CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

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ORDER NO. R4-2015-XXXX
NPDES NO. CA0054119

WASTE DISCHARGE REQUIREMENTS FOR THE JOINT OUTFALL SYSTEM LONG BEACH WATER RECLAMATION PLANT

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

Table 1. Discharger Information

Discharger	Joint Outfall System[1] (JOS, Permittee or Discharger)
Name of Facility	Long Beach Water Reclamation Plant (Long Beach WRP or Facility) and its associated wastewater collection system and outfall
Facility Address	7400 East Willow Street
	Long Beach, CA 90815
	Los Angeles County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Tertiary treated wastewater	33.79861º	-118.08778º	Coyote Creek

Table 3. Administrative Information

This Order was adopted on:	June 11, 2015
This Order shall become effective on:	August 1, 2015
This Order shall expire on:	July 31, 2020
The Permittee shall file a Report of Waste Discharge as an application for renewal of waste discharge requirements in accordance with Title 23, Division 3, Chapter 9 of the California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System permit in accordance with Title 40, section 122.21(d) of the Code of Federal regulations no later than:	180 days prior to the Order expiration date
The United States Environmental Protection Agency and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Major

[1] Ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995. These parties include County Sanitation Districts of Los Angeles County Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County.

I, Samuel Unger, 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**.

_____

Samuel Unger, P.E., Executive Officer

REVISED TENTATIVE

Contents

I. Facility Information 4
II. Findings 4
III. Discharge Prohibitions 5
IV. Effluent Limitations and Discharge Specifications 5
A. Effluent Limitations – Discharge Point 001 5
1. Final Effluent Limitations – Discharge Point 001 5
2. Other Effluent Limitations Applicable to Discharge Point 001 7
3. Interim Effluent Limitations – Not Applicable 8
B. Land Discharge Specifications – Not Applicable 8
C. Recycling Specifications – Not Applicable 8
V. Receiving Water Limitations 8
A. Surface Water Limitations 8
VI. Provisions 10
A. Standard Provisions 10
B. Monitoring and Reporting Program (MRP) Requirements 13
C. Special Provisions 13
1. Reopener Provisions 13
2. Special Studies, Technical Reports and Additional Monitoring Requirements 14
3. Best Management Practices and Pollution Prevention 16
4. Construction, Operation and Maintenance Specifications 17
5. Special Provisions for Municipal Facilities (POTWs Only) 17
6. Spill Reporting Requirements 19
7. Compliance Schedules – Not Applicable 22
VII. Compliance Determination 23

Tables

Table 1. Discharger Information 1
Table 2. Discharge Location 1
Table 3. Administrative Information 1
Table 4. Effluent Limitations 5

Attachments

Attachment A – Definitions A-1
Attachment B – Map B-1
Attachment C – Flow Schematic C-1
Attachment D – Standard Provisions D-1
Attachment E – Monitoring and Reporting Program E-1
Attachment F – Fact Sheet F-1
Attachment G – Toxicity Reduction Evaluation (TRE) Work Plan G-1
Attachment H – Pretreatment Reporting Requirements H-1

REVISED TENTATIVE

I. FACILITY INFORMATION

Information describing the Long Beach Water Reclamation Plant (Long Beach WRP or Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

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

A. Legal Authorities. This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (CWC; 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 United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the CWC (commencing with section 13370). It shall serve as a National Pollutant Discharge Elimination System (NPDES) permit for point source discharges from this facility to surface waters.

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

C. Notification of Interested Parties. The Regional Water Board has notified the Permittee 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.

D. Provisions and Requirements Implementing State Law. Some of the provisions/requirements in this Order and the MRP are included to implement state law only. These provisions/requirements are not mandated or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies available for NPDES violations.

E. Consideration of Public Comment. The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet.

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order No. R4-2007-0047 except for enforcement purposes, and, in order to meet the provisions contained in Division 7 of the CWC (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Permittee is authorized to discharge from the identified facility and outfalls into waters of the United States and shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for past violations of the previous Order.

REVISED TENTATIVE

III. DISCHARGE PROHIBITIONS

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

B. The bypass or overflow of untreated wastewater or wastes to surface waters or surface water drainage courses is prohibited, except as allowed in section VI.C.5.d of this Order and Standard Provision I.G. of Attachment D, Standard Provisions.

C. The monthly average effluent dry weather discharge flow rate from the facility shall not exceed the 25.0 million gallons per day (mgd) design capacity.

D. The Permittee shall not cause degradation of any water supply, except as consistent with State Water Board Resolution No. 68-16.

E. 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 California Water Code.

F. The discharge of any substances in concentrations toxic to animals or plants is prohibited.

G. The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is prohibited under Water Code section 13375.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

a. The Permittee shall maintain compliance with the following effluent limitations at Discharge Point 001 into Coyote Creek, with compliance measured at Monitoring Location EFF-001 as described in the Monitoring and Reporting Program (MRP), Attachment E:

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand ($BOD_5$20°C)	mg/L	20	30	45		
	lbs/day[1]	4,200	6,300	9,400		
Total Suspended Solids (TSS)	mg/L	15	40	45		
	lbs/day[1]	3,100	8,300	9,400		
pH	standard units	--	--	--	6.5	8.5
Removal Efficiency for BOD and TSS	%	85	--	--		

[1] The mass-based effluent limitations are based on the plant design flow rate of 25 mgd, and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day, or Flow (mgd) x Concentration (µg/L) x 0.00834 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity of the facility, the mass-based effluent limitations shall not apply, and the concentration-based effluent limitations will be the only applicable effluent limitations during such events.

REVISED TENTATIVE

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Oil and Grease	mg/L	10	--	15		
	lbs/day[1]	2,100	--	3,100		
Settleable Solids	ml/L	0.1	--	0.3		
Total Residual Chlorine	mg/L	--	--	0.1		
	lbs/day[1]	--	--	21		
Ammonia Nitrogen	mg/L	4.1	--	7.9		
	lbs/day[1]	855	--	1,647		
Nitrate + Nitrite (as N)	mg/L	8	--	--		
	lbs/day[1]	1,670	--	--		
Nitrite (as N)	mg/L	1	--	--		
	lbs/day[1]	210	--	--		
Copper (dry-weather)[2]	µg/L	18	--	20		
	lbs/day[1]	3.8	--	4.2		
Copper (wet-weather)[3]	µg/L	--	--	27		
	lbs/day[1]	--	--	5.6		
Lead (wet-weather)[3]	µg/L	--	--	106		
	lbs/day[1]	--	--	22		
Zinc (wet-weather)[3]	µg/L	--	--	156		
	lbs/day[1]	--	--	32		
Selenium	µg/L	4.3	--	7.5		
	lbs/day[1]	0.90	--	1.6		
Benzo(a)Pyrene	µg/L	0.049	--	0.098		
	lbs/day[1]	0.01	--	0.02		
Benzo(b)Fluoranthene	µg/L	0.049	--	0.098		
	lbs/day[1]	0.01	--	0.02		
Benzo(k)Fluoranthene	µg/L	0.049	--	0.098		
	lbs/day[1]	0.01	--	0.02		
	µg/L	0.049	--	0.098		

REVISED TENTATIVE

[2] Dry-weather effluent limitations for Coyote Creek shall apply when the maximum daily flow in the creek is less than 156 cubic feet per second (cfs) as measured at the Los Angeles County Department of Public Works (LACDPW) flow gauging station F354-R designated as RSW-007 in this permit.

[3] Wet-weather effluent limitations for Coyote Creek shall apply when the maximum daily flow in the creek is equal to or greater than 156 cfs as measured at the LACDPW flow gauge station F354-R (RSW-007).

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Chrysene	lbs/day[1]	0.01	--	0.02		
Dibenzo(a,h)Anthracene	µg/L	0.049	--	0.098		
	lbs/day[1]	0.01	--	0.02		
Indeno(1,2,3-cd)Pyrene	µg/L	0.049	--	0.098		
	lbs/day[1]	0.01	--	0.02		
Chronic Toxicity[4,5]	Pass or Fail, % Effect (Test of Significant Toxicity, (TST))	Pass[6]	--	Pass or % Effect <50		

REVISED TENTATIVE

2. Other Effluent Limitations Applicable to Discharge Point 001

a. **Percent Removal:** The average monthly percent removal of BOD 5-day 20°C and TSS shall not be less than 85 percent.

b. The temperature of wastes discharged shall not exceed 86°F except as a result of external ambient temperature.

c. Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

d. The wastes discharged to water courses shall at all times 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 in the disinfected effluent does not exceed a 7-day median of 2.2 Most Probable Number (MPN) or Colony Forming Unit (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

[4] The median monthly effluent limitation (MMEL) shall be reported as "Pass" or "Fail." The maximum daily effluent limitation (MDEL) shall be reported as "Pass" or "Fail" and "% Effect." The MMEL for chronic toxicity shall only apply when there is a discharge on more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail."

[5] A numeric WQBEL is established because effluent data showed that there ~~was~~is 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 will be implemented using the *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013), 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),* *http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010*.

[6] This is a Median Monthly Effluent Limitation.

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.

e. 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 (NTUs) within a 24-hour period; (b) 5 NTUs more than 5 percent of the time (72 minutes) within a 24-hour period; and (c) 10 NTU at any time.

3. Interim Effluent Limitations – Not Applicable

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives (WQOs) contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in Coyote Creek:

1. For waters designated with a warm freshwater habitat (WARM) beneficial use, the temperature of the receiving water at any time or place and within any given 24-hour period shall not be altered by more than 5°F above the natural temperature and shall not be raised above 86°F due to the discharge of effluent at the receiving water station located downstream of the discharge. Natural conditions shall be determined on a case-by-case basis.

   If the receiving water temperature, downstream of the discharge, exceeds 86°F as a result of the following:

   a. High temperature in the ambient air; or,

   b. High temperature in the receiving water upstream of the discharge,

   then the exceedance shall not be considered a violation.

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.

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

4. The total residual chlorine shall not exceed 0.1 mg/L in the receiving waters and shall not persist in the receiving water at any concentration that causes impairment of beneficial uses as a result of the wastes discharged.

5. The Escherichia coli (E. coli) concentration in the receiving water shall not exceed the following, as a result of wastes discharged:

   a. Geometric Mean Limitations

      i. E. coli density shall not exceed 126/100 mL.

REVISED TENTATIVE

b. Single Sample Limitations

i. E. coli density shall not exceed 235/100 mL.

6. 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 limitations, as a result of wastes discharged:

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

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

7. 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.

8. 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.

9. 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.

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

11. 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.

12. 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.

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

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.

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

16. The wastes discharged shall not result in visible floating particulates, foams, or oil and grease in the receiving waters.

17. 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.

18. 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.

19. Chronic Toxicity Narrative Receiving Water Quality Objective

a. There shall be no chronic toxicity in ambient waters as a result of wastes discharged.

REVISED TENTATIVE

b. Receiving water and effluent toxicity testing shall be performed on the same day as close to concurrently as possible.

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.

VI. PROVISIONS

A. Standard Provisions

1. The Permittee shall comply with all Standard Provisions included in Attachment D.

2. **Regional Water Board Standard Provisions**. The Permittee shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

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

   b. Odors, vectors, and other nuisances of sewage or sludge origin beyond the limitations of the treatment plant site or the sewage collection system due to improper operation of facilities, as determined by the Regional 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 recurrence interval of once in 100 years.

   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 Regional 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 Permittee from any responsibilities, liabilities or penalties established pursuant to any applicable state law or regulation under authority preserved by section 510 of the CWA, related to oil and hazardous substances liability.

   h. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the Permittee from any responsibilities, liabilities or penalties to which the Permittee is or may be subject to under section 311 of the CWA, related to oil and hazardous substances liability.

   i. Discharge of wastes to any point other than specifically described in this Order is prohibited.

   j. The Permittee 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.

REVISED TENTATIVE

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. A copy of these waste discharge requirements shall be maintained at the discharge Facility so as to be available at all times to operating personnel.

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

n. The Permittee shall file with the Regional 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.

o. In the event of any change in name, ownership, or control of these waste disposal facilities, the Permittee shall notify the Regional 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 Regional Water Board, 30 days prior to taking effect.

p. 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.

q. The Permittee 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.

r. Violation of any of the provisions of this Order may subject the Permittee to any of the penalties described herein or in Attachment D of this Order, or any combination thereof, at the discretion of the prosecuting authority; except that only one kind of penalty may be applied for each kind of violation.

s. 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 Permittee to administrative or civil liabilities, criminal penalties, and/or other enforcement remedies to ensure compliance. Additionally, certain violations may subject the Permittee to civil or criminal enforcement from appropriate local, state, or federal law enforcement entities.

t. The CWC provides that any person who violates a waste discharge requirement or a provision of the CWC is subject to civil penalties of up to $5,000 per day, $10,000 per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per

REVISED TENTATIVE

gallon per day of violation, or some combination thereof, depending on the violation, or upon the combination of violations.

u. CWC section 13385(h)(i) requires the Regional Water Board to assess a mandatory minimum penalty of three-thousand dollars ($3,000) for each serious violation. Pursuant to CWC 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 CWC 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. CWC section 13385(i) requires the Regional 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 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 violations within that time period.

w. Pursuant to CWC 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. CWC 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 Permittee 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 Permittee shall notify the Chief of the Watershed Regulatory Section at the Regional Water Board by telephone (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 Regional Water Board within five days, unless the Regional 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

REVISED TENTATIVE

notification shall also be submitted via email with reference to CI-5662 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.

z. The Permittee shall investigate the feasibility of recycling, conservation, and/or alternative disposal methods of wastewater (such as groundwater injection), and/or use of storm water and dry-weather urban runoff. The Permittee submitted a feasibility study on July 30, 2014. The Permittee shall submit an update to this feasibility study as part of the submittal of the Report of Waste Discharge (ROWD) for the next permit renewal.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

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 Permittee 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 have or will have a reasonable potential to cause, or contribute to adverse impacts on water quality or beneficial uses of the receiving waters.

e. This Order may also be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR sections 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 Permittee 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.

