the Watershed reports and the State's CWA Section 303(d) List of impaired waters. The environmental characteristics of the hydrographic unit, including the quality of available recycled water that may be produced as a result of the feasibility investigation, will be improved by compliance with the requirements of this Order. Additional information on the Los Angeles River Watershed is available at https://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/Water_Quality_and_Watersheds/ws_losangeles.shtml.

8.4. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area: The water quality standards necessary to protect beneficial uses of the waterbodies in the Los Angeles River Watershed can reasonably be achieved through the coordinate control of all factors that affect water quality in the area, including the conservation of water and/or the production of recycled water contemplated in the feasibility investigation. For example, the water quality in the watershed could be improved through the addition of recycled water which meets Title 22 standards. The Los Angeles Water Board has taken this factor into account in establishing effluent limitations in the Order.

8.5. Economic considerations: The Permittee did not present any evidence regarding economic considerations related to this Order. However, the Los Angeles Water Board has considered the economic impact of requiring certain provisions pursuant to state law, and in conjunction with the applicable TMDLs incorporated into the Order. The only cost here would be the cost of the feasibility investigation. Any additional costs associated with the feasibility investigation is reasonably necessary to prevent nuisance and protect beneficial uses identified in the Basin Plan, and to increase water supply. The failure to consider the feasibility of conservation or increased recycling could potentially result in the loss of, or impacts to, beneficial uses, and any such loss or impact would have a detrimental economic impact, particularly given the effects on beneficial uses and supplies of water from drought and climate change. Economic

considerations related to costs of compliance are therefore not sufficient, in the Los Angeles Water Board's determination, to justify failing to prevent nuisance and protect beneficial uses.

8.6. Need for developing housing within the region: The Los Angeles Water Board does not anticipate that these state law requirements will adversely impact the need for housing in the area. The region generally relies on imported water to meet many of its water resource needs. Imported water makes up a vast majority of the region's water supply, with local groundwater, local surface water, and reclaimed water making up the remaining amount. This Order helps address the need for housing by controlling pollutants in discharges, which will improve the quality of local surface and ground water, as well as water available for recycling and reuse. This in turn may reduce the demand for imported water, thereby increasing the region's capacity to support continued housing development. A reliable water supply for future housing development is required by law, and with less imported water available to guarantee this reliability, an increase in local supply is necessary. Therefore, the potential for developing housing in the area will be facilitated by the conservation of water, or reuse or the production of, recycled water that may result from the feasibility investigation.

8.7. Need to develop and use recycled water: The State Water Board's Recycled Water Policy requires the Los Angeles Water Boards to encourage the use of recycled water. In addition, as discussed immediately above, a need to develop and use recycled water exists within the region, especially during times of drought. To encourage recycling, the Permittee is required by this Order to continue to explore the feasibility of recycling to maximize the beneficial reuse of tertiary treated effluent and to report on its recycled water production and use. The Discharger shall submit an update to this feasibility investigation as part of the submittal of the Report of Waste Discharge (ROWD) for the next permit renewal.

9. PUBLIC PARTICIPATION

The Los Angeles Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the Tillman WRP. As a step in the WDR adoption process, the Los Angeles Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

9.1. Notification of Interested Parties

The Los Angeles 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, and the public notice, the fact sheet, and the draft order were posted on the Los Angeles Water Board's home page at https://www.waterboards.ca.gov/losangeles/ under the "Tentative Permits" heading. Permittee notification was provided by posting a copy of the notice at the entrance of the Tillman WRP, 6100 Woodley Avenue, Van Nuys, CA 91406. In addition, interested agencies and persons are notified through a transmittal email to the Discharger, being included in the email transaction, for the Los Angeles Water Board's intention to prescribe WDRs for the discharge.

The public had access to the agenda and any changes in dates and locations through the Los Angeles Water Board's website at http://www.waterboards.ca.gov/losangeles/.

9.2. 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 Los Angeles Water Board at the address on the cover page of this Order, or by email submitted to danielle.robinson@waterboards.ca.gov.

To be fully responded to by staff and considered by the Los Angeles Water Board, the written comments were due at the Los Angeles Water Board office by **5:00 p.m. on November 14, 2022**.

9.3. Public Hearing

The Los Angeles 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: December 8, 2022
Time: 09:00 a.m.
Location: WRD Headquarters Board Room
4040 Paramount Blvd
Lakewood, CA 90712

A virtual platform is also available for those who want to join online. Please follow the directions provided in the agenda to register or to view the Board meeting.

Additional information about the location of the hearing and options for participating will be available 10 days before the hearing. Any person desiring to receive future notices about any proposed Board action regarding this Discharger, please contact Danielle Robinson at danielle.robinson@waterboards.ca.gov, to be included on the e-mail list.

Interested persons were invited to attend. At the public hearing, the Los Angeles Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

9.4. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Los Angeles Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100
Or by email at waterqualitypetitions@waterboards.ca.gov

For instructions on how to file a petition for review, see: http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

Filing a petition does not automatically stay any of the requirements of this Order.

9.5. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address below by appointment between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Los Angeles Water Board at the address below or by calling (213) 576-6600.

Los Angeles Regional Water Quality Control Board
320 W. 4th Street, Suite 200
Los Angeles, CA 90013-2343

9.6. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Los Angeles Water Board**,** reference this facility, and provide a name, address, and phone number.

9.7. Additional Information

Requests for additional information or questions regarding this Order should be directed to Danielle Robinson at (213) 576-6656 or via email at danielle.robinson@waterboards.ca.gov.

ATTACHMENT G - TOXICITY REDUCTION EVALUATION (TRE) WORK PLAN

1. Gather and Review Information and Data
   1.1. POTW Operations and Performance
   1.2. POTW Influent and Pretreatment Program
   1.3. Effluent Data, including Toxicity Results
   1.4. Sludge (Biosolids) Data
2. Evaluate Facility Performance
3. Conduct Toxicity Identification Evaluation (TIE)
4. Evaluate Sources and In-Plant Controls
5. Implement Toxicity Control Measures
6. Conduct Confirmatory Toxicity Testing

ATTACHMENT H - PRETREATMENT REPORTING REQUIREMENTS

The City of Los Angeles (Permittee) is required to submit an annual Pretreatment Program Compliance Report (Report) to the Los Angeles Water Board and United States Environmental Protection Agency, Region 9 (USEPA). This Attachment outlines the minimum reporting requirements of the Report. If there is any conflict between requirements stated in this attachment and provisions stated in the Waste Discharge Requirements (WDRs), those contained in the WDRs will prevail.

1. PRETREATMENT REQUIREMENTS

1.1. The Permittee shall be responsible and liable for the performance of all Control Authority pretreatment requirements contained in 40 CFR part 403, including any subsequent regulatory revisions to part 403. Where part 403 or subsequent revision places mandatory actions upon the Permittee as Control Authority but does not specify a timetable for completion of the actions, the Permittee shall complete the required actions within six months from the issuance date of this Order or the effective date of the part 403 revisions, whichever comes later. For violations of pretreatment requirements, the Permittee shall be subject to enforcement actions, penalties, fines and other remedies by the USEPA or other appropriate parties, as provided in the Act. USEPA may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements as provided in the act.

1.2. The Permittee shall enforce the requirements promulgated under sections 307(b), 307(c), 307(d) and 402(b) of the Act with timely, appropriate and effective enforcement actions. The Permittee shall cause all non-domestic users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements or, in the case of a new non-domestic user, upon commencement of the discharge.

1.3. The Permittee shall perform the pretreatment functions as required in 40 CFR part 403 including, but not limited to:

1.3.1. Implement the necessary legal authorities as provided in 40 CFR section 403.8(f)(1);

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

1.3.3. Implement the programmatic functions as provided in 40 CFR section 403.8(f)(2); and

1.3.4. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR section 403.8(f)(3).