REVISED TENTATIVE

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 Regional 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 Regional Water Board will revise and modify this Order in accordance with such standards.

i. This Order may be reopened and modified, to add or revise effluent limitations as a result of future Basin Plan Amendments, such as an update of a water quality objective, adoption of SSOs, new TMDLs, or the adoption/revision of any of the San Gabriel River Watershed TMDLs.

j. This Order may be reopened and modified, to revise effluent limitations as a result of the delisting of a pollutant from the 303(d) list.

k. This Order will be reopened and modified to revise any and all of the chronic toxicity testing provisions and effluent limitations, to the extent necessary, to be consistent with any Toxicity Plan that is subsequently adopted by the State Water Board promptly after USEPA approval of such Plan.

l. This Order will be reopened and modified to the extent necessary, to be consistent with new policies, a new state-wide plan, new laws, or new regulations.

m. This Order may be reopened to modify effluent limits if copper, lead, and zinc waste load allocations are revised if the USEPA approves a revised TMDL for Metals in the San Gabriel River or the Implementation Plan is revised by the Regional Water Board.

n. Upon the request of the Permittee, the Regional Water Board will review future studies conducted by the Permittee to evaluate the appropriateness of utilizing dilution credits and/or attenuation factors if they are demonstrated to be appropriate and protective of the GWR beneficial use, on a pollutant-by-pollutant basis. Following this evaluation, this Order may be reopened to modify final effluent limitations, if at the conclusion of necessary studies conducted by the Permittee, the Regional Water Board determines that dilution credits, attenuation factors, or metal translators are warranted.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Toxicity Reduction Requirements**

The Permittee shall prepare and submit a copy of the Permittee's initial investigation Toxicity Reduction Evaluation (TRE) workplan in accordance with Monitoring and Reporting Program section V.A.7~~6~~.

b. **Ammonia Site-Specific Objective (SSO) Evaluation**

The Permittee shall prepare and submit an annual "Ammonia Site-Specific Objective Evaluation" report on May 15th of each year. This report will include the following:

REVISED TENTATIVE

i. Concurrent increases in hardness and sodium (measured as alkalinity) have been linked to decreases in ammonia sensitivity[7] and a relationship consistent with these findings was observed in the LA County SSO study. Therefore, on an annual basis, receiving water hardness and alkalinity will be evaluated and compared to conditions observed from 2000 through 2007. If the current year's annual mean hardness and alkalinity is 25% lower than the 2000 through 2007 mean, the Permittee will initiate quarterly receiving water chronic testing using the most sensitive species for the Long Beach WRP at the downstream receiving water location 100 feet below the outfall[8]. Results from this toxicity testing will be evaluated to determine if waste discharged ammonia is causing toxicity (see section (ii) below for details on this evaluation).

ii. Evaluation of all receiving water toxicity will be conducted to determine if waste discharged ammonia was a likely cause of any observed toxicity. If it is determined that observed receiving toxicity is caused by waste discharged ammonia and discharged ammonia levels were below the SSO adjusted ammonia water quality objective, the Permittee shall develop and submit a plan for reevaluating the SSO to the Executive Officer.

iii. Compare downstream ammonia measurements with calculated objectives to ensure adequate protection of beneficial uses. If it is determined that downstream receiving water ammonia objectives are not being met, the Permittee shall evaluate if waste discharged ammonia concentrations below the SSO adjusted ammonia water quality objective are responsible for the downstream objective exceedances.

iv. Sampling observations and other available information will be evaluated every two years to determine if winter spawning fish species are present in the San Gabriel River. If winter spawning fish were observed, the Permittee will propose a plan to evaluate if significant numbers of early life-stage (ELS) fish are present during the period of October 1st to March 31st (ELS absent). This plan will identify appropriate methods for gathering additional information to determine if the Basin Plan ELS implementation provisions for the ammonia objective are protective of the species and life stages present.

c. **Treatment Plant Capacity**

The Permittee shall submit a written report to the Executive Officer of the Regional 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 Permittee's senior administrative officer shall sign a letter, which transmits that report and certifies that the Permittee'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,

[7] April 2007. Arid West Water Quality Research Project Special Studies Final Report, 07-03-P-139257-0207. Relative Role of Sodium and Alkalinity vs. Hardness in Controlling Acute Ammonia Toxicity. Report prepared by Parametrix Environmental Research Lab in collaboration with GEI Consultants, Chadwick Ecological Division.

[8] 25% reduction determined using statistical power analyses of the 2000 through 2007 hardness and alkalinity data assuming a minimum annual sample size of 12.

REVISED TENTATIVE

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 to those facilities which have not reached 75 percent of capacity as of the effective date of this Order. For those facilities that have reached 75 percent of capacity by that date but for which no such report has been previously submitted, such a report shall be filed within 90 days of the issuance of this Order.

d. **Special Study for Constituents of Emerging Concern (CECs)**

The Permittee has completed the minimum required two years of CEC monitoring and will not be required to conduct additional monitoring at this time.

3. Best Management Practices and Pollution Prevention

a. **Storm Water Pollution Prevention Plan (SWPPP) – (Not Applicable)**

b. **Spill Clean-up Contingency Plan (SCCP)**

Within 90 days of the effective date of this Order, the Permittee is required to submit a SCCP, which describes the activities and protocols to address clean-up of spills, overflows, and bypasses of untreated or partially treated wastewater from the Permittee's collection system or treatment facilities that reach water bodies, including dry channels and beach sands. At a minimum, the plan shall include sections on spill clean-up and containment measures, public notification, and monitoring. The Permittee shall review and amend the plan as appropriate after each spill from the Facility or in the service area of the Facility. The Permittee 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 X.B.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 Permittee shall develop and conduct a 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; or, 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 reported 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 the 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

REVISED TENTATIVE

limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional 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 CWC 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 Regional 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 pollutant(s), consistent with the control strategy.

v. An annual status report that shall be sent to the Regional Water Board including:

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

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

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

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

4. Construction, Operation and Maintenance Specifications

a. 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 (CWC sections 13625 – 13633).

b. The Permittee 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, 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 Permittee shall halt, reduce, or otherwise control all discharges upon the reduction, loss, or failure of the primary source of power.

c. The Permittee 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.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. **Sludge Disposal Requirements (Not Applicable)**

b. **Pretreatment Requirements**

REVISED TENTATIVE

i. The Permittee has developed and implemented an approved Pretreatment Program that was submitted to the Regional 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 1972, the County Sanitation Districts of Los Angeles County's (Sanitation Districts) Board of Directors adopted the *Wastewater Ordinance*. The purpose of this Ordinance is to establish controls on users of the Sanitation Districts' sewerage system in order to protect the environment and public health, and to provide for the maximum beneficial use of the Sanitation Districts' facilities. This *Wastewater Ordinance*, as amended July 1, 1998, shall supersede all previous regulations and policies of the Sanitation Districts' governing items covered in this Ordinance. Specifically, the provisions of this Ordinance shall supersede the Sanitation Districts' "Policy Governing Use of District Trunk Sewers" dated December 6, 1961, and shall amend the Sanitation Districts' "An Ordinance Regulating Sewer Construction, Sewer Use and Industrial Wastewater Discharges," dated April 1, 1972, and as amended July 1, 1975, July 1, 1980, July 1, 1983, and November 1, 1989.

iii. In 2014, there are 418 CIU permittees, 944 SIU permittees, and 1,588 other industrial users in the Sanitation Districts' Pretreatment Program.

iv. Any change to the program shall be reported to the Regional Water Board in writing and shall not become effective until approved by the Executive Officer in accordance with procedures established in 40 CFR section 403.18.

v. Applications for renewal or modification of this Order must contain information about industrial discharges to the POTW pursuant to 40 CFR section 122.21(j)(6). Pursuant to 40 CFR section 122.42(b) and provision VII.A of Attachment D, Standard Provisions, of this Order, the Permittee 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 section 122.44(j)(1), the Permittee 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 part 403.

vi. The Permittee 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 B.1 of Attachment H. The Long Beach WRP is part of the Joint Outfall System (JOS), consisting of the Joint Water Pollution Control Plant (JWPCP) and the upstream plants. In the reevaluation of the local limitations, the Permittee shall consider the effluent limitations contained in this Order, the contributions from the upstream WRPs in the JOS, and other relevant factors due to the interconnection of the Districts' WRPs within the JOS. The Permittee shall submit to the Regional Water Board revised local limits, as necessary, for Regional Water Board approval based on the schedule specified in the NPDES Permit issued to the JWPCP. In addition, the Permittee shall consider collection system overflow protection from such constituents as oil and grease, etc.

vii. The Permittee shall comply with Attachment H – Pretreatment Reporting Requirements.

REVISED TENTATIVE

c. **Collection System Requirements**

i. The Permittee's collection system is part of the system that is subject to this Order. As such, the Permittee must properly operate and maintain its collection system (40 CFR section 122.41(e)). The Permittee must report any non-compliance (40 CFR section 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 CFR section 122.41(d)). See the Order at Attachment D, subsections I.D, V.E, V.H, and I.C., and the following section of this Order.

d. **Filter Bypass.**

i. Conditions pertaining to bypass are contained in Attachment D, Section "I. Standard Provisions – Permit Compliance", subsection G. 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). Consistent with those provisions, during periods of elevated, wet-weather flows, the operational diversion of a portion of the secondarily treated wastewater around the tertiary filters is allowable provided that the resulting combined discharge of fully treated (tertiary) and partially treated (secondary) wastewater complies with the effluent and receiving water limitations in this Order.

6. Spill Reporting Requirements

a. **Initial Notification**

Although State and Regional 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 Permittee shall make notifications as required below:

i. In accordance with the requirements of Health and Safety Code section 5411.5, the Permittee 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 as soon as possible, but no later than two hours after becoming aware of the release.

ii. In accordance with the requirements of CWC section 13271, the Permittee shall provide notification to the California Office of Emergency Services (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 OES is (800) 852-7550.

iii. The Permittee shall notify the Regional 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 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 Permittee has notified OES and the local health officer or the director of environmental health with jurisdiction over the affected waterbody. The phone number for reporting these releases of sewage to the

REVISED TENTATIVE

Regional Water Board is (213) 576-6657. The phone numbers for after hours and weekend reporting of releases of sewage to the Regional Water Board are (213) 305-2284 and (213) 305-2253.

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

(a) The location, date, and time of the release.

(b) The water body that received or will receive the discharge.

(c) An estimate of the amount of sewage or other waste released and the amount that reached a surface water at the time of notification.

(d) If ongoing, the estimated flow rate of the release at the time of the notification.

(e) The name, organization, phone number and email address of the reporting representative.

b. **Monitoring**

For spills, overflows and bypasses reported under section VI.C.6.a, the Permittee shall monitor as required below:

i. To define the geographical extent of the spill's impact, the Permittee 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). The Permittee shall analyze the samples for total coliform, fecal coliforms, E. coli (if fecal coliform test shows positive), enterococcus (if the spill reaches the marine waters), and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible, and safe). This monitoring shall be done on a daily basis 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 VI.C.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 Permittee shall submit a statement to the Regional Water Board by email at augustine.anijielo@waterboards.ca.gov . If the discharge is 1,000 gallons or more, this statement shall certify that OES has been notified of the discharge in accordance with CWC 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:

(a) Agency, NPDES No., Order No., and MRP CI No., if applicable.

(b) The location, date, and time of the discharge.

(c) The water body that received the discharge.

REVISED TENTATIVE

(d) A description of the level of treatment of the sewage or other waste discharged.

(e) An initial estimate of the amount of sewage or other waste released and the amount that reached a surface water.

(f) The OES control number and the date and time that notification of the incident was provided to OES.

(g) 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 working days after disclosure of the incident is required. Submission to the Regional 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 Permittee shall submit the final written report to this Regional Water Board. (A copy of the final written report, for a given incident, already submitted pursuant to a statewide General WDRs for Wastewater Collection System Agencies (SSO WDR), may be submitted to the Regional 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 Permittee 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 Permittee's preventive maintenance plan. Any deviations from or modifications to the plan shall be discussed.

d. **Records**

The Permittee 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 Regional 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 VI.C.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.

REVISED TENTATIVE

vi. Any mitigation measures implemented.

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

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

e. **Activities Coordination**

Although not required by this Order, Regional 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 MS4 NPDES permit that may contain spill prevention, sewer maintenance, reporting requirements and (iii) the SSO WDR.

f. **Consistency with SSO 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 State Water Board adopted *General Waste Discharge Requirements for Sanitary Sewer Systems*, (WQ Order No. 2006-0003-DWQ; SSO WDR) on May 2, 2006, to provide a consistent, statewide regulatory approach to address sanitary sewer overflows. The SSO WDR requires public agencies that own or operate sanitary sewer systems to apply for coverage under the SSO WDR, develop and implement sewer system management plans, and report all SSO to the State Water Board's online SSOs database. Regardless of the coverage obtained under the SSO WDR, the Permittee's collection system is part of the POTW that is subject to this NPDES permit. As such, pursuant to federal regulations, the Permittee must properly operate and maintain its collection system (40 CFR section 122.41 (e)), report any non-compliance (40 CFR section 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR section 122.41(d)).

The requirements contained in this Order in sections VI.C.3.b (SCCP Plan section), VI.C.4 (Construction, Operation and Maintenance Specifications section), and VI.C.6 (Spill Reporting Requirements section) are intended to be consistent with the requirements of the SSO WDR. The Regional Water Board recognizes that there may be some overlap between these NPDES permit provisions and SSO WDR requirements, related to the collection systems. The requirements of the SSO WDR are considered the minimum thresholds (see finding 11 of State Water Board Order No. 2006-0003-DWQ). To encourage efficiency, the Regional Water Board will accept the documentation prepared by the Permittees under the SSO WDR for compliance purposes as satisfying the requirements in sections VI.C.3.b, VI.C.4, and VI.C.6 provided the more stringent provisions contained in this NPDES permit are also addressed. Pursuant to SSO WDR, section D, provision 2(iii) and (iv), the provisions of this NPDES permit supercede the SSO WDR, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative.

7. Compliance Schedules – Not Applicable

REVISED TENTATIVE

VII. COMPLIANCE DETERMINATION

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

A. 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 Permittee 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).

B. Multiple Sample Data

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

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.
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.

C. Average Monthly Effluent Limitation (AMEL)

If the average (or when applicable, the median determined by subsection B 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, though the Permittee 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). If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the Permittee may be considered out of compliance for that calendar month. The Permittee 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 Permittee 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 Permittee 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.

REVISED TENTATIVE

D. 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 Permittee 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 Permittee 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.

E. 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 Permittee 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.

F. 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 violation will be flagged and the Permittee 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).

G. 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 violation will be flagged and the Permittee 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).

H. Six-month Median Effluent Limitation

If the median of daily discharges over any 180-day period exceeds the six-month median effluent limitation for a given parameter, an alleged violation will be flagged and the Permittee 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 Permittee 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.

I. 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 Permittee will be considered out of

REVISED TENTATIVE

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.

J. 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 *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, ~~and~~ Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response ≤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.

The Maximum Daily Effluent Limitation (MDEL) for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in "Fail" and the "Percent Effect" is ≥~~0.50~~50%.

The Median Monthly Effluent Limitation (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." The MMEL for chronic toxicity shall only apply when there is a discharge on more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail."

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. 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). The Regional Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see Fact Sheet discussion at IV.C.5). 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 Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the 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,

REVISED TENTATIVE

invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, including those that incorporate a consideration of concentration-response patterns, must be submitted to the Regional Water Board (40 CFR section 122.41(h)). The Regional Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Permittee, the USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed. The Board may consider the results of any TIE/TRE studies in an enforcement action.

K. 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:

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

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

L. 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.

M. 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.

N. 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.

O. Compliance with 2,3,7,8-TCDD Equivalents

TCDD equivalents shall be calculated using the following formula, where the Minimum Levels (MLs), and toxicity equivalency factors (TEFs) are as provided in the table below. The Permittee shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Permittee 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

REVISED TENTATIVE

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-HeptaCDFs	50	0.01
1,2,3,4,7,8,9-HeptaCDFs	50	0.01
OctaCDF	100	0.0001

P. 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. 'Qi' and 'Ci' 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, 'Ci' is the concentration measured in the composite sample and 'Qi' 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. 'Qi' and 'Ci' are the flow rate (MGD) and the constituent concentration (mg/L), respectively, which are associated with each of the 'N' waste streams. 'Qt' is the total flow rate of the combined waste streams.

REVISED TENTATIVE

Q. Bacterial Standards and Analysis

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

   $$\text{Geometric Mean} = (C_1 \times C_2 \times \ldots \times C_3)^{1/n}$$

   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.

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.

3. Detection methods used for coliforms (total and fecal) 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.

4. Detection methods used for *E. coli* 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.

R. Single Operational Upset (SOU)

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

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

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 V.E.2(b) of Attachment D – Standard Provisions.

3. For purpose outside of CWC 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).

4. For purpose of CWC 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 CWC section 13385 (f)(2).

REVISED TENTATIVE

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:

Arithmetic mean = $\mu = \Sigma x / n$ 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
Biosolids refer to sewage sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 CFR part 503.

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

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

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

REVISED TENTATIVE

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.

Effluent Concentration Allowance (ECA)
ECA is a value derived from the water quality criterion/objective, dilution credit, and ambient background concentration that is used, in conjunction with the coefficient of variation for the effluent monitoring data, to calculate a long-term average (LTA) discharge concentration. The ECA has the same meaning as waste load allocation (WLA) as used in U.S. EPA 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).

REVISED TENTATIVE

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.

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).

Method Detection Limit (MDL)
MDL is the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analyte concentration is greater than zero, as defined in in 40 CFR part 136, Attachment B, revised as of July 3, 1999.

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.

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 Regional 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

REVISED TENTATIVE

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 Regional Water Board.

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Permittee 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 Regional 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 Regional Water Board Basin Plan.

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

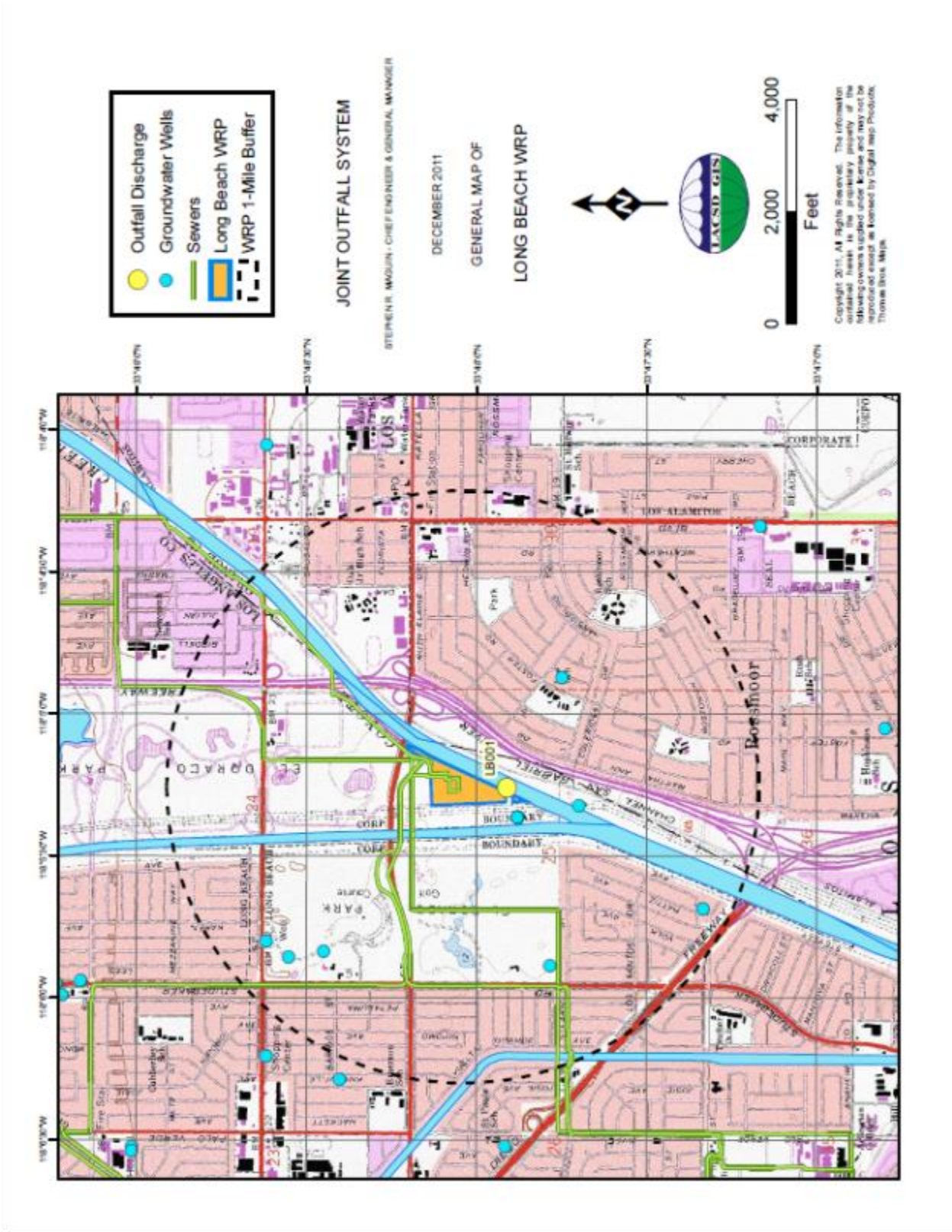
$$\sigma = (\sum[(x - \mu)^2]/(n - 1))^{0.5}$$

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

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.)

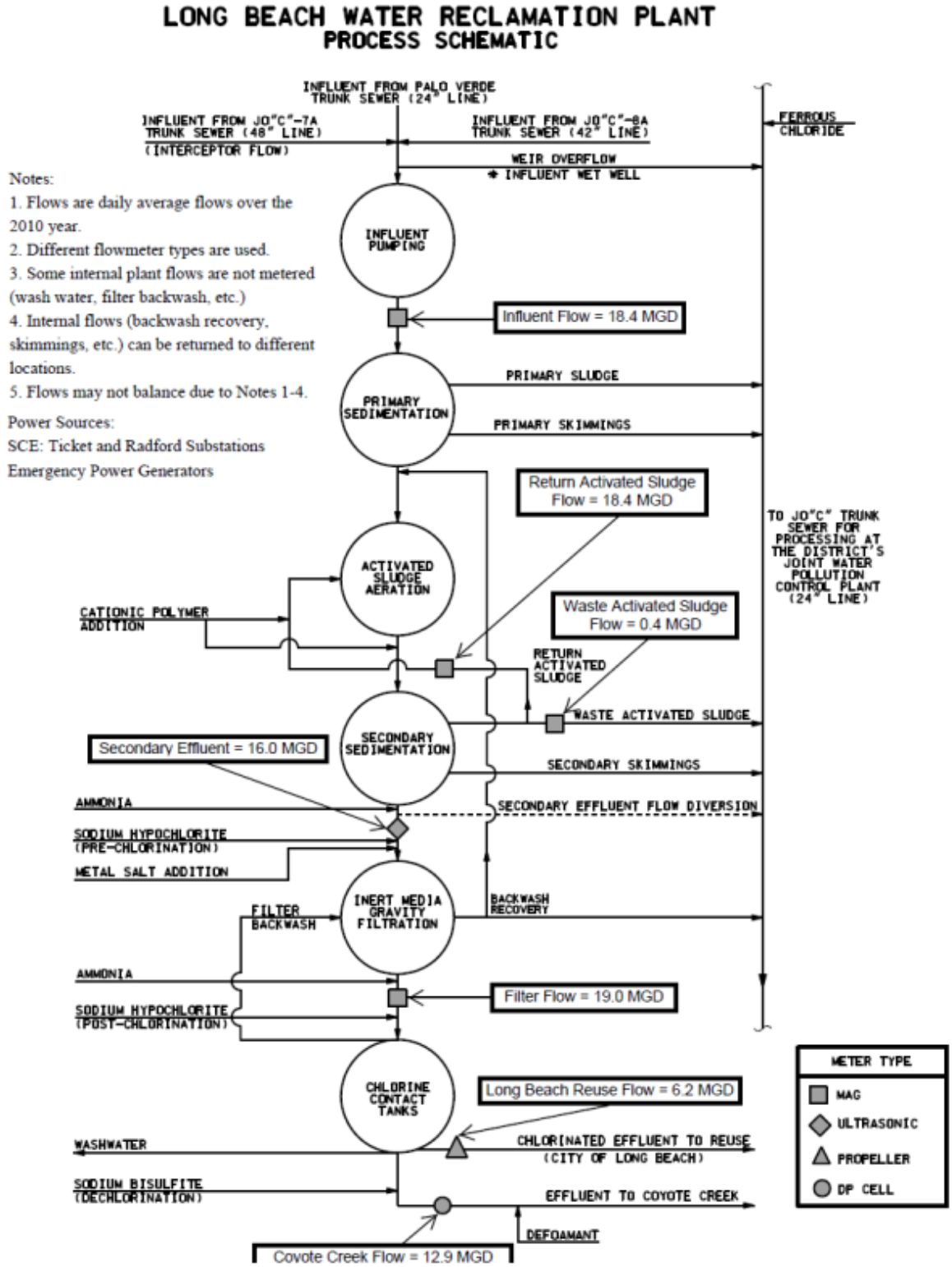
REVISED TENTATIVE

ATTACHMENT B – MAP



REVISED TENTATIVE

ATTACHMENT C – FLOW SCHEMATIC



REVISED TENTATIVE

ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittee must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA), its regulations, and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 CFR section 122.41(a); California Water Code (CWC) sections 13261, 13263, 13264, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Permittee shall comply with effluent standards or prohibitions established under section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA 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. (Title 40 of the Code of Federal Regulations (40 CFR) section 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

The Permittee shall allow the Regional Water Board, State Water Board, USEPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. section 1318(a)(4)(B); 40 CFR section 122.41(i); CWC sections 13267 and 13383):

REVISED TENTATIVE

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

G. Bypass

1. Definitions
   a. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR section 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 section 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Permittee 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 I.G.3, I.G.4, and I.G.5 below. (40 CFR section 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 CFR section 122.41(m)(4)(i)):
   a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR section 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 section 122.41(m)(4)(i)(B)); and
   c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 CFR § 122.41(m)(4)(i)(C).)
4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 CFR section 122.41(m)(4)(ii).)

REVISED TENTATIVE

5. Notice

   a. Anticipated bypass. If the Permittee knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass. (40 CFR section 122.41(m)(3)(i).)

   b. Unanticipated bypass. The Permittee shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). (40 CFR section 122.41(m)(3)(ii).)

H. 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 Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 CFR section 122.41(n)(1).)

1. 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 I.H.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR section 122.41(n)(2).)

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

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

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

   c. The Permittee submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR section 122.41(n)(3)(iii)); and

   d. The Permittee complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR section 122.41(n)(3)(iv).)

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

REVISED TENTATIVE

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the CWC. (40 CFR section 122.41(l)(3); and 122.61.)

III. STANDARD PROVISIONS – MONITORING

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

B. Monitoring results 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 subchapters N or O. In the case of pollutants for which there are no approved methods under 40 CFR Part 136 or otherwise required under 40 CFR subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 CFR sectionsection 122.41(j)(4); 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Permittee 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 Regional Water Board Executive Officer at any time. (40 CFR section 122.41(j)(2).)

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 CFR section 122.41(j)(3)(i));
2. The individual(s) who performed the sampling or measurements (40 CFR section 122.41(j)(3)(ii));
3. The date(s) analyses were performed (40 CFR section 122.41(j)(3)(iii));
4. The individual(s) who performed the analyses (40 CFR section 122.41(j)(3)(iv));
5. The analytical techniques or methods used (40 CFR section 122.41(j)(3)(v)); and
6. The results of such analyses. (40 CFR section 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Permittee (40 CFR section 122.7(b)(1)); and
2. Permit applications and attachments, permits and effluent data. (40 CFR section 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

REVISED TENTATIVE

A. Duty to Provide Information

The Permittee shall furnish to the Regional Water Board, State Water Board, or USEPA within a reasonable time, any information which the Regional 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 Permittee shall also furnish to the Regional Water Board, State Water Board, or USEPA copies of records required to be kept by this Order. (40 CFR section 122.41(h); CWC sections 13267 and 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or USEPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, and V.B.5 below. (40 CFR section 122.41(k).)

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

3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or USEPA shall be signed by a person described in Standard Provisions – Reporting V.B.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 V.B.2 above (40 CFR section 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 section 122.22(b)(2)); and

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

4. If an authorization under Standard Provisions – Reporting V.B.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 V.B.3 above must be submitted to the Regional Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 CFR section 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.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

REVISED TENTATIVE

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

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 CFR section 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 CFR section 122.41(l)(4)(i).)
3. If the Permittee 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 subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 CFR section 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 CFR section 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission 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. (40 CFR section 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 CFR section 122.41(l)(6)(ii)):
   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR section 122.41(l)(6)(ii)(A).)
   b. Any upset that exceeds any effluent limitation in this Order. (40 CFR section 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR section 122.41(l)(6)(iii).)

REVISED TENTATIVE

F. Planned Changes

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

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 CFR section 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 CFR section 122.41(l)(1)(ii).)
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 section 122.41(l)(1)(iii).)

G. Anticipated Noncompliance

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

H. Other Noncompliance

The Permittee shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. (40 CFR section 122.41(l)(7).)

I. Other Information

When the Permittee 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 Regional Water Board, State Water Board, or USEPA, the Permittee shall promptly submit such facts or information. (40 CFR section 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

B. 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,

REVISED TENTATIVE

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 section 122.41(a)(2); CWC section 13385 and 13387).

C. Any person may be assessed an administrative penalty by the Administrator of USEPA, the Regional 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 section 122.41(a)(3))

D. 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 section 122.41(j)(5)).

E. 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 section 122.41(k)(2)).

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following (40 CFR section 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect Permittee that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 CFR section 122.42(b)(1)); and
2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 CFR section 122.42(b)(2).)

REVISED TENTATIVE

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

REVISED TENTATIVE

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Contents

I. General Monitoring Provisions E-2
II. Monitoring Locations E-4
III. Influent Monitoring Requirements E-7
A. Monitoring Location INF-001 ..... E-7
IV. Effluent Monitoring Requirements E-8
A. Monitoring Location EFF-001 ..... E-8
V. Whole Effluent Toxicity Testing Requirements E-12
VI. Land Discharge Monitoring Requirements (Not Applicable) E-19
VII. Recycling Monitoring Requirements (NOT APPLICABLE) E-19
VIII. Receiving Water Monitoring Requirements E-19
A. Monitoring Location RSW-001 through RSW-006 ..... E-19
B. Ammonia Receiving Water Monitoring Requirements E-22
C. TMDL Flow Monitoring Requirements E-22
D. Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL (Harbor Toxic TMDL) Monitoring Requirements E-22
IX. Other Monitoring Requirements E-23
A. Watershed Monitoring E-23
B. Tertiary Filter Treatment Bypasses E-24
X. Reporting Requirements E-25
A. General Monitoring and Reporting Requirements E-25
B. Self-Monitoring Reports (SMRs) E-25
C. Discharge Monitoring Reports (DMRs) E-27
D. Other Reports E-27

Tables

Table E-1. Monitoring Station Locations E-4
Table E-2. Influent Monitoring E-7
Table E-3. Effluent Monitoring E-8
Table E-4. USEPA Test Methods and Test Acceptability Criteria for Freshwater Organisms E-14
Table E-5. USEPA Test Methods and Test Acceptability Criteria for West Coast Marine and Estuarine Organisms E-15
Table E-6. Receiving Water Monitoring Requirements E-19
Table E-7. Ammonia Receiving Water Monitoring Requirements E-22
Table E-8. TMDL Receiving Water Monitoring Requirements E-22
Table E-9. Monitoring Periods and Reporting Schedule E-25

REVISED TENTATIVE

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP), (CI-5662)

Section 308(a) of the federal Clean Water Act 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. California Water Code (CWC) sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and California laws and/or regulations.