1.4. The Permittee shall submit annually a report to USEPA Pacific Southwest Region, and the State describing its pretreatment activities over the previous year. In the event the District is not in compliance with any conditions or requirements of this Order, then the District shall also include the reasons for noncompliance and state how and when the District shall comply with such conditions and requirements. This annual report shall cover operations from January 1 through December 31 and is due on April 30 of each year. The report shall contain, but not be limited to, the following information:

1.4.1. A summary of analytical results from representative, flow proportioned, 24-hour composite sampling of the publicly-owned treatment works (POTW) influent and effluent for those pollutants USEPA has identified under section 307(a) of the Act

which are known or suspected to be discharged by nondomestic users. This will consist of an annual full priority pollutant scan, with quarterly samples analyzed only for those pollutants detected in the full scan. The Permittee is not required to sample and analyze for asbestos. The Permittee shall also provide any influent or effluent monitoring data for nonpriority pollutants which the District believes may be causing or contributing to interference or pass through. Sampling and analysis shall be performed with the techniques prescribed in 40 CFR part 136;

1.4.2. A discussion of Upset, Interference or Pass Through incidents, if any, at the treatment plant which the Permittee knows or suspects were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the nondomestic user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent pass through or interference;

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

1.4.4. The Permittee shall characterize the compliance status of each SIU by providing a list or table which includes the following information:

a. Name of the SIU;

b. Category, if subject to federal categorical standards;

c. The type of wastewater treatment or control processes in place;

d. The number of samples taken by the POTW during the year;

e. The number of samples taken by the SIU during the year;

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

g. A list of the standards violated during the year. Identify whether the violations were for categorical standards or local limits;

h. Whether the facility is in significant noncompliance (SNC) as defined at 40 CFR section 403.8(f)(2)(viii) at any time during the year; and

i. A summary of enforcement or other actions taken during the year to return the SIU to compliance. Describe the type of action, final compliance date, and the amount of fines and penalties collected, if any. Describe any proposed actions for bringing the SIU into compliance.

1.4.5. A brief description of any programs the POTW implements to reduce pollutants from nondomestic users that are not classified as SIUs;

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

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

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

2. LOCAL LIMITS EVALUATION

2.1. In accordance with 40 CFR section 122.44(j)(2)(ii), the POTW shall provide a written technical evaluation of the need to revise local limits under 40 CFR section 403.5(c)(1) following the effective date of the Order. The Local Limits Evaluations for this facility are conducted concurrently with the Local Limits Evaluations for the Hyperion Water Reclamation Plant and the Los Angeles-Gelandale Water Reclamation Plant.

3. SIGNATORY REQUIREMENTS AND REPORT SUBMITTAL

3.1. Signatory Requirements.

The annual report must be signed by a principal executive officer, ranking elected official or other duly authorized employee if such employee is responsible for the overall operation of the POTW. Any person signing these reports must make the following certification [40 CFR section 403.6(a)(2)(ii)]:

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.

3.2. Report Submittal.

The Annual Pretreatment Report shall be submitted electronically using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional information for SMR/DMR submittal in the event there will be a planned service interruption for electronic submittal.

A copy of the Annual Pretreatment Report must be sent to USEPA electronically to the following address: R9Pretreatment@epa.gov.

ATTACHMENT I – SUMMARY OF REASONABLE POTENTIAL ANALYSIS FOR PRIORITY POLLUTANTS

Water Quality Criteria Comparison

CTR #	Parameters	Units	CV	MEC	Title 22 MCLs	Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Human health for consumption of Organisms only	Lowest C
1	Antimony	µg/L	0.3	1.79	6	NONE	NONE	4300	6
2	Arsenic	µg/L	0.4	3.31	10	340	150	NONE	10
3	Beryllium	µg/L	1.0	0.16 (DNQ)	4	NONE	NONE	Narrative	4
4	Cadmium	µg/L	---	---	---	---	---	---	---
5a	Chromium III*	µg/L	0.3	1.45	---	2300	270	Narrative	270
5b	Chromium VI	µg/L	0.6	0.556 (DNQ)	50	16	11	Narrative	11
6	Copper*	µg/L	---	---	---	---	---	---	---
7	Lead	µg/L	---	---	---	---	---	---	---
8	Mercury	ng/L	0.3	0.002	0.012 note a	Reserved	Reserved	0.051	0.012
9	Nickel*	µg/L	0.3	6.75	100	994	110	4600	100
10	Selenium	µg/L	0.3	**1.03**	50	Reserved	5	Narrative	5
11	Silver*	µg/L	0.8	0.268	---	7.2	none	NONE	7.2
12	Thallium	µg/L	1.4	0.88 (DNQ)	2	NONE	NONE	6.3	2
13	Zinc	µg/L	0.2	160	---	220	220	NONE	220
14	Cyanide	µg/L	0.6	5	150	22	5.2	220,000	5.2
15	Asbestos	Fibers/L	---	---	7x10^ 6	NONE	NONE	NONE	7x10^6

CTR #	Parameters	Units	CV	MEC	Title 22 MCLs	Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Human health for consumption of Organisms only	Lowest C
16	2,3,7,8-TCDD (Dioxin)	pg/L	0.6	< 9.5	30	NONE	NONE	0.014	0.014
17	Acrolein	µg/L	0.6	< 0.65		NONE	NONE	780	780
18	Acrylonitrile	µg/L	0.6	< 0.18		NONE	NONE	0.66	0.66
19	Benzene	µg/L	0.6	< 0.08	1	NONE	NONE	71	1
20	Bromoform	µg/L	0.6	< 0.07	--	NONE	NONE	360	360
21	**Carbon Tetrachloride**	**µg/L**	**0.6**	**0.67**	**0.5**	**NONE**	**NONE**	**4.4**	**0.5**
22	Chlorobenzene	µg/L	0.6	< 0.09	--	NONE	NONE	21,000	21,000
23	Dibromochloromethane	µg/L	0.5	3.72	--	NONE	NONE	34	34
24	Chloroethane	µg/L	0.6	< 0.08	--	NONE	NONE	NONE	NONE
25	2-chloroethyl vinyl ether	µg/L	0.6	< 0.37	--	NONE	NONE	NONE	NONE
26	Chloroform	µg/L	0.4	42.9	--	NONE	NONE	Reserved	Reserved
27	Dichlorobromomethane	µg/L	0.3	13.3	--	NONE	NONE	46	46
28	1,1-Dichloroethane	µg/L	0.6	< 0.09	5	NONE	NONE	NONE	5
29	1,2-dichloroethane	µg/L	0.6	< 0.07	0.5	NONE	NONE	99	0.5
30	1,1-Dichloroethylene	µg/L	0.6	< 0.13	6	NONE	NONE	3.2	3.2
31	1,2-dichloropropane	µg/L	0.6	< 0.09	5	NONE	NONE	39	5
32	1,3-dichloropropylene	µg/L	0.6	< 0.08	0.5	NONE	NONE	1,700	0.5
33	Ethylbenzene	µg/L	0.6	< 0.09	300	NONE	NONE	29,000	300
34	Methyl bromide	µg/L	0.6	< 0.15	--	NONE	NONE	4,000	4,000
35	Methyl chloride	µg/L	0.6	< 0.07	--	NONE	NONE	Narrative	Narrative
36	Methylene chloride	µg/L	0.6	7.35	--	NONE	NONE	1,600	1,600
37	1,1,2,2-tetrachlroethane	µg/L	0.6	< 0.02	1	NONE	NONE	11	1
38	Tetrachloroethylene	µg/L	0.6	< 0.07	5	NONE	NONE	8.85	5