REVISED TENTATIVE

I. GENERAL MONITORING PROVISIONS

A. All samples shall be representative of the waste discharge under conditions of peak load. Quarterly effluent analyses shall be performed during the months of January, April, July, and October. Semiannual analyses shall be performed during the months of January and July. Annual analyses shall be performed during the month of July with the exception of bioassessments. Should there be instances when monitoring could not be done during these specified months, the Permittee must notify the Regional Water Board, state the reason why monitoring could not be conducted, and obtain approval from the Executive Officer for an alternate schedule. Results of monthly, quarterly, semiannual, and annual analyses shall be reported as due date specified in Table E-8 of MRP.

B. Pollutants shall be analyzed using the analytical methods described in 40 CFR sections 136.3, 136.4, and 136.5; or where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the Environmental Laboratory Accreditation Program (ELAP) or approved by the Executive Officer 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 Regional Water Board each time a new certification and/or renewal of the certification is obtained from ELAP. On July 1, 2014, the Drinking Water Program's ELAP was transferred from the California Department of Public Health (CDPH) to the State Water Board's new Division of Drinking Water (DDW).

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

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

E. 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.

F. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses by the DDW or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program."

G. 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.

H. The Permittee shall select the analytical method that provides a ML lower than the permit limit established for a given parameter, unless the Permittee 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 J, below. If the effluent limitation is lower than all the MLs in Appendix 4, SIP, the Permittee must select the method with the lowest ML for compliance purposes. The Permittee shall include in the Annual Summary Report a list of the analytical methods employed for each test.

I. The Permittee 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 Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. In accordance with section J, below, the Permittee's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.

J. In accordance with section 2.4.3 of the SIP, the Regional 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 Permittee's permit in any of the following situations:

1. When the pollutant under consideration is not included in Appendix 4, SIP.
2. When the Permittee and the Regional Water Board agree to include in the permit a test method that is more sensitive than those specified in 40 CFR part 136.
3. When the Permittee agrees to use an ML that is lower than those listed in Appendix 4.
4. When the Permittee demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 and proposes an appropriate ML for the matrix; or,
5. When the Permittee uses a method, 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 Permittee, the Regional 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.

K. If the Permittee samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water

REVISED TENTATIVE

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.

L. The Permittee 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 Regional Water Board upon request and a spill summary shall be included in the annual summary report.

M. 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, and 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum). The detection methods used for each analysis shall be reported with the results of the analyses.

1. Detection methods used for coliforms (total and fecal) 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.
2. Detection methods used for E.coli 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 Regional Water Board to be appropriate.

II. MONITORING LOCATIONS

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

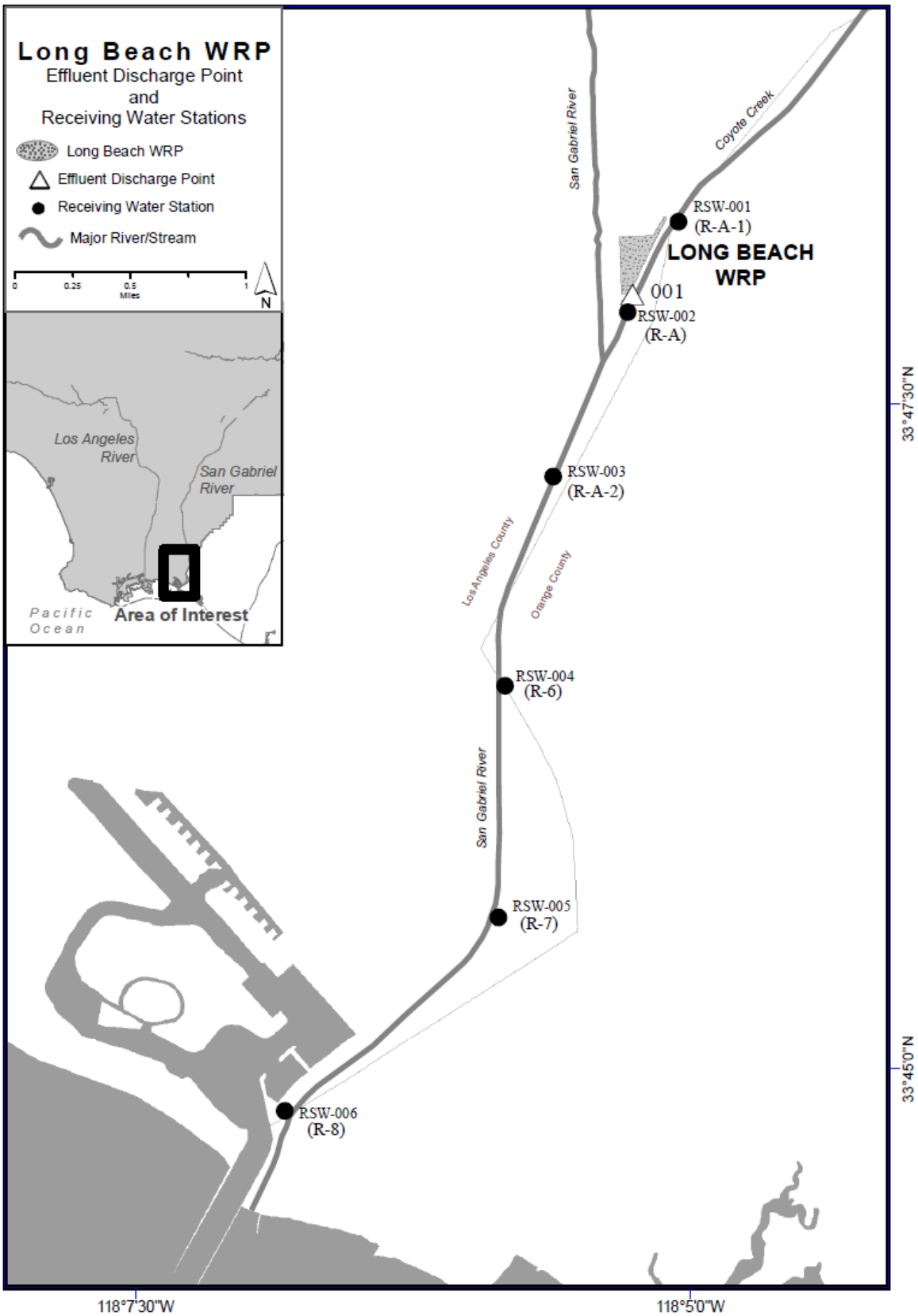
Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Influent Monitoring Station		
--	INF-001	Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and/or where representative samples of the influent can be obtained.
Effluent Monitoring Stations		
001	EFF-001A	The effluent sampling station 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.
001	EFF-001B	The effluent sampling station for total residual chlorine and temperature shall be located downstream of the dechlorination process and inside the plant. The total residual chlorine and temperature limitations shall be applied to the effluent sample collected at this point.
Receiving Water Monitoring Stations		
--	RSW-001	Coyote Creek, upstream of discharge from Long Beach Water Reclamation Plant at Latitude 33.80083º, Longitude -118.08611º. (R-A-1). This location is also used for bioassessment.
Coyote Creek Monitoring Station and Ammonia Receiving Water Point of Compliance	RSW-002	Coyote Creek, 100 feet downstream of discharge from Long Beach Water Reclamation Plant at Latitude 33.79833º, Longitude -118.08778º. (R-A) This location is also used for the ammonia receiving water point of compliance and bioassessment.

REVISED TENTATIVE

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	RSW-003	San Gabriel River, downstream of the confluence of the eastern and western low flow channel at Latitude 33.78722º, Longitude -118.09361º. (R-A-2)
--	RSW-004	San Gabriel River, at College Park bridge at Latitude 33.77490º, Longitude -118.09766º. (R-6)
--	RSW-005	San Gabriel River, at Westminster Avenue (Second Street) at Latitude 33.75944º, Longitude -118.09778º. (R-7)
--	RSW-006	San Gabriel River, at Marina Avenue at Latitude 33.74722º, Longitude -118.11361º. (R-8)
TMDL Wet- and Dry-Weather Flow Monitoring Station		
--	RSW-007	Los Angeles County Department of Public Works (LACDPW) flow gauging station located just upstream of Long Beach WRP at Latitude 33.81056º, Longitude -118.07444º. (F354-R). This gauging station is operated and maintained by the LACDPW.

REVISED TENTATIVE



Long Beach WRP Receiving Water Stations

REVISED TENTATIVE

III. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to:

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

A. Monitoring Location INF-001

1. The Permittee shall monitor influent to the facility at INF-001 as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	recorder	continuous[1]	[1]
pH	pH unit	grab	weekly	[2]
Total suspended solids	mg/L	24-hour composite	weekly	[2]
BOD_5 20°C	mg/L	24-hour composite	weekly	[2]
Copper	µg/L	24-hour composite	quarterly	[2]
Lead	µg/L	24-hour composite	quarterly	[2]
Zinc	µg/L	24-hour composite	quarterly	[2]
Selenium	µg/L	24-hour composite	quarterly	[2]
Benzo(a)Pyrene	µg/L	24-hour composite	semiannually	[2]
Benzo(b)Fluoranthene	µg/L	24-hour composite	semiannually	[2]
Benzo(k)Fluoranthene	µg/L	24-hour composite	semiannually	[2]
Chrysene	µg/L	24-hour composite	semiannually	[2]
Dibenzo(a,h)Anthracene	µg/L	24-hour composite	semiannually	[2]
Indeno(1,2,3-cd)Pyrene	µg/L	24-hour composite	semiannually	[2]
PCBs[3]	µg/L	24-hour composite	annually	[2]
Remaining USEPA priority pollutants[4] excluding asbestos	µg/L	24-hour composite; grab for VOCs and Cyanide	semiannually	[2]

[1] Total daily flow, monthly average flow, and instantaneous peak daily flow (24-hr basis) shall be reported. Actual monitored flow shall be reported (not the maximum flow, i.e., design capacity).

[2] Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or State Water 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.

[3] PCBs as aroclors shall be analyzed using method EPA 608, PCBs as congeners shall be analyzed using method EPA 1668c. PCBs as congeners shall be analyzed for three years and may be discontinued for the remaining life of this Order if none of the PCBs congeners are detected using method EPA 1668c.

USEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR part 136, Permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608 for monitoring data, reported as aroclor results, that will be used for assessing 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.

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

REVISED TENTATIVE

IV. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to:

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

A. Monitoring Location EFF-001

1. The Permittee shall monitor the discharge of tertiary-treated effluent at EFF-001A, except for total residual chlorine and temperature. Total residual chlorine and temperature shall be monitored at EFF-001B. If more than one analytical test method is listed for a given parameter, the Permittee must select from the listed methods and corresponding Minimum Level:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Total waste flow	mgd	recorder	continuous[5]	[6]
Turbidity	NTU	recorder	continuous[5]	[6]
Total residual chlorine	mg/L	recorder	continuous[7]	--
Total residual chlorine	mg/L	grab	daily[8,9]	[6]

[5] Where continuous monitoring of a constituent is required, the following shall be reported:
Total waste flow – Total daily, monthly average, 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. Grab sample can be used to determine compliance with the 10 NTU limit. A flow-weighted 24-hour composite sample may be used in place of the recorder to determine the flow-proportioned average daily value.

[6] Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; where no methods are specified for a given pollutant, by methods approved by this Regional 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.

[7] 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 from the recorded media and shall be made available upon request of the Regional Water Board. The continuous monitoring data are not intended to be used for compliance determination purposes.

[8] Daily grab samples shall be collected at monitoring location EFF-001B, 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. Furthermore, additional monitoring requirements specified in section IV.A.2. shall be followed.

[9] Daily samples shall be collected Monday to Friday, except for holidays.

REVISED TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Total coliform	MPN/100mL or CFU/100ml	grab	daily[9]	[6]
Fecal coliform[10]	MPN/100mL or CFU/100ml	grab	weekly	[6]
E. coli[11]	MPN/100mL or CFU/100ml	grab	weekly	[6]
Temperature	°F	grab	daily	[6]
pH	pH units	grab	daily	[6]
Settleable Solids	mL/L	grab	daily	[6]
Total Suspended Solids (TSS)	mg/L	24-hour composite	daily	[6]
BOD_5 20°C	mg/L	24-hour composite	weekly[12]	[6]
Oil and grease	mg/L	grab	monthly	[6]
Dissolved oxygen	mg/L	grab	monthly	[6]
Ammonia Nitrogen	mg/L	24-hour composite	monthly	[6]
Nitrite nitrogen	mg/L	24-hour composite	monthly	[6]
Nitrate nitrogen	mg/L	24-hour composite	monthly	[6]
Organic nitrogen	mg/L	24-hour composite	monthly	[6]
Total kjeldahl nitrogen (TKN)	mg/L	24-hour composite	monthly	[6]
Total nitrogen	mg/L	24-hour composite	monthly	[6]
Total phosphorus	mg/L	24-hour composite	monthly	[6]
Surfactants (MBAS)	mg/L	24-hour composite	monthly	[6]
Surfactants (CTAS)	mg/L	24-hour composite	monthly	[6]
Total hardness ($CaCO_3$)	mg/L	24-hour composite	monthly	[6]
Chronic toxicity	Pass or Fail, %Effect (TST)	24-hour composite	monthly	[6,13]

[10] Fecal coliform testing shall be conducted only if total coliform is positive. If the total coliform analysis results in no detection, a result of (<) the reporting limit for total coliform will be reported for both fecal and E. coli.

[11] E. coli testing shall be conducted only if fecal coliform testing is positive. If the fecal coliform analysis results in no detection, a result of less than (<) the reporting limit for fecal coliform will be reported for E. coli.

[12] If the result of the weekly BOD analysis yields a value greater than the 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 BOD AWEL and AMEL are demonstrated; after which the frequency shall revert to weekly.

[13] The Permittee shall conduct whole effluent toxicity monitoring as outlined in section V. Please refer to section V.A.7 of this MRP for the accelerated monitoring schedule. The median monthly summary result shall be reported as “Pass” or “Fail.” The maximum daily single result shall be reported as “Pass” or “Fail” and “% Effect.” When there is a discharge on more than one day in a calendar month period, up to three independent toxicity tests may be conducted when one toxicity test results in “Fail.”