CTR #	Parameters	Units	CV	MEC	Title 22 MCLs	Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Human health for consumption of Organisms only	Lowest C
39	Toluene	µg/L	0.6	< 0.1	150	NONE	NONE	200,000	150
40	Trans 1,2-Dichloroethylene	µg/L	0.6	< 0.1	10	NONE	NONE	140,000	10
41	1,1,1-Trichloroethane	µg/L	0.6	< 0.08	200	NONE	NONE	Narrative	200
42	1,1,2-trichloroethane	µg/L	0.6	< 0.08	5	NONE	NONE	42	5
43	Trichloroethylene	µg/L	0.6	< 0.06	5	NONE	NONE	81	5
44	Vinyl chloride	µg/L	0.6	< 0.14	0.5	NONE	NONE	525	0.5
45	2-chlorophenol	µg/L	0.6	< 0.32	--	NONE	NONE	400	400
46	2,4-dichlorophenol	µg/L	0.6	< 0.46	--	NONE	NONE	790	790
47	2,4-dimethylphenol	µg/L	0.6	< 0.57	--	NONE	NONE	2,300	2,300
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	µg/L	0.6	< 0.44	--	NONE	NONE	765	765
49	2,4-dinitrophenol	µg/L	0.6	< 0.38	--	NONE	NONE	14,000	14,000
50	2-nitrophenol	µg/L	0.6	< 0.44	--	NONE	NONE	NONE	None
51	4-nitrophenol	µg/L	0.6	< 0.35	--	NONE	NONE	NONE	None
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-cresol)	µg/L	0.6	0.64 (DNQ)	--	NONE	NONE	NONE	None
53	**Pentachlorophenol**	**µg/L**	**0.6**	**2.6**	**1**	**pH dependent**	**pH dependent**	**8.2**	**1**
54	Phenol	µg/L	0.6	< 0.49	--	NONE	NONE	4,600,000	4.6x10^6
55	2,4,6-trichlorophenol	µg/L	0.6	< 0.39	--	NONE	NONE	6.5	6.5
56	Acenaphthene	µg/L	0.6	< 0.011	--	NONE	NONE	2,700	2,700
57	Acenaphthylene	µg/L	0.6	< 0.017	--	NONE	NONE	NONE	NONE
58	Anthracene	µg/L	0.6	0.047	--	NONE	NONE	110,000	110,000

CTR #	Parameters	Units	CV	MEC	Title 22 MCLs	Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Human health for consumption of Organisms only	Lowest C
59	Benzidine	µg/L	0.6	< 0.15	--	NONE	NONE	0.00054	0.00054
60	Benzo(a)Anthracene	µg/L	0.6	< 0.017	--	NONE	NONE	0.049	0.049
61	**Benzo(a)Pyrene**	**µg/L**	**0.6**	**0.15 (DNQ)**	**0.2**	**NONE**	**NONE**	**0.049**	**0.049**
62	**Benzo(b)Fluoranthene**	**µg/L**	**0.6**	**0.12 (DNQ)**	**--**	**NONE**	**NONE**	**0.049**	**0.049**
63	Benzo(ghi)Perylene	µg/L	1.2	0.13	--	NONE	NONE	NONE	NONE
64	**Benzo(k)Fluoranthene**	**µg/L**	**0.6**	**0.14 (DNQ)**	**--**	**NONE**	**NONE**	**0.049**	**0.049**
65	Bis(2-Chloroethoxy) methane	µg/L	0.6	< 0.21	--	NONE	NONE	NONE	NONE
66	Bis(2-Chloroethyl)Ether	µg/L	0.6	< 0.16	--	NONE	NONE	1.4	1.4
67	Bis(2-Chloroisopropyl) Ether	µg/L	0.6	< 0.2	--	NONE	NONE	170,000	170,000
68	Bis(2-Ethylhexyl) Phthalate	µg/L	0.6	0.38	4	NONE	NONE	5.9	4
69	4-Bromophenyl Phenyl Ether	µg/L	0.6	< 0.13	--	NONE	NONE	NONE	NONE
70	Butylbenzyl Phthalate	µg/L	0.6	< 0.21	--	NONE	NONE	5,200	5,200
71	2-Chloronaphthalene	µg/L	0.6	< 0.17	--	NONE	NONE	4,300	4,300
72	4-Chlorophenyl Phenyl Ether	µg/L	0.6	< 0.12	--	NONE	NONE	NONE	NONE
73	Chrysene	µg/L	0.6	< 0.022	--	NONE	NONE	0.049	0.049
74	**Dibenzo(a,h)Anthracene**	**µg/L**	**1.7**	**0.328**	**--**	**NONE**	**NONE**	**0.049**	**0.049**
75	1,2-Dichlorobenzene	µg/L	0.6	< 0.17	600	NONE	NONE	17,000	600

CTR #	Parameters	Units	CV	MEC	Title 22 MCLs	Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Human health for consumption of Organisms only	Lowest C
76	1,3-Dichlorobenzene	µg/L	0.6	< 0.1	--	NONE	NONE	2,600	2,600
77	1,4-Dichlorobenzene	µg/L	0.6	< 0.17	5	NONE	NONE	2,600	5
78	3,3'-Dichlorobenzidine	µg/L	0.6	< 0.51	--	NONE	NONE	0.077	0.077
79	Diethyl Phthalate	µg/L	0.6	< 0.22	--	NONE	NONE	120,000	120,000
80	Dimethyl Phthalate	µg/L	0.6	< 0.13	--	NONE	NONE	2,900,000	2.9x10^6
81	Di-n-Butyl Phthalate	µg/L	0.6	< 0.31	--	NONE	NONE	12,000	12,000
82	2,4-Dinitrotoluene	µg/L	0.6	< 0.07	--	NONE	NONE	9.1	9.1
83	2,6-Dinitrotoluene	µg/L	0.6	< 0.1	--	NONE	NONE	NONE	NONE
84	Di-n-Octyl Phthalate	µg/L	0.6	< 0.23	--	NONE	NONE	NONE	NONE
85	1,2-Diphenylhydrazine	µg/L	0.6	< 0.21	--	NONE	NONE	0.54	0.54
86	Fluoranthene	µg/L	0.6	0.047	--	NONE	NONE	370	370
87	Fluorene	µg/L	0.6	< 0.014	--	NONE	NONE	14,000	14,000
88	Hexachlorobenzene	µg/L	0.6	< 0.17	--	NONE	NONE	0.00077	0.00077
89	Hexachlorobutadiene	µg/L	0.6	< 0.14	--	NONE	NONE	50	50
90	Hexachlorocyclopentadiene	µg/L	0.6	< 0.05	--	NONE	NONE	17,000	17,000
91	Hexachloroethane	µg/L	0.6	< 0.14	--	NONE	NONE	8.9	8.9
92	**Indeno(1,2,3-cd)Pyrene**	**µg/L**	**1.4**	**0.2**	**--**	**NONE**	**NONE**	**0.049**	**0.049**
93	Isophorone	µg/L	0.6	0.41 (DNQ)	--	NONE	NONE	600	600
94	Napthalene	µg/L	0.6	0.14	--	NONE	NONE	NONE	NONE
95	Nitrobenzene	µg/L	0.6	< 0.18	--	NONE	NONE	1,900	1,900
96	N-Nitrosodimethylamine	µg/L	0.6	< 0.13	--	NONE	NONE	8.1	8.1
97	N-Nitrosodi-n-Propylamine	µg/L	0.6	< 0.2	--	NONE	NONE	1.4	1.4