REVISED TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	pCi/L	Calculated for radium-226 & 228 and 24-hour composite for all other	semiannually	[14]
Copper	µg/L	24-hour composite	monthly	[6]
Lead	µg/L	24-hour composite	monthly	[6]
Zinc	µg/L	24-hour composite	monthly	[6]
Selenium	µg/L	24-hour composite	monthly	[6]
Benzo(a)Pyrene	µg/L	24-hour composite	monthly	[6]
Benzo(b)Fluoranthene	µg/L	24-hour composite	monthly	[6]
Benzo(k)Fluoranthene	µg/L	24-hour composite	monthly	[6]
Chrysene	µg/L	24-hour composite	monthly	[6]
Dibenzo(a,h)Anthracene	µg/L	24-hour composite	monthly	[6]
Indeno(1,2,3-cd)Pyrene	µg/L	24-hour composite	monthly	[6]
Antimony	µg/L	24-hour composite	quarterly	[6]
Arsenic	µg/L	24-hour composite	quarterly	[6]
Beryllium	µg/L	24-hour composite	quarterly	[6]
Cadmium	µg/L	24-hour composite	quarterly	[6]
Chromium III	µg/L	calculation	quarterly	[6]
Chromium VI	µg/L	grab	quarterly	[6]
Total chromium	µg/L	grab	quarterly	[6]
Mercury[15]	µg/L	24-hour composite	quarterly	[6]
Nickel	µg/L	24-hour composite	quarterly	[6]
Silver	µg/L	24-hour composite	quarterly	[6]
Thallium	µg/L	24-hour composite	quarterly	[6]
Cyanide	µg/L	grab	quarterly	[6]
4,4'-DDE	µg/L	24-hour composite	semiannually~~quarterly~~	[6]
Diazinon[16]	µg/L	24-hour composite	semiannually~~quarterly~~	[6]
2,3,7,8-TCDD[17]	µg/L	24-hour composite	semiannually	[6]

REVISED TENTATIVE

[14] 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.

[15] The mercury effluent samples shall be analyzed using EPA method 1631E, per 40 CFR part 136.

[16] Diazinon may be analyzed using USEPA method 8141A or EPA 525.2. Diazinon and chronic toxicity shall be sampled on the same day or as close to concurrently as possible.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Perchlorate	µg/L	grab	semiannually	[18]
1,4-Dioxane	µg/L	grab	semiannually	[18]
1,2,3-Trichloropropane	µg/L	grab	semiannually	[18]
Methyl tert-butyl-ether (MTBE)	µg/L	grab	semiannually	[18]
PCBs as aroclors[19]	µg/L	24-hour composite	annually	[6]
PCBs as congeners[20]	µg/L	24-hour composite	annually	[6]
Total dissolved solids	mg/L	24-hour composite	semiannually	[6]
Sulfate	mg/L	24-hour composite	semiannually	[6]
Chloride	mg/L	24-hour composite	semiannually	[6]
Boron	mg/L	24-hour composite	semiannually	[6]
Fluoride	mg/L	24-hour composite	semiannually	[6]
Remaining USEPA priority pollutants[21] excluding asbestos	µg/L	24-hour composite; grab for VOCs	semiannually	[6]

REVISED TENTATIVE

[17] In accordance with the SIP, the Permittee shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-001, located upstream of the discharge point. The Permittee shall use the appropriate Toxicity Equivalence Factor (TEF) to determine Toxic Equivalence (TEQ). Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding Toxicity Equivalence Factor (TEF_i). (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the Dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

$$\text{Dioxin concentration in effluent} = \sum_{1}^{17}(TEQ_i) = \sum_{1}^{17}(C_i)(TEF_i)$$

[18] Emerging chemicals include 1,4-dioxane (USEPA 8260B or 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).

[19] PCBs as aroclors is the sum of PCB 1016, PCB 1221, PCB 1232, PCB 1242, PCB 1248, PCB 1254, and PCB 1260 when monitoring using USEPA method 608.

[20] PCBs as congeners mean the sum of 41 congeners when monitoring using USEPA proposed method 1668c. 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 shall be individually quantified. PCBs as congeners shall be analyzed using method EPA 1668c for three years and may be discontinued for the remaining life of this Order if none of the PCB congeners are detected using method EPA 1668c.

USEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR part 136, Permittees should use for discharge monitoring reports/State monitoring reports: (1) USEPA method 608 for monitoring data, reported as aroclor results, that will be used for assessing 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.

2. **Total Residual Chlorine Additional Monitoring**

Continuous monitoring of total residual chlorine at EFF-001A shall serve as an internal trigger for the increased grab sampling at EFF-001B if either of the following occurs, except as noted in item c:

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

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

c. 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.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity Testing

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

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

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 during accelerated monitoring 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**.**

3. **Chronic Freshwater Species and Test Methods**

If effluent samples are collected from outfalls discharging to receiving waters with salinity <1 ppt, the Permittee 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.

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

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

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

REVISED TENTATIVE

[21] Priority pollutants are those constituents referred to in 40 CFR section 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423. PCB as aroclors shall be analyzed using method EPA 608 and PCB as congeners shall be analyzed using method EPA 1668c.

4. **Chronic Marine and Estuarine Species and Test Methods (Receiving Water Only)**

If the salinity of the receiving water sample is ≥1 ppt, the Permittee shall conduct the following chronic toxicity tests on receiving water samples in accordance with species and test methods in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving West Coast Marine and Estuarine Organisms (EPA/600/R-95/136, 1995*). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

a. A static renewal toxicity test with the topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0).

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

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

~~4.~~5. **Species Sensitivity Screening**

Species sensitivity screening shall be conducted beginning the first month the permit is in effect. The Permittee 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 ~~Fathead minnow~~*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 ~~Fathead minnow~~*Pimephales promelas*. If the result of all three species is "Pass", then the species that exhibits the highest "Percent Effect" at the discharge IWC during species sensitivity screening shall be used for routine monitoring during the permit cycle. If only one species fails, then that species shall be used for routine monitoring during the permit cycle. If two or more species result in "Fail," then the species that exhibits the highest "Percent Effect" at the discharge IWC during the suite of species sensitivity screening shall be used for routine monitoring during the permit cycle, until such time as a rescreening is required (24 months later).

Species sensitivity rescreening is required every 24 months if there has been discharge during dry weather conditions. If the intermittent discharge is only during wet weather, rescreening is not required. If rescreening is necessary, the Permittee shall rescreen with the fish, an invertebrate, and the alga species previously referenced and continue to monitor with the most sensitive species. If the first suite of rescreening tests demonstrates that the same species is the most sensitive then the rescreening does not need to include more than one suite of tests. If a different species is the most sensitive or if there is ambiguity, then the Permittee shall proceed with suites of screening tests for a minimum of three, but not to exceed five suites.

The Permittee shall conduct sensitivity screening of the receiving water at monitoring station RSW-003 every 24 months. Other receiving water monitoring station may be substituted upon receipt of written request from the Permittee and approval by the Executive Officer. The Permittee shall collect a single receiving water sample to initiate and concurrently conduct three toxicity tests using the fish, an invertebrate, (the purple sea urchin, the sand dollar, or the red abalone), and the alga species previously referenced (for Chronic Marine and Estuarine Species) and continue monitoring with the

REVISED TENTATIVE

most sensitive species. The determination of the most sensitive species will follow the rationale for the chronic freshwater species determination for the effluent.

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.~~6. **Quality Assurance and Additional Requirements**

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

a. 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 *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1, ~~and~~ Table A-1 and Appendix B, Table B-1. The null hypothesis (H_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.

b. The Median Monthly Effluent Limit (MMEL) for chronic toxicity only applies when there is a discharge on more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail."

c. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013) (see Table E.4, below), then the Permittee must re-sample and re test within 14 days.

Table E-4. USEPA Test Methods and Test Acceptability Criteria for Freshwater Organisms

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
Fathead Minnow, *Pimephales promelas*, Larval Survival and Growth Test Method 1000.0 (Table 1 of the test method, 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 the test method, 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 surviving control females must produce three broods. (required)
Green Alga, *Selenastrum capricornutum,*Growth Toxicity Test Method 1003.0. (Table 3 of the test	Mean cell density of at least 1 X 10^6 cells/mL in the controls; and variability (CV%) among control

REVISED TENTATIVE

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
method, above)	replicates less than or equal to 20%. (required)

d. If the receiving water chronic toxicity test does not meet all TAC specified in the referenced test method, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving West Coast Marine and Estuarine Organisms (EPA/600/R-95/136, 1995*) (see Table E-5, below), then the Permittee must re-sample and re-test within 14 days. This applies when the salinity of the receiving water sample is ≥1 ppt.

Table E-5. USEPA Test Methods and Test Acceptability Criteria for West Coast Marine and Estuarine Organisms

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
Topsmelt, *Atherinops affinis* (Larval Survival and Growth Test Method 1006.0, Table 3 of the test method, above).	≥80% survival in controls; 0.85 mg average weight of control larvae (9 day old), LC50 with copper must be ≤205 µg/L, <25% Minimum Significant Difference (MSD) for survival and <50% MSD for growth.
Purple sea urchin, *Strongylocentrotus purpuratus*, and the sand dollar, *Dendraster excentricus* (Fertilization Test Method 1008.0, Table 7 of the test method, above)	≥70% egg fertilization in controls; %MSD of <25%; and appropriate sperm counts.
Red abalone, *Haliotis rufescens* (Larval Shell Development Test Method, Table 3 of the test method, above).	≥80% normal shell development in the controls; must have statistical significant effect at 56 µg/L zinc; must achieve a %MSD of <20%.
Giant kelp, *Macrocystis pyrifera* (Germination and Growth Test Method 1009.0 (Table 3 of the test method, above).	≥70% germination in the controls; ≥10 µm germ-tube length in the controls and the NOEC must be below 35 µg/L in the reference toxicant test; must achieve a %MSD of <20 for both germination and germ-tube length in the reference toxicant.

~~d.~~e. Dilution water and control water, including brine controls, shall be laboratory water prepared and used as specified in the test methods manual. If dilution water and control water is different from test organism culture water, then a second control using culture water shall also be used.

~~e.~~f. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported using EC25[22].

~~f.~~g. The Permittee 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.

[22] 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.

REVISED TENTATIVE

~~6.~~7. Preparation of an Initial Investigation TRE Work Plan

The Permittee shall prepare and submit a copy of the Permittee's initial investigation TRE work plan to the Executive Officer of the Regional Water Board for approval within 90 days of the effective date of this permit. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The Permittee shall use USEPA manual EPA/833B-99/002 (municipal) as guidance, or most current version. At a minimum, the TRE Work Plan must contain the provisions in Attachment G. This work plan shall describe the steps that the Permittee intends to follow if toxicity is detected. At minimum, the work plan shall include:

a. 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.

b. 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.

c. 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).

~~7.~~8. Accelerated Monitoring Schedule for Median Monthly Summary Result: "Fail": and Accelerated Monitoring Schedule for Maximum Daily Single Result: "Fail and % Effect ≥50."

When there is discharge on more than one day in a calendar month, the Median Monthly summary result shall be used to determine if accelerated testing needs to be conducted. When there is discharge on only one day in a calendar month, the Maximum Daily single result shall be used to determine if accelerated testing needs to be conducted.

Once the Permittee becomes aware of this result, the Permittee shall implement an accelerated monitoring schedule within 48 hours for the *Ceriodaphnia dubia* test, and within 5 calendar days for both the *Pimephales promelas* and *Selenastrum capricornutum* tests. However, if the sample is contracted out to a commercial laboratory, the Permittee shall ensure that the first of four accelerated monitoring tests is initiated within seven calendar days of the Permittee becoming aware of the result. The accelerated monitoring schedule shall consist of four toxicity tests (including IWC), conducted at approximately two week intervals, over an eight week period; in preparation for the TRE process and associated reporting, these results shall also be reported using the EC25. If each of the accelerated toxicity tests results in "Pass", the Permittee shall return to routine monitoring for the next monitoring period. If one of the accelerated toxicity tests results in "Fail", the Permittee shall immediately implement the TRE Process conditions set forth below. During accelerated monitoring schedules, only 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.

~~8.~~9. Toxicity Reduction Evaluation (TRE) Process

During the TRE Process, monthly effluent monitoring shall resume 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.

a. **Preparation and Implementation of Detailed TRE Work Plan.** The Permittee shall immediately initiate a TRE using, according to the type of treatment facility, USEPA manual *Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants* (EPA/833/B-99/002, 1999) and, within 15 days, submit to the

REVISED TENTATIVE

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:

i. Further actions by the Permittee to investigate, identify, and correct the causes of toxicity.

ii. Actions the Permittee will take to mitigate the effects of the discharge and prevent the recurrence of toxicity.

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

b. **TIE Implementation.** The Permittee 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.

c. Many recommended TRE elements parallel required or recommended efforts for source control, pollution prevention, and storm water control programs. TRE efforts should be coordinated with such efforts. As toxic substances are identified or characterized, the Permittee 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.

d. The Permittee shall continue to conduct routine effluent monitoring for compliance determination purposes while ~~the duration of~~ the TIE and/or TRE process is taking place. Additional accelerated monitoring and TRE work plans are not required once a TRE ~~is~~has begun.

e. The Regional 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. The TRE may be ended at any stage, if monitoring finds there is no longer toxicity.

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

~~9.~~10. **Reporting**

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

a. The valid toxicity test results for the TST statistical approach, reported as “Pass” or “Fail” and “Percent Effect” at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported on the SMR due date specified in Table E-9~~8~~.

REVISED TENTATIVE

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

c. The statistical analysis used in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010) Appendix A, Figure A-1, ~~and~~ Table A-1, and Appendix B, Table B-1.

d. 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 Permittee shall provide status updates in the monthly monitoring reports, indicating which TIE/TRE steps are underway and which steps have been completed.

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

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

g. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon written request from the Regional Water Board Chief Deputy Executive Officer or the Executive Officer.

B. Ammonia Removal

1. Except with prior approval from the Executive Officer of the Regional Water Board, ammonia shall not be removed from bioassay samples. The Permittee 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 may be steps 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 toxicity identification evaluation 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 due to ammonia.

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 Regional Water Board, and receiving written permission expressing approval from the Executive Officer of the Regional Water Board.

C. Chlorine Removal

1. Except with prior approval from the Executive Office of the Regional Water Board, chlorine shall not be removed from bioassay samples. Chlorine may be removed from

REVISED TENTATIVE

the Long Beach WRP 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.