CTR #	Parameters	Units	CV	MEC	Title 22 MCLs	Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Human health for consumption of Organisms only	Lowest C
98	N-Nitrosodiphenylamine	µg/L	0.6	< 0.13	--	NONE	NONE	16	16
99	Phenanthrene	µg/L	0.6	< 0.012	--	NONE	NONE	NONE	NONE
100	Pyrene	µg/L	0.6	0.042	--	NONE	NONE	11,000	11,000
101	1,2,4-Trichlorobenzene	µg/L	0.6	< 0.18	--	NONE	NONE	NONE	NONE
102	Aldrin	µg/L	0.6	< 0.001	--	3	NONE	0.00014	0.00014
103	alpha-BHC	µg/L	0.6	< 0.0008	--	NONE	NONE	0.013	0.013
104	beta-BHC	µg/L	0.6	< 0.001	--	NONE	NONE	0.046	0.046
105	gamma-BHC (aka Lindane)	µg/L	0.6	0.0272	0.2	0.95	NONE	0.063	0.063
106	delta-BHC	µg/L	0.6	< 0.0009	--	NONE	NONE	NONE	NONE
107	Chlordane	µg/L	2.7	< 0.016	0.1	2.4	0.0043	0.00059	0.00059
108	4,4'-DDT	µg/L	0.6	< 0.001	--	1.1	0.001	0.00059	0.00059
109	4,4'-DDE	µg/L	0.6	< 0.001	--	NONE	NONE	0.00059	0.00059
110	4,4'-DDD	µg/L	0.6	< 0.001	--	NONE	NONE	0.00084	0.00084
111	Dieldrin	µg/L	0.6	< 0.001	--	0.24	0.056	0.00014	0.00014
112	alpha-Endosulfan	µg/L	0.6	< 0.001	--	0.22	0.056	240	0.056
113	beta-Endosulfan	µg/L	0.6	< 0.0016	--	0.22	0.056	240	0.056
114	Endosulfan Sulfate	µg/L	0.6	< 0.001	--	NONE	NONE	240	240
115	Endrin	µg/L	0.6	< 0.002	2	0.086	0.036	0.81	0.036
116	Endrin Aldehyde	µg/L	0.6	< 0.002	--	NONE	NONE	0.81	0.81
117	Heptachlor	µg/L	0.6	< 0.0009	0.01	0.52	0.0038	0.00021	0.00021
118	Heptachlor Epoxide	µg/L	0.6	< 0.0009	0.01	0.52	0.0038	0.00011	0.00011
119	PCB Aroclor 1016	µg/L	0.6	< 0.046	--	NONE	0.014	0.00017	0.00017
120	PCB Aroclor 1221	µg/L	0.6	< 0.054	--	NONE	0.014	0.00017	0.00017

CTR #	Parameters	Units	CV	MEC	Title 22 MCLs	Freshwater C acute = CMC tot	Freshwater C chronic = CCC tot	Human health for consumption of Organisms only	Lowest C
121	PCB Aroclor 1232	µg/L	0.6	< 0.009	--	NONE	0.014	0.00017	0.00017
122	PCB Aroclor 1242	µg/L	0.6	< 0.036	--	NONE	0.014	0.00017	0.00017
123	PCB Aroclor 1248	µg/L	0.6	< 0.024	--	NONE	0.014	0.00017	0.00017
124	PCB Aroclor 1254	µg/L	0.6	< 0.016	--	NONE	0.014	0.00017	0.00017
125	PCB Aroclor 1260	µg/L	0.6	< 0.031	--	NONE	0.014	0.00017	0.00017
126	Toxaphene	µg/L	0.6	< 0.041	3	0.73	0.0002	0.00075	0.0002
	Iron	µg/L	---	---	300	--	--	--	300
	Trihalomethanes	µg/L	0.3	52.5	80	--	--	--	80

Notes:

MEC = Maximum Effluent Concentration
C = Criteria
B = Background Receiving Water Concentration
a = State Water Resources Control Board Mercury Provisions
* = Hardness-dependent Criteria with Hardness = 140 mg/L

Reasonable Potential Tiers

CTR #	Parameters	Units	Tier 1 MEC > = Lowest C	B	Tier 2 B>C & present in Effluent	Tier 3 other info	RPA result	Reason
1	Antimony	µg/L	No	2.44	No	No	No	MEC<C
2	Arsenic	µg/L	No	9.21	No	No	No	MEC<C
3	Beryllium	µg/L	No	0.15 (DNQ)	No	No	No	MEC<C

CTR #	Parameters	Units	Tier 1 MEC > = Lowest C	B	Tier 2 B>C & present in Effluent	Tier 3 other info	RPA result	Reason
4	**Cadmium**	**µg/L**	**---**	**---**	**---**	**TMDL**	**Yes**	**TMDL**
5a	Chromium III*	µg/L	No	3.74	No	No	No	MEC<C
5b	Chromium VI	µg/L	No	3.74	No	No	No	MEC<C
6	**Copper**	**µg/L**	**---**	**---**	**---**	**TMDL**	**Yes**	**TMDL**
7	**Lead**	**µg/L**	**---**	**---**	**---**	**TMDL**	**Yes**	**TMDL**
8	Mercury	ng/L	No	0.0082	No	No	No	MEC<C
9	Nickel*	µg/L	No	50.1	No	No	No	MEC<C
10	**Selenium**	**µg/L**	**No**	**14.8**	**Yes**	**No**	**Yes**	**Tier 2**
11	Silver*	µg/L	No	0.417	No	No	No	MEC<C
12	Thallium	µg/L	No	E 0.46	No	No	No	MEC<C
13	Zinc	µg/L	No	94.3	No	TMDL	Yes	TMDL
14	**Cyanide**	**µg/L**	**No**	**5**	**No**	**Yes**	**Yes**	**303(d) listed; Tier 3**
15	Asbestos	Fibers/L	No	---	No	No	No	No data
16	2,3,7,8-TCDD (Dioxin)	pg/L	No	< 0.193	No	No	No	ND
17	Acrolein	µg/L	No	< 0.003	No	No	No	ND
18	Acrylonitrile	µg/L	No	< 0.0002	No	No	No	ND
19	Benzene	µg/L	No	< 0.08	No	No	No	ND
20	Bromoform	µg/L	No	< 0.07	No	No	No	ND
21	**Carbon Tetrachloride**	**µg/L**	**Yes**	**< 0.1**	**No**	**No**	**Yes**	**Tier 1**
22	Chlorobenzene	µg/L	No	< 0.09	No	No	No	ND
23	Dibromochloromethane	µg/L	No	0.76 (DNQ)	No	No	No	MEC<C
24	Chloroethane	µg/L	Uc	< 0.08	No	No	No	No Criteria
25	2-chloroethyl vinyl ether	µg/L	Uc	< 0.37	No	No	No	No Criteria

CTR #	Parameters	Units	Tier 1 MEC > = Lowest C	B	Tier 2 B>C & present in Effluent	Tier 3 other info	RPA result	Reason
26	Chloroform	µg/L	Uc	8.95	No	No	No	No Criteria
27	Dichlorobromomethane	µg/L	No	3.3	No	No	No	MEC<C
28	1,1-Dichloroethane	µg/L	No	< 0.09	No	No	No	ND
29	1,2-dichloroethane	µg/L	No	< 0.07	No	No	No	ND
30	1,1-Dichloroethylene	µg/L	No	< 0.13	No	No	No	ND
31	1,2-dichloropropane	µg/L	No	< 0.09	No	No	No	ND
32	1,3-dichloropropylene	µg/L	No	< 0.08	No	No	No	ND
33	Ethylbenzene	µg/L	No	0.49 (DNQ)	No	No	No	ND
34	Methyl bromide	µg/L	No	< 0.15	No	No	No	ND
35	Methyl chloride	µg/L	Uc	< 0.13	No	No	No	No Criteria
36	Methylene chloride	µg/L	No	< 0.08	No	No	No	MEC<C
37	1,1,2,2-tetrachlroethane	µg/L	No	< 0.02	No	No	No	ND
38	Tetrachloroethylene	µg/L	No	0.09 (DNQ)	No	No	No	ND
39	Toluene	µg/L	No	1.97 (DNQ)	No	No	No	ND
40	Trans 1,2-Dichloroethylene	µg/L	No	< 0.1	No	No	No	ND
41	1,1,1-Trichloroethane	µg/L	No	< 0.08	No	No	No	ND
42	1,1,2-trichloroethane	µg/L	No	< 0.08	No	No	No	ND
43	Trichloroethylene	µg/L	No	< 0.06	No	No	No	ND
44	Vinyl chloride	µg/L	No	< 0.14	No	No	No	ND
45	2-chlorophenol	µg/L	No	< 0.63	No	No	No	ND
46	2,4-dichlorophenol	µg/L	No	< 0.46	No	No	No	ND
47	2,4-dimethylphenol	µg/L	No	< 0.57	No	No	No	ND

CTR #	Parameters	Units	Tier 1 MEC > = Lowest C	B	Tier 2 B>C & present in Effluent	Tier 3 other info	RPA result	Reason
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	µg/L	No	< 0.44	No	No	No	ND
49	2,4-dinitrophenol	µg/L	No	< 0.67	No	No	No	ND
50	2-nitrophenol	µg/L	Uc	< 0.44	No	No	No	No Criteria
51	4-nitrophenol	µg/L	Uc	< 0.35	No	No	No	No Criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-cresol)	µg/L	Uc	< 0.53	No	No	No	No Criteria
53	**Pentachlorophenol**	**µg/L**	**Yes**	**< 0.37**	**No**	**No**	**Yes**	**Tier 1**
54	Phenol	µg/L	No	< 0.54	No	No	No	ND
55	2,4,6-trichlorophenol	µg/L	No	< 0.39	No	No	No	ND
56	Acenaphthene	µg/L	No	< 0.011	No	No	No	ND
57	Acenaphthylene	µg/L	No	< 0.017	No	No	No	No Criteria
58	Anthracene	µg/L	No	< 0.012	No	No	No	MEC<C
59	Benzidine	µg/L	No	< 0.3	No	No	No	ND
60	Benzo(a)Anthracene	µg/L	No	< 0.012	No	No	No	ND
61	**Benzo(a)Pyrene**	**µg/L**	**Yes**	**0.052 (DNQ)**	**Yes**	**No**	**Yes**	**Tier 1 & 2**
62	**Benzo(b)Fluoranthene**	**µg/L**	**Yes**	**0.048 (DNQ)**	**No**	**No**	**Yes**	**Tier 1**
63	Benzo(ghi)Perylene	µg/L	Uc	0.39	No	No	No	No Criteria
64	**Benzo(k)Fluoranthene**	**µg/L**	**Yes**	**< 0.012**	**No**	**No**	**Yes**	**Tier 1**
65	Bis(2-Chloroethoxy) methane	µg/L	Uc	< 0.21	No	No	No	No Criteria
66	Bis(2-Chloroethyl)Ether	µg/L	No	< 0.18	No	No	No	ND
67	Bis(2-Chloroisopropyl) Ether	µg/L	No	< 0.2	No	No	No	ND

CTR #	Parameters	Units	Tier 1 MEC > = Lowest C	B	Tier 2 B>C & present in Effluent	Tier 3 other info	RPA result	Reason
68	Bis(2-Ethylhexyl) Phthalate	µg/L	No	2.02 (DNQ)	No	No	No	MEC<C
69	4-Bromophenyl Phenyl Ether	µg/L	Uc	< 0.13	No	No	No	No Criteria
70	Butylbenzyl Phthalate	µg/L	No	< 0.21	No	No	No	ND
71	2-Chloronaphthalene	µg/L	No	< 0.17	No	No	No	ND
72	4-Chlorophenyl Phenyl Ether	µg/L	Uc	< 0.12	No	No	No	No Criteria
73	Chrysene	µg/L	No	< 0.016	No	No	No	ND
74	**Dibenzo(a,h)Anthracene**	**µg/L**	**Yes**	**0.29**	**Yes**	**No**	**Yes**	**Tier 1 & 2**
75	1,2-Dichlorobenzene	µg/L	No	< 0.17	No	No	No	ND
76	1,3-Dichlorobenzene	µg/L	No	< 0.14	No	No	No	ND
77	1,4-Dichlorobenzene	µg/L	No	< 0.17	No	No	No	ND
78	3,3'-Dichlorobenzidine	µg/L	No	< 0.51	No	No	No	ND
79	Diethyl Phthalate	µg/L	No	< 0.25	No	No	No	ND
80	Dimethyl Phthalate	µg/L	No	< 0.13	No	No	No	ND
81	Di-n-Butyl Phthalate	µg/L	No	< 0.31	No	No	No	ND
82	2,4-Dinitrotoluene	µg/L	No	< 0.07	No	No	No	ND
83	2,6-Dinitrotoluene	µg/L	Uc	< 0.1	No	No	No	No Criteria
84	Di-n-Octyl Phthalate	µg/L	Uc	< 0.23	No	No	No	No Criteria
85	1,2-Diphenylhydrazine	µg/L	No	< 0.32	No	No	No	ND
86	Fluoranthene	µg/L	No	0.25	No	No	No	MEC<C
87	Fluorene	µg/L	No	< 0.014	No	No	No	ND
88	Hexachlorobenzene	µg/L	No	< 0.17	No	No	No	ND
89	Hexachlorobutadiene	µg/L	No	< 0.14	No	No	No	ND
90	Hexachlorocyclopentadiene	µg/L	No	< 0.05	No	No	No	ND
91	Hexachloroethane	µg/L	No	< 0.14	No	No	No	ND

CTR #	Parameters	Units	Tier 1 MEC > = Lowest C	B	Tier 2 B>C & present in Effluent	Tier 3 other info	RPA result	Reason
92	**Indeno(1,2,3-cd)Pyrene**	**µg/L**	**Yes**	**0.28**	**Yes**	**No**	**Yes**	**Tier 1 & 2**
93	Isophorone	µg/L	No	< 0.22	No	No	No	MEC<C
94	Napthalene	µg/L	Uc	0.58	No	No	No	No Criteria
95	Nitrobenzene	µg/L	No	< 0.18	No	No	No	ND
96	N-Nitrosodimethylamine	µg/L	No	< 0.13	No	No	No	ND
97	N-Nitrosodi-n-Propylamine	µg/L	No	< 0.21	No	No	No	ND
98	N-Nitrosodiphenylamine	µg/L	No	< 0.13	No	No	No	ND
99	Phenanthrene	µg/L	Uc	< 0.012	No	No	No	No Criteria
100	Pyrene	µg/L	No	0.2	No	No	No	MEC<C
101	1,2,4-Trichlorobenzene	µg/L	Uc	< 0.18	No	No	No	No Criteria
102	Aldrin	µg/L	No	< 0.001	No	No	No	ND
103	alpha-BHC	µg/L	No	< 0.001	No	No	No	ND
104	beta-BHC	µg/L	No	< 0.001	No	No	No	ND
105	gamma-BHC (aka Lindane)	µg/L	No	< 0.001	No	No	No	MEC<C
106	delta-BHC	µg/L	Uc	< 0.001	No	No	No	No Criteria
107	Chlordane	µg/L	No	< 0.016	No	No	No	ND
108	4,4'-DDT	µg/L	No	< 0.001	No	No	No	ND
109	4,4'-DDE	µg/L	No	< 0.001	No	No	No	ND
110	4,4'-DDD	µg/L	No	< 0.001	No	No	No	ND
111	Dieldrin	µg/L	No	< 0.001	No	No	No	ND
112	alpha-Endosulfan	µg/L	No	< 0.001	No	No	No	ND
113	beta-Endosulfan	µg/L	No	< 0.002	No	No	No	ND
114	Endosulfan Sulfate	µg/L	No	< 0.001	No	No	No	ND
115	Endrin	µg/L	No	< 0.002	No	No	No	ND
116	Endrin Aldehyde	µg/L	No	< 0.002	No	No	No	ND