VI. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)

VII. RECYCLING MONITORING REQUIREMENTS (NOT APPLICABLE)

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location RSW-001 through RSW-006

1. The Permittee shall monitor Coyote Creek and San Gabriel River at RSW-001 through RSW-006 as follows:

Table E-~~5.~~6. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total flow[23]	cfs	calculation	monthly	--
Turbidity	NTU	grab	monthly	[24]
Total residual chlorine	mg/L	grab	monthly	[24]
E. coli	MPN/100ml or CFU/100ml	grab	monthly	[24]
Temperature	°F	grab	monthly	[24]
pH	pH units	grab	monthly	[24]
Settleable Solids	mL/L	grab	monthly	[24]
Total Suspended Solids	mg/L	grab	monthly	[24]
BOD_5 20°C	mg/L	grab	monthly	[24]
Oil and grease	mg/L	grab	monthly	[24]
Dissolved oxygen	mg/L	grab	monthly	[24]
Conductivity	µmhos/cm	grab	monthly	[24]
Ammonia nitrogen	mg/L	grab	monthly	[24]
Nitrate nitrogen	mg/L	grab	monthly	[24]
Nitrite nitrogen	mg/L	grab	monthly	[24]
Organic nitrogen	mg/L	grab	monthly	[24]
Total kjeldahl nitrogen (TKN)	mg/L	grab	monthly	[24]

[23] Some receiving water stations cannot be measured or estimated because of tidal effects near the Estuary. In this condition, total flow is not required to be reported.

[24] Pollutants shall be analyzed using the analytical methods described in 40 CFR part 136; where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or State Water 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.

REVISED TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total nitrogen	mg/L	grab	monthly	[24]
Total phosphorus	mg/L	grab	monthly	[24]
Orthophosphate-P	mg/L	grab	monthly	[24]
Surfactants (MBAS)	mg/L	grab	monthly	[24]
Surfactants (CTAS)	mg/L	grab	monthly	[24]
Total hardness ($CaCO_3$)	mg/L	grab	monthly	[24]
Salinity	ppt	grab	monthly	[24]
Chronic toxicity[25]	Pass or Fail, % Effect (TST)	grab	quarterly	[24, 26]
Copper	µg/L	grab	monthly	[24]
Lead	µg/L	grab	monthly	[24]
Zinc	µg/L	grab	monthly	[24]
Selenium	µg/L	grab	monthly	[24]
Benzo(a)Pyrene	µg/L	grab	monthly	[24]
Benzo(b)Fluoranthene	µg/L	grab	monthly	[24]
Benzo(k)Fluoranthene	µg/L	grab	monthly	[24]
Chrysene	µg/L	grab	monthly	[24]
Dibenzo(a,h)Anthracene	µg/L	grab	monthly	[24]
Indeno(1,2,3-cd)Pyrene	µg/L	grab	monthly	[24]
Antimony	µg/L	grab	quarterly	[24]
Arsenic	µg/L	grab	quarterly	[24]
Beryllium	µg/L	grab	quarterly	[24]
Cadmium	µg/L	grab	quarterly	[24]
Chromium III	µg/L	calculation	quarterly	[24]
Chromium VI	µg/L	grab	quarterly	[24]
Mercury[15]	µg/L	grab	quarterly	[24]

[25] The Permittee shall conduct whole effluent toxicity monitoring as outlined in section V. Please refer to section V.A.7 of this MRP for the accelerated monitoring schedule. The median monthly summary result is a threshold value for a determination of meeting the narrative receiving water objective and shall be reported as "Pass" or "Fail." The maximum daily single result is a threshold value for a determination of meeting the narrative receiving water objective and shall be reported as "Pass or Fail" and "% Effect." Up to three independent toxicity tests may be conducted when one toxicity test results in "Fail." If the chronic toxicity median monthly threshold at the immediate downstream receiving water location is not met and the toxicity cannot be attributed to upstream toxicity, as assessed by the Permittee, then the Permittee shall initiate accelerated monitoring. For example, 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 accelerated monitoring need not be implemented.

[26] For monitoring locations with brackish waters (RSW-003, RSW-004, RSW-005, and RSW-006), the receiving water chronic toxicity tests will be implemented using the *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms* (EPA/600/R-95/136, 1995).

Prior to initiating the receiving water chronic toxicity test, the salinity of the receiving water sample shall be analyzed to determine which of the two chronic toxicity test methods shall be used. When the salinity of the sample is <1 ppt, the freshwater organism test method shall be used. When the salinity of receiving water sample is ≥1 ppt, the marine/estuarine organism test method shall be used.

REVISED TENTATIVE

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Nickel	µg/L	grab	quarterly	[24]
Silver	µg/L	grab	quarterly	[24]
Thallium	µg/L	grab	quarterly	[24]
Cyanide	µg/L	grab	quarterly	[24]
4,4'-DDE	µg/L	grab	semiannually	[24]
Methyl tert-butyl-ether (MTBE)	µg/L	grab	semiannually	[27]
Perchlorate	µg/L	grab	semiannually	[27]~~[26]~~
1,2,3-Trichloropropane	µg/L	grab	semiannually	[27]~~[26]~~
1,4-Dioxane	µg/L	grab	semiannually	[27]~~[26]~~
Diazinon[28]	µg/L	grab	quarterly	[27]~~[24]~~
2,3,7,8-TCDD[29]	µg/L	grab	semiannually	[24]
Iron	µg/L	grab	semiannually	[24]
Methoxychlor	µg/L	grab	semiannually	[24]
2,4-D	µg/L	grab	semiannually	[24]
2,4,5-TP (Silvex)	µg/L	grab	semiannually	[24]
PCBs as aroclors[19]	µg/L	grab	annually	[24]
PCBs as congeners[20]	µg/L	grab	annually	[24]
Remaining USEPA priority pollutants[30] excluding asbestos	µg/L	grab	semiannually	[24]

2. Receiving water samples shall not be taken during or within 48-hours following the flow of rainwater runoff into the San Gabriel River-Coyote Creek system. 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.

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[27] Emerging chemicals include 1,4-dioxane (USEPA 8260B or 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).

[28] Diazinon sampling shall be conducted concurrently with the receiving water chronic toxicity sampling.

[29] In accordance with the SIP, the Permittee shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-001, located upstream of the discharge point. The Permittee shall use the appropriate Toxicity Equivalence Factor (TEF) to determine Toxic Equivalence (TEQ). Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding Toxicity Equivalence Factor (TEF_i), (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the Dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

$$\text{Dioxin concentration in effluent} = \sum_{1}^{17}(TEQ_i) = \sum_{1}^{17}(C_i)(TEF_i)$$

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

REVISED TENTATIVE

B. Ammonia Receiving Water Monitoring Requirements

1. On July 30, 2009, the Regional Water Board approved the ammonia receiving water monitoring location based on the study conducted by the Permittee. The study concluded that the ammonia compliance monitoring shall be conducted 100 feet below the outfall. To ensure that downstream receiving waters are protected at all times, the Permittee shall monitor the ammonia concentrations at RSW-002, 100 feet downstream from the discharge outfall. The purpose of the monitoring location is to ensure that ammonia water quality objectives are met in the receiving water, even immediately downstream of the discharge when there has been little time for uptake or volatilization of ammonia in the receiving water. Concurrent sampling of ammonia, pH, and temperature will be required at this monitoring location. The Permittee shall compare the ammonia results to Basin Plan ammonia water quality objectives, based on the real-time pH and temperature data collected at the time of ammonia sampling.

2. The Permittee shall monitor Coyote Creek at RSW-002. The monitoring requirement specified in Table E-6~~5~~ will satisfy the monitoring requirement in this Table and is not meant to be a duplicative requirement. The parameters shall be reported as follows:

Table E-~~6.~~7. Ammonia Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature	°F	grab	monthly	[24]
pH	pH units	grab	monthly	[24]
Ammonia Nitrogen	mg/L	grab	monthly	[24]
Chronic toxicity[25]	Pass or Fail, %Effect (TST)	grab	quarterly	[24]

C. TMDL Flow Monitoring Requirements

1. The Permittee shall report the maximum daily flow at LACDPW flow gauging station F354-R in Coyote Creek. This station is also known as RSW-007 for the purposes of this permit. The RSW-007 gauging station is operated and maintained by the LACDPW. This information is necessary to determine the wet- and dry-weather condition of the creek as defined by *San Gabriel River Metals TMDL*. If the gauging station is not operational, an estimated maximum daily flow may be submitted.

Table E-~~7.~~8. TMDL Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Maximum Daily Flow	cfs	recorder	daily	N/A

D. Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL (Harbor Toxic TMDL) Monitoring Requirements

1. The Harbor Toxic TMDL requires the responsible parties identified in the metals TMDLs for Los Angeles River and San Gabriel River to conduct water and sediment monitoring above the Los Angeles River Estuary and at the mouth of the San Gabriel River, respectively, to determine the rivers' contribution to the impairments in the Greater Harbor waters. The JOS is identified as a responsible party in the metals TMDLs for the Los Angeles River and San Gabriel River. Although WLAs are not assigned to the Los Angeles River and San Gabriel River Watershed Responsible Parties, the Harbor Toxic TMDL does require these parties to develop and implement a monitoring plan and submit

REVISED TENTATIVE

annual reports regarding implementation. In this permit, the Permittee will be required to comply with the terms of the TMDL.

2. On November 19, 2013, in compliance with Table 7-40.2 of the Harbor Toxic TMDL: Implementation Plan, the JOS submitted a monitoring plan for approval by the Regional Water Board. This monitoring plan is currently being reviewed by the Regional Water Board.

IX. OTHER MONITORING REQUIREMENTS

A. Watershed Monitoring

1. The goals of the Watershed-wide Monitoring Program for the San Gabriel River Watershed are to:
   - Determine compliance with receiving water limitations.
   - Monitor trends in surface water quality.
   - Ensure protection of beneficial uses.
   - Provide data for modeling contaminants of concern.
   - Characterize water quality including seasonal variation of surface waters within the watershed.
   - Assess the health of the biological community.
   - Determine mixing dynamics of effluent and receiving waters in the estuary.
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 San Gabriel River, which was approved by the Regional Water Board on September 25, 2006.
3. In coordination with the Los Angeles County Public Works and other interested stakeholders in the San Gabriel River, the Permittee shall conduct instream bioassessment monitoring once a year, during 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 (benthic diatoms and soft-bodied algae), chlorophyll a and biomass for instream algae, and physical habitat assessment at the random monitoring stations designated by the San Gabriel River Watershed Monitoring Program. Over time, bioassessment monitoring will provide a measure of the physical condition of the waterbody and the integrity of its biological communities.
   a. The bioassessment program shall include an analysis of the community structure of the instream macroinvertebrate, algal assemblages, algal biomass, and physical habitat assessment at monitoring stations RSW-001 and RSW-002.

      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 Permittee. 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

REVISED TENTATIVE

the same season and at the same location as specified in the MRP, then the Permittee 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 Permittee must provide a copy of their Standard Operation Procedures (SOPs) for the Bioassessment Monitoring Program to the Regional Water Board upon request. The document must contain step-by-step field, laboratory and data entry procedures, as well as, 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 for the California Stream Bioassessment Procedure (CSBP) or more recently established sampling protocols, such as used by the Surface Water Ambient Monitoring Program (SWAMP). 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 Permittee 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 Regional 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 Permittee 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.

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

B. Tertiary Filter Treatment Bypasses

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

2. The Permittee shall maintain 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.

   c. Estimated total volume bypassed

3. The Permittee shall notify Regional Water Board staff by telephone within 24 hours of the filter bypass event.

REVISED TENTATIVE

4. The Permittee shall submit a written report to the Regional 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 B.1. above, shall be submitted to the Regional Water Board in the corresponding monthly report.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. If there is no discharge during any reporting period, the report shall so state.
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.
4. The Permittee shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
5. Each monthly monitoring report shall include a determination of compliance with receiving water ammonia water quality objectives at RSW-002. Any exceedances of an ammonia water quality objective shall be noted in the "Summary of Non-Compliance" section of the monitoring report.

B. Self-Monitoring Reports (SMRs)

1. The Permittee shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program Web site (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Permittee shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Permittee 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 Permittee monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-~~8.~~9. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
Daily	Permit 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

REVISED TENTATIVE

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Weekly	Sunday following permit 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 permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	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) permit 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) permit effective date	January 1 through June 30 July 1 through December 31	September 15 March 15
Annually	January 1 following (or on) permit effective date	January 1 through December 31	April 15

4. Reporting Protocols. The Permittee 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 Permittee 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. Permittees 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 Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. Compliance Determination. Compliance with effluent limitations for priority pollutants shall be determined using sample reporting protocols defined above and Attachment A of this Order. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Permittee 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 RL).

REVISED TENTATIVE

6. Multiple Sample Data. When determining compliance with an average monthly effluent limitation (AMEL), average weekly effluent limitation (AWEL), or maximum daily effluent limitation (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.

7. The Permittee shall submit SMRs in accordance with the following requirements:

   a. The Permittee 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 Permittee 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 Permittee shall electronically submit the data in a tabular format as an attachment.

   b. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify instances of non-compliance or exceedances of effluent limitations of the WDRs; 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.

C. Discharge Monitoring Reports (DMRs)

1. The Permittee shall submit DMRs electronically via CIWQS.

D. Other Reports

1. The Permittee shall report the results of any special studies, chronic toxicity testing, TRE/TIE, Pollutant Minimization Program (PMP), and Pollution Prevention Plan required by Special Provisions – section VI.C. The Permittee shall submit reports in compliance with SMR reporting requirements described in subsection X.B. above.

2. **Annual Summary Report**

   By April 15 of each year, the Permittee 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 Permittee shall submit annual report to the Regional Water Board in accordance with the requirements described in subsection X.B.7 above.

   Each annual monitoring report shall contain a separate section titled "Reasonable Potential Analysis" which discusses whether or not 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/

REVISED TENTATIVE

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.

e. The date and time of sample collection.

3. The Permittee shall submit to the Regional Water Board, together with the first monitoring report required by this permit, 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.

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

   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.

REVISED TENTATIVE

ATTACHMENT F – FACT SHEET

Contents

I. Permit Information F-3
II. Facility Description F-4
A. Description of Wastewater and Biosolids Treatment and Controls F-4
B. Discharge Points and Receiving Waters F-5
C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data F-5
D. Compliance Summary F-10
E. Planned Changes F-11
III. Applicable Plans, Policies, and Regulations F-11
A. Legal Authorities F-11
B. California Environmental Quality Act (CEQA) F-11
C. State and Federal Laws, Regulations, Policies, and Plans F-12
D. Impaired Water Bodies on CWA Section 303(d) List F-15
E. Other Plans, Polices and Regulations F-16
IV. Rationale For Effluent Limitations and Discharge Specifications F-19
A. Discharge Prohibitions F-19
B. Technology-Based Effluent Limitations (TBELs) F-19
1. Scope and Authority F-19
2. Applicable TBELs F-19
C. Water Quality-Based Effluent Limitations (WQBELs) F-20
1. Scope and Authority F-20
2. Applicable Beneficial Uses and Water Quality Criteria and Objectives F-21
3. Determining the Need for WQBELs F-30
4. WQBEL Calculations F-35
5. Whole Effluent Toxicity (WET) F-40
D. Final Effluent Limitation Considerations F-44
1. Anti-Backsliding Requirements F-44
2. Antidegradation Policies F-45
3. Stringency of Requirements for Individual Pollutants F-46
E. Interim Effluent Limitations F-48
F. Land Discharge Specifications – Not Applicable F-48
G. Recycling Specifications F-48
V. Rationale for Receiving Water Limitations F-48
A. Surface Water F-48
VI. Rationale for Provisions F-48
A. Standard Provisions F-48
B. Special Provisions F-48
1. Reopener Provisions F-48
2. Special Studies and Additional Monitoring Requirements F-48
3. Best Management Practices and Pollution Prevention F-49
4. Construction, Operation, and Maintenance Specifications F-49
5. Special Provisions for Municipal Facilities (POTWs Only) F-49
6. Other Special Provisions (Not Applicable) F-50
7. Compliance Schedules (Not Applicable) F-50
VII. Rationale for Monitoring and Reporting Requirements F-50
A. Influent Monitoring F-51
B. Effluent Monitoring F-51

REVISED TENTATIVE

C. WET Requirements F-53
D. Receiving Water Monitoring F-53
1. Surface Water F-53
2. Groundwater – (Not Applicable) F-53
E. Other Monitoring Requirements F-53
1. Watershed Monitoring and Bioassessment Monitoring F-53
VIII. Consideration of Need to Prevent Nuisance and CWC Section 13241 Factors. F-53
IX. Public Participation F-55
A. Notification to Permittee and Interested Persons F-55
B. Written Comments F-55
C. Public Hearing F-55
D. Reconsideration of Waste Discharge Requirements F-55
E. Information and Copying F-56
F. Register of Interested Persons F-56
G. Additional Information F-56

Tables

Table F-1. Facility Information F-3
Table F-2. Historic Effluent Limitations and Monitoring Data F-5
Table F-3. Summary of Chronic Toxicity Data Exceeding 1.0 TUc F-10
Table F-4. Basin Plan Beneficial Uses – Receiving Waters F-12
Table F-5. Summary of TBELs F-19
Table F-6. Summary of Ammonia Effluent Limitations for Discharge Point 001 ..... F-27
Table F-7. Summary of Reasonable Potential Analysis F-30
Table F-8. Summary of WQBELs for Discharge Point 001 ..... F-39
Table F-9. Summary of Final Effluent Limitations for Discharge Point 001 ..... F-46
Table F-10. Effluent Monitoring Frequency Comparison F-51

REVISED TENTATIVE

ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional 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 Permittees 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 Permittee. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Permittee.

REVISED TENTATIVE

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B190107014
Discharger	Joint Outfall System
Name of Facility	Long Beach Water Reclamation Plant, Long Beach
Facility Address	7400 East Willow Street
	Long Beach, CA 90815
	Los Angeles County
Facility Contact, Title and Phone	Ann Heil, Supervising Engineer, (562) 699-7411
Authorized Person to Sign and Submit Reports	Ann Heil, Supervising Engineer, (562) 699-7411
Mailing Address	1955 Workman Mill Road, Whittier, CA 90601
Billing Address	SAME
Type of Facility	POTW
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Y
Recycling Requirements	Producer
Facility Permitted Flow	25 million gallons per day (mgd)
Facility Design Flow	25 mgd
Watershed	San Gabriel River
Receiving Water	Coyote Creek
Receiving Water Type	Inland surface water

A. The Joint Outfall System (ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995. These parties include County Sanitation Districts of Los Angeles County Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County), formerly referred to as the County Sanitation Districts of Los Angeles County and hereinafter Permittee, Discharger or Districts, is the owner and operator of the Long Beach Water Reclamation Plant and its associated wastewater collection system and outfalls (hereinafter Facility), a Publicly-Owned Treatment Works (POTW).

For the purposes of this Order, references to the "Permittee" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Permittee herein.

B. The Facility discharges wastewater to Coyote Creek, a water of the United States and State of California. The Permittee was previously regulated by Order No. R4-2007-0047 and NPDES Permit No. CA0054119 adopted on September 6, 2007. Order No. R4-2007-0047 expired on August 5, 2012, but was administratively extended. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. The Permittee filed a report of waste discharge and submitted an application for reissuance of its WDRs and NPDES permit on January 24, 2012. The application was deemed complete on February 21, 2012. A site visit was conducted on July 10, 2012, to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment and Controls

1. The Permittee owns and operates the Long Beach WRP, a tertiary wastewater treatment plant located at 7400 East Willow Street, Long Beach, California. Attachment B shows the location of the plant. The Long Beach WRP currently receives wastewater from Artesia, Bellflower, Cerritos, Hawaiian Gardens, Lakewood, Long Beach, and Signal Hill. The wastewater is a mixture of domestic and industrial wastewater that is pre-treated pursuant to 40 CFR part 403. Long Beach WRP has a design capacity of 25 mgd and serves an estimated population of 229,000 people.

   The Districts have undertaken a full evaluation of local limits for the JOS, which is an interconnected system consisting of the Long Beach, Los Coyotes, Pomona, San Jose Creek and Whittier Narrows WRPs, as well as Joint Water Pollution Control Plant (JWPCP), and La Canada WRP (non-industrial). Due to the interconnectedness of this system, it is appropriate to formally evaluate local limits for all treatment plants on the system at one time so that conditions throughout the system can be considered. The Districts have reviewed the discharge limitations in the NPDES permits issued to these facilities and have found that changes to existing local limits are not necessary to meet the limitations. The most recent local limits evaluation was submitted on August 22, 2012 finding that the existing limits were fully protective of the JOS system. However, a re-evaluation will be required following the renewal of the NPDES permit issued to the JWPCP.

   The Long Beach WRP is part of an integrated network of facilities, known as the JOS. The JOS incorporates the Long Beach WRP and six other wastewater treatment plants, which are connected by more than 1,200 miles of interceptors and trunk sewers. The upstream treatment plants (Whittier Narrows, Pomona, La Cañada, Long Beach, Los Coyotes, and San Jose Creek) are connected to the JWPCP located in Carson. This system allows for the diversion of influent flows into or around each upstream plant if so desired.

2. Treatment at the Long Beach WRP consists of primary sedimentation, activated sludge biological treatment with nitrification and denitrification, secondary sedimentation, inert media filtration, chloramination, and dechlorination. Treated wastewater discharged to Coyote Creek is dechlorinated.

3. Sodium hypochlorite and ammonia are used as disinfectants at the Long Beach WRP in a process known as sequential chlorination. Sodium hypochlorite is added to the treated effluent prior to tertiary filtration to destroy bacteria, pathogens, and viruses, and to

REVISED TENTATIVE

minimize algal growth in the filters. This is followed by chloramination after filtration, to minimize the time that the effluent is subject to disinfection with free chlorine and thus control formation of trihalomethanes. Prior to discharge, sodium bisulfite is added to the treated effluent to remove residual chlorine.

4. No facilities are provided for solids processing at the plant. Sewage solids separated from the wastewater are returned to the trunk sewer for conveyance to JWPCP for treatment and disposal occurs, under Order No. R4-2011-0151 (NPDES No. CA0053813). Attachment C is a schematic of the Long Beach WRP wastewater flow.
5. The Permittee has constructed a biological nutrient removal system with nitrogen de-nitrification process (NDN) in order to achieve compliance with the ammonia Basin Plan objectives. The system was completed and has been in operation since 2003.

B. Discharge Points and Receiving Waters

The Long Beach WRP discharges tertiary treated wastewater to Coyote Creek, a water of the United States and State of California. Treated effluents are discharged from the plant to surface waters at:

Discharge Point 001: Discharge to Coyote Creek located approximately 2,200 feet upstream from the confluence with San Gabriel River, within the Estuary in the San Gabriel River Watershed (approximate coordinates: Latitude 33.79861º and Longitude -118.08778º).

During dry weather (May 1 – October 31), the primary sources of water flow in San Gabriel River, downstream of the discharge point, are the Long Beach WRP effluent and other NPDES-permitted discharges, including discharges conveyed through the municipal separate storm sewer systems (MS4). Storm water and dry weather urban runoff from the MS4 are regulated under an NPDES permit, *Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges within the Coastal Watersheds of Los Angeles County, Except those Discharges Originating from the City of Long Beach*, NPDES Permit No. CAS004001.

The Los Angeles County Flood Control District channelized portions of Coyote Creek and the San Gabriel River, which convey and control floodwater to prevent damage to homes located adjacent to the river. Although this is not the main purpose, the San Gabriel River conveys treated wastewater along with stormwater and urban runoff.

Notwithstanding that segments located further downstream of the discharge are concrete-lined, the watershed supports a diversity of wildlife, particularly an abundance of avian species such as the *Least Bell's Vireo, Tricolored Blackbird, and California Gnatcatcher*. Aquatic life, such as fish, invertebrates, and algae exist in the San Gabriel River Watershed.

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

Effluent limitations contained in the previous Order (No. R4-2007-0047) for discharges from Discharge Point 001, (Monitoring Location EFF-001) and representative monitoring data from the term of the previous Order as reported in the ROWD, are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation (Order No. R4-2007-0047)			Monitoring Data (From 11/01/2009 To 04/30/2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
$BOD_5$20°C	mg/L	20	30	45	6	6	6

REVISED TENTATIVE

Parameter	Units	Effluent Limitation (Order No. R4-2007-0047)			Monitoring Data (From 11/01/2009 To 04/30/2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Total Suspended Solids (TSS)	mg/L	15	40	45	7.7	7.7	7.7
Oil and Grease	mg/L	10	--	15	<5	--	<5
Settleable Solids	ml/L	0.1	--	0.3	<0.1	<0.1	<0.1
Residual Chlorine	mg/L	--	--	0.1	<0.05	<0.05	<0.05
Nitrite-N (as N)	mg/L	1	--	--	0.6	--	0.6
Nitrate + Nitrite as N	mg/L	8	--	--	8.38	--	8.38
Total Ammonia	mg/L	1.8	--	4.2	2.6	--	2.6
Antimony	µg/L	--	--	--	0.61	--	0.61
Arsenic	µg/L	--	--	--	3.51	--	3.51
Beryllium	µg/L	--	--	--	<0.25	--	<0.25
Cadmium	µg/L	--	--	--	0.02	--	0.02
Chromium III	µg/L	--	--	--	<0.5	--	<0.5
Chromium VI	µg/L	--	--	--	1.6	--	1.6
Copper	µg/L	18	--	20/26	8.05	--	8.05
Lead	µg/L	--	--	106	0.13	--	0.13
Mercury	µg/L	--	--	--	0.0027	--	0.0027
Nickel	µg/L	--	--	--	1.75	--	1.75
Selenium	µg/L	--	--	--	E 0.92	--	0.92
Silver	µg/L	--	--	--	0.02	--	0.02
Thallium	µg/L	--	--	--	<0.25	--	<0.25
Zinc	µg/L	--	--	156	46.1	--	46.1
Cyanide	µg/L	--	--	--	0.0023	--	0.0023
Asbestos	µg/L	--	--	--	--	--	--
2,3,7,8-TCDD (Dioxin)	pg/L	--	--	--	<13	--	<13
Acrolein	µg/L	--	--	--	0.64	--	0.64
Acrylonitrile	µg/L	--	--	--	<2	--	<2
Benzene	µg/L	--	--	--	<0.5	--	<0.5
Bromoform	µg/L	--	--	--	1.3	--	1.3
Carbon Tetrachloride	µg/L	--	--	--	<0.5	--	<0.5
Chlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
Dibromochloromethane	µg/L	--	--	--	8.5	--	8.5
Chloroethane	µg/L	--	--	--	<0.5	--	<0.5
2-chloroethyl vinyl ether	µg/L	--	--	--	<0.5	--	<0.5
Chloroform	µg/L	--	--	--	27.4	--	27.4
Dichlorobromomethane	µg/L	--	--	--	18.6	--	18.6

REVISED TENTATIVE

Parameter	Units	Effluent Limitation (Order No. R4-2007-0047)			Monitoring Data (From 11/01/2009 To 04/30/2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
1,1-dichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,2-dichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,1-dichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
1,2-dichloropropane	µg/L	--	--	--	<0.5	--	<0.5
1,3-dichloropropylene	µg/L	--	--	--	<0.5	--	<0.5
Ethylbenzene	µg/L	--	--	--	<0.5	--	<0.5
Methyl bromide	µg/L	--	--	--	<0.5	--	<0.5
Methyl chloride	µg/L	--	--	--	E 0.09	--	E 0.09
Methylene chloride	µg/L	--	--	--	E 0.28	--	E 0.28
1,1,2,2-tetrachloroethane	µg/L	--	--	--	<0.5	--	<0.5
Tetrachloroethylene	µg/L	--	--	--	<0.5	--	<0.5
Toluene	µg/L	--	--	--	0.1	--	0.1
Trans 1,2-Dichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
1,1,1-Trichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,1,2-Trichloroethane	µg/L	--	--	--	<0.5	--	<0.5
Trichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
Vinyl Chloride	µg/L	--	--	--	<0.5	--	<0.5
2-chlorophenol	µg/L	--	--	--	<5	--	<5
2,4-dichlorophenol	µg/L	--	--	--	<5	--	<5
2,4-dimethylphenol	µg/L	--	--	--	<2	--	<2
4,6-dinitro-o-resol(aka 2-methyl-4,6-Dinitrophenol)	µg/L	--	--	--	<5	--	<5
2,4-dinitrophenol	µg/L	--	--	--	<5	--	<5
2-nitrophenol	µg/L	--	--	--	<10	--	<10
4-nitrophenol	µg/L	--	--	--	<10	--	<10
3-Methyl-4-Chlorophenol (aka 4-chloro-m-cresol)	µg/L	--	--	--	<1	--	<1
Pentachlorophenol	µg/L	--	--	--	<1	--	<1
Phenol	µg/L	--	--	--	1.2	--	1.2
2,4,6-trichlorophenol	µg/L	--	--	--	0.4	--	0.4
Acenaphthene	µg/L	--	--	--	<1	--	<1
Acenaphthylene	µg/L	--	--	--	<10	--	<10

REVISED TENTATIVE

Parameter	Units	Effluent Limitation (Order No. R4-2007-0047)			Monitoring Data (From 11/01/2009 To 04/30/2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Anthracene	µg/L	--	--	--	<10	--	<10
Benzidine	µg/L	--	--	--	<5	--	<5
Benzo(a)Anthracene	µg/L	--	--	--	<5	--	<5
Benzo(a)Pyrene	µg/L	--	--	--	E 0.013	--	0.013
Benzo(b)Fluoranthene	µg/L	--	--	--	E 0.01	--	0.01
Benzo(ghi)Perylene	µg/L	--	--	--	< 5	--	< 5
Benzo(k)Fluoranthene	µg/L	--	--	--	0.02	--	0.02
Bis(2-Chloro-ethoxy) methane	µg/L	--	--	--	<5	--	<5
Bis(2-Chloroethyl)Ether	µg/L	--	--	--	<1	--	<1
Bis(2-Chloroisopropyl) Ether	µg/L	--	--	--	<2	--	<2
Bis(2-Ethylhexyl) Phthalate	µg/L	--	--	--	0.3	--	0.3
4-Bromophenyl Phenyl Ether	µg/L	--	--	--	<5	--	<5
Butylbenzyl Phthalate	µg/L	--	--	--	<10	--	<10
2-Chloronaphthalene	µg/L	--	--	--	<10	--	<10
4-Chlorophenyl Phenyl Ether	µg/L	--	--	--	<5	--	<5
Chrysene	µg/L	--	--	--	E 0.014	--	0.014
Dibenzo(a,h) Anthracene	µg/L	--	--	--	0.023	--	0.023
1,2-Dichlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
1,3-Dichlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
1,4-Dichlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
3-3'-Dichlorobenzidine	µg/L	--	--	--	<5	--	<5
Diethyl Phthalate	µg/L	--	--	--	0.35	--	0.35
Dimethyl Phthalate	µg/L	--	--	--	<2	--	<2
Di-n-Butyl Phthalate	µg/L	--	--	--	<10	--	<10
2-4-Dinitrotoluene	µg/L	--	--	--	<5	--	<5
2-6-Dinitrotoluene	µg/L	--	--	--	<5	--	<5