CTR #	Parameters	Units	Tier 1 MEC > = Lowest C	B	Tier 2 B>C & present in Effluent	Tier 3 other info	RPA result	Reason
117	Heptachlor	µg/L	No	< 0.001	No	No	No	ND
118	Heptachlor Epoxide	µg/L	No	< 0.001	No	No	No	ND
119	PCB Aroclor 1016	µg/L	No	< 0.046	No	No	No	ND
120	PCB Aroclor 1221	µg/L	No	< 0.054	No	No	No	ND
121	PCB Aroclor 1232	µg/L	No	< 0.05	No	No	No	ND
122	PCB Aroclor 1242	µg/L	No	< 0.043	No	No	No	ND
123	PCB Aroclor 1248	µg/L	No	< 0.031	No	No	No	ND
124	PCB Aroclor 1254	µg/L	No	< 0.016	No	No	No	ND
125	PCB Aroclor 1260	µg/L	No	< 0.031	No	No	No	ND
126	Toxaphene	µg/L	No	< 0.041	No	No	No	ND
	Iron	µg/L	Ud	Ud	Ud	Ud	No	No data
	Trihalomethanes	**µg/L**	**No**	**14.75**	**No**	**No**	**Yes**	**MEC<C, TSD RPA**

Notes:

MEC = Maximum Effluent Concentration
C = Criteria
B = Background Receiving Water Concentration
Ud = Undetermined due to lack of data
Uc = Undetermined due to lack of criteria
RPA = Reasonable Potential Analysis
TSD = USEPA Technical Support Document
ND = Not Detected
E = estimated value (for detected but not quantified (DNQ) values)

Aquatic Life Limit Calculations

CTR #	Parameters	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife
1	Antimony	--	--	--	--	--	--	--	--	--
2	Arsenic	--	--	--	--	--	--	--	--	--
3	Beryllium	--	--	--	--	--	--	--	--	--
4	Cadmium	--	--	--	--	--	--	--	--	--
5a	Chromium III*	--	--	--	--	--	--	--	--	--
5b	Chromium VI	--	--	--	--	--	--	--	--	--
6	Copper	--	--	--	--	--	--	--	--	--
7	Lead	--	--	--	--	--	--	--	--	--
8	Mercury	--	--	--	--	--	--	--	--	--
9	Nickel*	--	--	--	--	--	--	--	--	--
10	**Selenium**	**--**	**--**	**0.689**	**3.45**	**3.45**	**1.30**	**4.47**	**2.02**	**6.97**
11	Silver*	--	--	--	--	--	--	--	--	--
12	Thallium	--	--	--	--	--	--	--	--	--
13	**Zinc (wet weather)**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
14	**Cyanide**	**0.32**	**7.06**	**0.53**	**2.7**	**2.7**	**1.55**	**4.3**	**3.11**	**8.5**
15	Asbestos	--	--	--	--	--	--	--	--	--
16	2,3,7,8-TCDD (Dioxin)	--	--	--	--	--	--	--	--	--
17	Acrolein	--	--	--	--	--	--	--	--	--
18	Acrylonitrile	--	--	--	--	--	--	--	--	--
19	Benzene	--	--	--	--	--	--	--	--	--
20	Bromoform	--	--	--	--	--	--	--	--	--
21	Carbon Tetrachloride	--	--	--	--	--	--	--	--	--
22	Chlorobenzene	--	--	--	--	--	--	--	--	--
23	Dibromochloromethane	--	--	--	--	--	--	--	--	--

CTR #	Parameters	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife
24	Chloroethane	--	--	--	--	--	--	--	--	--
25	2-chloroethyl vinyl ether	--	--	--	--	--	--	--	--	--
26	Chloroform	--	--	--	--	--	--	--	--	--
27	Dichlorobromomethane	--	--	--	--	--	--	--	--	--
28	1,1-Dichloroethane	--	--	--	--	--	--	--	--	--
29	1,2-dichloroethane	--	--	--	--	--	--	--	--	--
30	1,1-Dichloroethylene	--	--	--	--	--	--	--	--	--
31	1,2-dichloropropane	--	--	--	--	--	--	--	--	--
32	1,3-dichloropropylene	--	--	--	--	--	--	--	--	--
33	Ethylbenzene	--	--	--	--	--	--	--	--	--
34	Methyl bromide	--	--	--	--	--	--	--	--	--
35	Methyl chloride	--	--	--	--	--	--	--	--	--
36	Methylene chloride	--	--	--	--	--	--	--	--	--
37	1,1,2,2-tetrachlroethane	--	--	--	--	--	--	--	--	--
38	Tetrachloroethylene	--	--	--	--	--	--	--	--	--
39	Toluene	--	--	--	--	--	--	--	--	--
40	Trans 1,2-Dichloroethylene	--	--	--	--	--	--	--	--	--
41	1,1,1-Trichloroethane	--	--	--	--	--	--	--	--	--
42	1,1,2-trichloroethane	--	--	--	--	--	--	--	--	--
43	Trichloroethylene	--	--	--	--	--	--	--	--	--
44	Vinyl chloride	--	--	--	--	--	--	--	--	--
45	2-chlorophenol	--	--	--	--	--	--	--	--	--
46	2,4-dichlorophenol	--	--	--	--	--	--	--	--	--
47	2,4-dimethylphenol	--	--	--	--	--	--	--	--	--

CTR #	Parameters	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	--	--	--	--	--	--	--	--	--
49	2,4-dinitrophenol	--	--	--	--	--	--	--	--	--
50	2-nitrophenol	--	--	--	--	--	--	--	--	--
51	4-nitrophenol	--	--	--	--	--	--	--	--	--
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-cresol)	--	--	--	--	--	--	--	--	--
53	**Pentachlorophenol**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
54	Phenol	--	--	--	--	--	--	--	--	--
55	2,4,6-trichlorophenol	--	--	--	--	--	--	--	--	--
56	Acenaphthene	--	--	--	--	--	--	--	--	--
57	Acenaphthylene	--	--	--	--	--	--	--	--	--
58	Anthracene	--	--	--	--	--	--	--	--	--
59	Benzidine	--	--	--	--	--	--	--	--	--
60	Benzo(a)Anthracene	--	--	--	--	--	--	--	--	--
61	**Benzo(a)Pyrene**	**--**	**--**	**--**	**--**	**--**	**1.55**	**--**	**3.11**	**--**
62	**Benzo(b)Fluoranthene**	**--**	**--**	**--**	**--**	**--**	**1.55**	**--**	**3.11**	**--**
63	Benzo(ghi)Perylene	--	--	--	--	--	--	--	--	--
64	**Benzo(k)Fluoranthene**	**--**	**--**	**--**	**--**	**--**	**1.55**	**--**	**3.11**	**--**
65	Bis(2-Chloroethoxy) methane	--	--	--	--	--	--	--	--	--
66	Bis(2-Chloroethyl)Ether	--	--	--	--	--	--	--	--	--
67	Bis(2-Chloroisopropyl) Ether	--	--	--	--	--	--	--	--	--
68	Bis(2-Ethylhexyl) Phthalate	--	--	--	--	--	--	--	--	--

CTR #	Parameters	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife
69	4-Bromophenyl Phenyl Ether	--	--	--	--	--	--	--	--	--
70	Butylbenzyl Phthalate	--	--	--	--	--	--	--	--	--
71	2-Chloronaphthalene	--	--	--	--	--	--	--	--	--
72	4-Chlorophenyl Phenyl Ether	--	--	--	--	--	--	--	--	--
73	Chrysene	--	--	--	--	--	--	--	--	--
74	**Dibenzo(a,h)Anthracene**	**--**	**--**	**--**	**--**	**--**	**2.58**	**--**	**7.72**	**--**
75	1,2-Dichlorobenzene	--	--	--	--	--	--	--	--	--
76	1,3-Dichlorobenzene	--	--	--	--	--	--	--	--	--
77	1,4-Dichlorobenzene	--	--	--	--	--	--	--	--	--
78	3,3'-Dichlorobenzidine	--	--	--	--	--	--	--	--	--
79	Diethyl Phthalate	--	--	--	--	--	--	--	--	--
80	Dimethyl Phthalate	--	--	--	--	--	--	--	--	--
81	Di-n-Butyl Phthalate	--	--	--	--	--	--	--	--	--
82	2,4-Dinitrotoluene	--	--	--	--	--	--	--	--	--
83	2,6-Dinitrotoluene	--	--	--	--	--	--	--	--	--
84	Di-n-Octyl Phthalate	--	--	--	--	--	--	--	--	--
85	1,2-Diphenylhydrazine	--	--	--	--	--	--	--	--	--
86	Fluoranthene	--	--	--	--	--	--	--	--	--
87	Fluorene	--	--	--	--	--	--	--	--	--
88	Hexachlorobenzene	--	--	--	--	--	--	--	--	--
89	Hexachlorobutadiene	--	--	--	--	--	--	--	--	--
90	Hexachlorocyclopentadiene	--	--	--	--	--	--	--	--	--
91	Hexachloroethane	--	--	--	--	--	--	--	--	--

CTR #	Parameters	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife
92	**Indeno(1,2,3-cd)Pyrene**	**--**	**--**	**--**	**--**	**--**	**2.32**	**--**	**6.57**	**--**
93	Isophorone	--	--	--	--	--	--	--	--	--
94	Napthalene	--	--	--	--	--	--	--	--	--
95	Nitrobenzene	--	--	--	--	--	--	--	--	--
96	N-Nitrosodimethylamine	--	--	--	--	--	--	--	--	--
97	N-Nitrosodi-n-Propylamine	--	--	--	--	--	--	--	--	--
98	N-Nitrosodiphenylamine	--	--	--	--	--	--	--	--	--
99	Phenanthrene	--	--	--	--	--	--	--	--	--
100	Pyrene	--	--	--	--	--	--	--	--	--
101	1,2,4-Trichlorobenzene	--	--	--	--	--	--	--	--	--
102	Aldrin	--	--	--	--	--	--	--	--	--
103	alpha-BHC	--	--	--	--	--	--	--	--	--
104	beta-BHC	--	--	--	--	--	--	--	--	--
105	gamma-BHC (aka Lindane)	--	--	--	--	--	--	--	--	--
106	delta-BHC	--	--	--	--	--	--	--	--	--
107	Chlordane	--	--	--	--	--	--	--	--	--
108	4,4'-DDT	--	--	--	--	--	--	--	--	--
109	4,4'-DDE	--	--	--	--	--	--	--	--	--
110	4,4'-DDD	--	--	--	--	--	--	--	--	--
111	Dieldrin	--	--	--	--	--	--	--	--	--
112	alpha-Endosulfan	--	--	--	--	--	--	--	--	--
113	beta-Endosulfan	--	--	--	--	--	--	--	--	--
114	Endosulfan Sulfate	--	--	--	--	--	--	--	--	--
115	Endrin	--	--	--	--	--	--	--	--	--
116	Endrin Aldehyde	--	--	--	--	--	--	--	--	--

CTR #	Parameters	ECA acute multiplier (p.7)	LTA acute	ECA chronic multiplier	LTA chronic	Lowest LTA	AMEL multiplier (n=4)	AMEL aq.life	MDEL multiplier (n=4)	MDEL aqlife
117	Heptachlor	--	--	--	--	--	--	--	--	--
118	Heptachlor Epoxide	--	--	--	--	--	--	--	--	--
119	PCB Aroclor 1016	--	--	--	--	--	--	--	--	--
120	PCB Aroclor 1221	--	--	--	--	--	--	--	--	--
121	PCB Aroclor 1232	--	--	--	--	--	--	--	--	--
122	PCB Aroclor 1242	--	--	--	--	--	--	--	--	--
123	PCB Aroclor 1248	--	--	--	--	--	--	--	--	--
124	PCB Aroclor 1254	--	--	--	--	--	--	--	--	--
125	PCB Aroclor 1260	--	--	--	--	--	--	--	--	--
126	Toxaphene	--	--	--	--	--	--	--	--	--
	Iron	--	--	--	--	--	--	--	--	--
	Trihalomethanes	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**

Notes:

ECA = Effluent concentration allowance
LTA = Long Term Average
AMEL = Average Monthly Effluent Limitation
MDEL = Maximum Daily Effluent Limitation

Human Health Limit Calculations and Final Limitation Determination

CTR #	Parameters	Human health AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	Human health MDELhh	Lowest AMEL	Lowest MDEL	Recommendation
1	Antimony	--	--	--	--	--	No reasonable potential
2	Arsenic	--	--	--	--	--	No reasonable potential
3	Beryllium	--	--	--	--	--	No reasonable potential
4	**Cadmium**	**--**	**--**	**--**	**--**	**--**	**Reasonable potential**
5a	Chromium III*	--	--	--	--	--	No reasonable potential
5b	Chromium VI	--	--	--	--	--	No reasonable potential
6	**Copper**	**--**	**--**	**--**	**--**	**--**	**Reasonable potential**
7	**Lead**	**--**	**--**	**--**	**--**	**--**	**Reasonable potential**
8	Mercury	--	--	--	--	--	No reasonable potential
9	Nickel*	--	--	--	--	--	No reasonable potential
10	**Selenium**	**--**	**--**	**--**	**4.47**	**6.97**	**Reasonable potential**
11	Silver*	--	--	--	--	--	No reasonable potential
12	Thallium	--	--	--	--	--	No reasonable potential
13	**Zinc (wet weather)**	**--**	**--**	**--**	**--**	**--**	**Reasonable potential**
14	**Cyanide**	**220,000**	**2.0**	**441,362**	**4.3**	**8.5**	**Reasonable potential**
15	Asbestos	--	--	--	--	--	No reasonable potential
16	2,3,7,8-TCDD (Dioxin)	--	--	--	--	--	No reasonable potential
17	Acrolein	--	--	--	--	--	No reasonable potential
18	Acrylonitrile	--	--	--	--	--	No reasonable potential
19	Benzene	--	--	--	--	--	No reasonable potential
20	Bromoform	--	--	--	--	--	No reasonable potential
21	**Carbon Tetrachloride**	**--**	**--**	**--**	**0.5**	**--**	**Reasonable potential**
22	Chlorobenzene	--	--	--	--	--	No reasonable potential

CTR #	Parameters	Human health AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	Human health MDELhh	Lowest AMEL	Lowest MDEL	Recommendation
23	Dibromochloromethane	--	--	--	--	--	No reasonable potential
24	Chloroethane	--	--	--	--	--	No reasonable potential
25	2-chloroethyl vinyl ether	--	--	--	--	--	No reasonable potential
26	Chloroform	--	--	--	--	--	No reasonable potential
27	Dichlorobromomethane	--	--	--	--	--	No reasonable potential
28	1,1-Dichloroethane	--	--	--	--	--	No reasonable potential
29	1,2-dichloroethane	--	--	--	--	--	No reasonable potential
30	1,1-Dichloroethylene	--	--	--	--	--	No reasonable potential
31	1,2-dichloropropane	--	--	--	--	--	No reasonable potential
32	1,3-dichloropropylene	--	--	--	--	--	No reasonable potential
33	Ethylbenzene	--	--	--	--	--	No reasonable potential
34	Methyl bromide	--	--	--	--	--	No reasonable potential
35	Methyl chloride	--	--	--	--	--	No reasonable potential
36	Methylene chloride	--	--	--	--	--	No reasonable potential
37	1,1,2,2-tetrachlroethane	--	--	--	--	--	No reasonable potential
38	Tetrachloroethylene	--	--	--	--	--	No reasonable potential
39	Toluene	--	--	--	--	--	No reasonable potential
40	Trans 1,2-Dichloroethylene	--	--	--	--	--	No reasonable potential
41	1,1,1-Trichloroethane	--	--	--	--	--	No reasonable potential
42	1,1,2-trichloroethane	--	--	--	--	--	No reasonable potential
43	Trichloroethylene	--	--	--	--	--	No reasonable potential
44	Vinyl chloride	--	--	--	--	--	No reasonable potential
45	2-chlorophenol	--	--	--	--	--	No reasonable potential
46	2,4-dichlorophenol	--	--	--	--	--	No reasonable potential

CTR #	Parameters	Human health AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	Human health MDELhh	Lowest AMEL	Lowest MDEL	Recommendation
47	2,4-dimethylphenol	--	--	--	--	--	No reasonable potential
48	4,6-dinitro-o-resol (aka2-methyl-4,6-Dinitrophenol)	--	--	--	--	--	No reasonable potential
49	2,4-dinitrophenol	--	--	--	--	--	No reasonable potential
50	2-nitrophenol	--	--	--	--	--	No reasonable potential
51	4-nitrophenol	--	--	--	--	--	No reasonable potential
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-cresol)	--	--	--	--	--	No reasonable potential
53	**Pentachlorophenol**	**--**	**--**	**--**	**1**	**--**	**Reasonable potential**
54	Phenol	--	--	--	--	--	No reasonable potential
55	2,4,6-trichlorophenol	--	--	--	--	--	No reasonable potential
56	Acenaphthene	--	--	--	--	--	No reasonable potential
57	Acenaphthylene	--	--	--	--	--	No reasonable potential
58	Anthracene	--	--	--	--	--	No reasonable potential
59	Benzidine	--	--	--	--	--	No reasonable potential
60	Benzo(a)Anthracene	--	--	--	--	--	No reasonable potential
61	**Benzo(a)Pyrene**	**0.049**	**2.01**	**0.098**	**0.049**	**0.098**	**Reasonable potential**
62	**Benzo(b)Fluoranthene**	**0.049**	**2.01**	**0.098**	**0.049**	**0.098**	**Reasonable potential**
63	Benzo(ghi)Perylene	--	--	--	--	--	No reasonable potential
64	**Benzo(k)Fluoranthene**	**0.049**	**2.01**	**0.098**	**0.049**	**0.098**	**Reasonable potential**
65	Bis(2-Chloroethoxy) methane	--	--	--	--	--	No reasonable potential
66	Bis(2-Chloroethyl)Ether	--	--	--	--	--	No reasonable potential
67	Bis(2-Chloroisopropyl) Ether	--	--	--	--	--	No reasonable potential
68	Bis(2-Ethylhexyl) Phthalate	--	--	--	--	--	No reasonable potential

CTR #	Parameters	Human health AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	Human health MDELhh	Lowest AMEL	Lowest MDEL	Recommendation
69	4-Bromophenyl Phenyl Ether	--	--	--	--	--	No reasonable potential
70	Butylbenzyl Phthalate	--	--	--	--	--	No reasonable potential
71	2-Chloronaphthalene	--	--	--	--	--	No reasonable potential
72	4-Chlorophenyl Phenyl Ether	--	--	--	--	--	No reasonable potential
73	Chrysene	--	--	--	--	--	No reasonable potential
74	**Dibenzo(a,h)Anthracene**	**0.049**	**2.99**	**0.146**	**0.049**	**0.146**	**Reasonable potential**
75	1,2-Dichlorobenzene	--	--	--	--	--	No reasonable potential
76	1,3-Dichlorobenzene	--	--	--	--	--	No reasonable potential
77	1,4-Dichlorobenzene	--	--	--	--	--	No reasonable potential
78	3,3'-Dichlorobenzidine	--	--	--	--	--	No reasonable potential
79	Diethyl Phthalate	--	--	--	--	--	No reasonable potential
80	Dimethyl Phthalate	--	--	--	--	--	No reasonable potential
81	Di-n-Butyl Phthalate	--	--	--	--	--	No reasonable potential
82	2,4-Dinitrotoluene	--	--	--	--	--	No reasonable potential
83	2,6-Dinitrotoluene	--	--	--	--	--	No reasonable potential
84	Di-n-Octyl Phthalate	--	--	--	--	--	No reasonable potential
85	1,2-Diphenylhydrazine	--	--	--	--	--	No reasonable potential
86	Fluoranthene	--	--	--	--	--	No reasonable potential
87	Fluorene	--	--	--	--	--	No reasonable potential
88	Hexachlorobenzene	--	--	--	--	--	No reasonable potential
89	Hexachlorobutadiene	--	--	--	--	--	No reasonable potential
90	Hexachlorocyclopentadiene	--	--	--	--	--	No reasonable potential
91	Hexachloroethane	--	--	--	--	--	No reasonable potential
92	**Indeno(1,2,3-cd)Pyrene**	**0.049**	**2**	**0.139**	**0.049**	**0.139**	**Reasonable potential**

CTR #	Parameters	Human health AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	Human health MDELhh	Lowest AMEL	Lowest MDEL	Recommendation
93	Isophorone	--	--	--	--	--	No reasonable potential
94	Napthalene	--	--	--	--	--	No reasonable potential
95	Nitrobenzene	--	--	--	--	--	No reasonable potential
96	N-Nitrosodimethylamine	--	--	--	--	--	No reasonable potential
97	N-Nitrosodi-n-Propylamine	--	--	--	--	--	No reasonable potential
98	N-Nitrosodiphenylamine	--	--	--	--	--	No reasonable potential
99	Phenanthrene	--	--	--	--	--	No reasonable potential
100	Pyrene	--	--	--	--	--	No reasonable potential
101	1,2,4-Trichlorobenzene	--	--	--	--	--	No reasonable potential
102	Aldrin	--	--	--	--	--	No reasonable potential
103	alpha-BHC	--	--	--	--	--	No reasonable potential
104	beta-BHC	--	--	--	--	--	No reasonable potential
105	gamma-BHC (aka Lindane)	--	--	--	--	--	No reasonable potential
106	delta-BHC	--	--	--	--	--	No reasonable potential
107	Chlordane	--	--	--	--	--	No reasonable potential
108	4,4'-DDT	--	--	--	--	--	No reasonable potential
109	4,4'-DDE	--	--	--	--	--	No reasonable potential
110	4,4'-DDD	--	--	--	--	--	No reasonable potential
111	Dieldrin	--	--	--	--	--	No reasonable potential
112	alpha-Endosulfan	--	--	--	--	--	No reasonable potential
113	beta-Endosulfan	--	--	--	--	--	No reasonable potential
114	Endosulfan Sulfate	--	--	--	--	--	No reasonable potential
115	Endrin	--	--	--	--	--	No reasonable potential
116	Endrin Aldehyde	--	--	--	--	--	No reasonable potential

CTR #	Parameters	Human health AMELhh = ECA = C hh O	MDEL/ AMEL multiplier	Human health MDELhh	Lowest AMEL	Lowest MDEL	Recommendation
117	Heptachlor	--	--	--	--	--	No reasonable potential
118	Heptachlor Epoxide	--	--	--	--	--	No reasonable potential
119	PCB Aroclor 1016	--	--	--	--	--	No reasonable potential
120	PCB Aroclor 1221	--	--	--	--	--	No reasonable potential
121	PCB Aroclor 1232	--	--	--	--	--	No reasonable potential
122	PCB Aroclor 1242	--	--	--	--	--	No reasonable potential
123	PCB Aroclor 1248	--	--	--	--	--	No reasonable potential
124	PCB Aroclor 1254	--	--	--	--	--	No reasonable potential
125	PCB Aroclor 1260	--	--	--	--	--	No reasonable potential
126	Toxaphene	--	--	--	--	--	No reasonable potential
	Iron	--	--	--	300	--	No reasonable potential
	Trihalomethanes	**--**	**--**	**--**	**80**	**--**	**No reasonable potential**