REVISED TENTATIVE

Parameter	Units	Effluent Limitation (Order No. R4-2007-0047)			Monitoring Data (From 11/01/2009 To 04/30/2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Di-n-Octyl Phthalate	µg/L	--	--	--	<10	--	<10
1,2-Diphenylhydrazine	µg/L	--	--	--	<1	--	<1
Fluoranthene	µg/L	--	--	--	<1	--	<1
Fluorene	µg/L	--	--	--	<10	--	<10
Hexachlorobenzene	µg/L	--	--	--	<1	--	<1
Hexachlorobutadiene	µg/L	--	--	--	<1	--	<1
Hexachlorocyclopentadiene	µg/L	--	--	--	<5	--	<5
Hexachloroethane	µg/L	--	--	--	<1	--	<1
Indeno(1,2,3-cd)Pyrene	µg/L	--	--	--	0.033	--	0.033
Isophorone	µg/L	--	--	--	<1	--	<1
Naphthalene	µg/L	--	--	--	<1	--	< 1
Nitrobenzene	µg/L	--	--	--	<1	--	< 1
N-Nitroso-dimethylamine	µg/L	--	--	--	0.63	--	0.63
N-Nitrosodi-n-Propylamine	µg/L	--	--	--	<5	--	<5
N-Nitroso-diphenylamine	µg/L	--	--	--	<1	--	<1
Phenanthrene	µg/L	--	--	--	<5	--	<5
Pyrene	µg/L	--	--	--	<10	--	<10
1,2,4-Trichlorobenzene	µg/L	--	--	--	<5	--	<5
Aldrin	µg/L	--	--	--	<0.005	--	<0.005
Alpha-BHC	µg/L	--	--	--	<0.01	--	<0.01
Beta-BHC	µg/L	--	--	--	<0.005	--	<0.005
Gamma-BHC (aka Lindane)	µg/L	--	--	--	0.004	--	0.004
delta-BHC	µg/L	--	--	--	<0.005	--	<0.005
Chlordane	µg/L	--	--	--	<0.05	--	<0.05
4,4'-DDT	µg/L	--	--	--	<0.01	--	<0.01
4,4'-DDE	µg/L	0.00059	--	0.0012	<0.01	--	<0.01
4,4'-DDD	µg/L	--	--	--	<0.01	--	<0.01
Dieldrin	µg/L	--	--	--	<0.01	--	<0.01
Alpha-Endosulfan	µg/L	--	--	--	<0.01	--	<0.01
Beta-Endosulfan	µg/L	--	--	--	<0.01	--	<0.01
Endosulfan Sulfate	µg/L	--	--	--	<0.01	--	<0.01
Endrin	µg/L	--	--	--	<0.01	--	<0.01

REVISED TENTATIVE

Parameter	Units	Effluent Limitation (Order No. R4-2007-0047)			Monitoring Data (From 11/01/2009 To 04/30/2014)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Endrin Aldehyde	µg/L	--	--	--	<0.01	--	<0.01
Heptachlor	µg/L	--	--	--	< 0.01	--	< 0.01
Heptachlor Epoxide	µg/L	--	--	--	<0.01	--	<0.01
PCB 1016	µg/L	--	--	--	<0.1	--	<0.1
PCB 1221	µg/L	--	--	--	<0.5	--	<0.5
PCB 1232	µg/L	--	--	--	<0.3	--	<0.3
PCB 1242	µg/L	--	--	--	<0.1	--	<0.1
PCB 1248	µg/L	--	--	--	<0.1	--	<0.1
PCB 1254	µg/L	--	--	--	<0.05	--	<0.05
PCB 1260	µg/L	--	--	--	<0.1	--	<0.1
Toxaphene	µg/L	--	--	--	<0.5	--	<0.5
Iron	µg/L	--	--	--	0.09	--	0.09
MTBE	µg/L	--	--	--	0.19	--	0.19
1,2,3-Trichloropropane	µg/L	--	--	--	0.0016	--	0.0016
Perchlorate	µg/L	--	--	--	0.5	--	0.5
1,4-Dioxane	µg/L	--	--	--	2.1	--	2.1

D. Compliance Summary

On June 6, 2014, Regional Water Board staff issued the Joint Outfall System a Notice of Violation (NOV) for failure to report a valid toxicity test result in October 2012 (ambient) and March 2013 (effluent). This NOV is currently being contested by the Permittee.

One exceedance of the 1.0 TUc monthly median trigger for accelerated monitoring was observed in the final effluent in December 2011. In addition, an exceedance of the 1.0 TUc in a single test was observed in March 2009, November 2012, and December 2013 chronic toxicity samples. These data are presented in Table F-3 below.

Table F-3. Summary of Chronic Toxicity Data Exceeding 1.0 TUc

Test Date	Test Species	Endpoint	NOEC	TUc	Monthly Median TUc	EC/IC25	%Effect in 100% Sample
03/03/09	*Pimephales promelas*	Survival	100%	1.0	1.0	>100%	0%
		Growth	100%	1.0		>100%	7.1%
03/10/09	*Pimephales promelas*	Survival	80%	1.2		>100%	22.2%
		Growth	80%	1.2		>100%	17.2%
03/31/09	*Pimephales promelas*	Survival	100%	1.0		>100%	5.0%
		Growth	100%	1.0		>100%	6.0%

REVISED TENTATIVE

Test Date	Test Species	Endpoint	NOEC	TUc	Monthly Median TUc	EC/IC25	%Effect in 100% Sample
12/06/11	*Ceriodaphnia dubia*	Survival	100%	1.0	**1.3**	>100%	0%
		Reproduction	75%	1.3		>100%	22.8%
12/15/11	*Ceriodaphnia dubia*	Survival	100%	1.0		>100%	20.0%
		Reproduction	<12.5%	>8.0		18%	88.6%
12/20/11	*Ceriodaphnia dubia*	Survival	100%	1.0		>100%	0.0%
		Reproduction	100%	1.0		>100%	3.5%
11/13/12	*Ceriodaphnia dubia*	Survival	100%	1.0	1.0	>100%	0%
		Reproduction	75%	1.3		60.8%	51.1%
11/22/12	*Ceriodaphnia dubia*	Survival	100%	1.0		>100%	0%
		Reproduction	100%	1.0		>100%	-4.5%
11/27/12	*Ceriodaphnia dubia*	Survival	100%	1.0		>100%	0%
		Reproduction	100%	1.0		>100%	-11.0%
12/03/13	*Ceriodaphnia dubia*	Survival	100%	1.0	1.0	66.4%	50%
		Reproduction	50%	2.0		62.0%	68.4%
12/12/13	*Ceriodaphnia dubia*	Survival	100%	1.0		>100%	20.0%
		Reproduction	100%	1.0		73.1%	46.2%
12/17/13	*Ceriodaphnia dubia*	Survival	100%	1.0		>100%	22.2%
		Reproduction	100%	1.0		>100%	15.8%

E. Planned Changes

There are no planned changes for this facility.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (CWC; 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 United States Environmental Protection Agency (USEPA) and chapter 5.5, division 7 of the CWC (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

B. California Environmental Quality Act (CEQA)

Under CWC section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code.

REVISED TENTATIVE

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plan.** The Regional Water Board adopted a Water Quality Control Plan for the Los Angeles Region (Basin Plan) on June 4, 1994 that designates beneficial uses, establishes water quality objectives (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. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. On May 26, 2000, the USEPA approved the revised Basin Plan except for the implementation plan for potential MUN-designated water bodies. On August 22, 2000, the City of Los Angeles, City of Burbank, City of Simi Valley, and the County Sanitation Districts of Los Angeles County challenged USEPA's water quality standards action in the U.S. District Court. On December 18, 2001, the court issued an order remanding the matter to USEPA to take further action on the 1994 Basin Plan consistent with the court's decision. On February 15, 2002, USEPA revised its decision and approved the 1994 Basin Plan in whole. In its February 15, 2002 letter, USEPA stated:

> USEPA bases its approval on the court's finding that the Regional Board's identification of waters with an asterisk ("*") in conjunction with the implementation language at page 2-4 of the 1994 Basin Plan, was intended "to only conditionally designate and not finally designate as MUN those water bodies identified by an ('*') for the MUN use in Table 2-1 of the Basin Plan, without further action." Court Order at p. 4. Thus, the waters identified with an ("*") in Table 2-1 do not have MUN as a designated use until such time as the State undertakes additional study and modifies its Basin Plan. Because this conditional use designation has no legal effect, it does not constitute a new water quality standard subject to USEPA review under section 303(c)(3) of the Clean Water Act ("CWA"). 33 U.S.C. § 1313(c)(3).

USEPA's decision has no effect on the MUN designations of groundwater. Beneficial uses applicable to Coyote Creek and San Gabriel River are as follows:

Table F-4. Basin Plan Beneficial Uses – Receiving Waters

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Coyote Creek (Hydro. Unit No. 405.15) WBD No. 180701060506	<u>Existing:</u> Rare, threatened or endangered species (RARE) <u>Intermittent:</u> Non-contact water recreation (REC-2) <u>Potential:</u> Industrial service supply (IND), industrial process supply (PROC), water contact recreation (REC-1)[1], warm freshwater habitat (WARM), wildlife habitat (WILD), and municipal and domestic water supply (MUN)[2].

[1] Access prohibited by Los Angeles County DPW in concrete-channelized areas

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REVISED TENTATIVE

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	San Gabriel River Estuary (Hydro. Unit No. 405.15) WBD No. 180701060606	Existing: IND, navigation (NAV), REC-1, REC-2, commercial and sport fishing (COMM), estuarine habitat (EST), marine habitat(MAR), WILD, RARE, migration of aquatic organism (MIGR), and spawning, reproduction, and/or early development (SPWN) Intermittent: none Potential: Shellfish harvesting (SHELL)

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

3. **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 Regional 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.

4. **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.

5. **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, oil and grease, settleable solids, turbidity, pH, and percent removal of BOD and TSS. Restrictions on BOD, TSS, oil and grease, settleable solids, turbidity, and pH are discussed in section IV.B.2 of the Fact Sheet. This Order's technology-based pollutant

[2] The potential MUN beneficial use for the water body is consistent with Regional Water Board Resolution 89-03; however, the Regional Water Board has only conditionally designated the MUN beneficial uses and at this time cannot establish effluent limitation designed to protect the conditional designation.

REVISED TENTATIVE

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 carried over from the previous permit.

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 the Ocean Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

6. **Antidegradation Policy.** Federal regulations at 40 CFR section 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining the Quality of the Waters of the State"). 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 Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharges must be consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution 68-16.

7. **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.

8. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California ESA (Fish and Game Code, sections 2050 to 2097) or the Federal ESA (16 USC sections 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the state. The Permittee is responsible for meeting all requirements of the applicable ESA.

9. **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 Permittee must file a petition with the State Water Board (State Water Board), Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under CWC section 1211.

10. **Domestic Water Quality.** In compliance with CWC 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 promotes that policy by requiring discharges to meet maximum contaminant levels developed to protect human health and ensure that water is safe for domestic use.

REVISED TENTATIVE

11. **Water Recycling.** In accordance with statewide policies concerning water reclamation[3], this Regional Water Board strongly encourages, wherever practical, water recycling, water conservation, and use of storm water and dry-weather urban runoff. The Permittee submitted a feasibility study investigating the feasibility of recycling, conservation, and/or alternative disposal methods of wastewater (such as groundwater injection), and/or use of storm water and dry-weather urban runoff on July 30, 2014. The Permittee shall submit an update to this feasibility study as part of the submittal of the Report of Waste Discharge (ROWD) for the next permit renewal.

12. **Monitoring and Reporting.** 40 CFR section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional 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.

13. **Sewage Sludge/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 to implement this program; therefore, USEPA is the implementing agency to require compliance with 40 CFR part 503.

D. Impaired Water Bodies on CWA Section 303(d) List

The State Water Board proposed the California 2008-2010 Integrated Report from a compilation of the adopted Regional Water Boards' Integrated Reports containing CWA section 303(d) List of Impaired Waters and CWA section 305(b) Reports following recommendations from the Regional Water Boards and information solicited from the public and other interested parties. The Regional Water Boards' Integrated Reports were used to revise their 2006 CWA Section 303(d) List. On August 4, 2010, the State Water Board adopted the California 2008-2010 Integrated Report. On November 12, 2010, the USEPA approved California 2008-2010 Integrated Report CWA Section 303(d) List of Impaired Waters requiring Total Maximum Daily Loads (TMDL) for the Los Angeles Region. The CWA Section 303(d) List can be viewed at the following link:

http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml

Coyote Creek, San Gabriel River, and their tributaries are in the California 2008-2010 Integrated Report. The following are the identified pollutants impacting the receiving water:

Coyote Creek -- Hydrologic unit 405.15, Calwater Watershed 18070106

Pollutants: Ammonia, dissolved copper, diazinon, indicator bacteria, lead, toxicity, and pH.

San Gabriel River Reach 1 (Estuary to Firestone Blvd.) -- Hydrologic unit 405.15, Calwater Watershed 18070106

Pollutants: Coliform bacteria and pH.

San Gabriel River Estuary -- Hydrologic unit 405.15, Calwater Watershed 18070106

Pollutants: Copper, dioxin, nickel, and dissolved oxygen.

[3] See, e.g., CWC sections 13000 and 13550-13557, State Water Board Resolution No. 77-1 (Policy with Respect to Water Reclamation in California), and State Water Board Resolution No. 2009-0011 (Recycled Water Policy).

REVISED TENTATIVE

E. Other Plans, Polices and Regulations

1. **Sources of Drinking Water Policy**. On May 19, 1988, the State Water Board adopted Resolution No. 88-63, *Sources of Drinking Water (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 State Water Board's SODW Policy, on March 27, 1989, the Regional Water Board adopted Resolution No. 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).*

   Consistent with Regional Water Board Resolution No. 89-03 and State Water Board Resolution No. 88-63, in 1994 the Regional Water Board conditionally designated all inland surface waters in Table 2-1 of the 1994 Basin Plan as existing, intermittent, or potential for Municipal and Domestic Supply (MUN). However, the conditional designation in the 1994 Basin Plan included the following implementation provision: "no new effluent limitations will be placed in Waste Discharge Requirements as a result of these [potential MUN designations made pursuant to the SODW policy and the Regional Water Board's enabling resolution] until the Regional Water Board adopts [a special Basin Plan Amendment that incorporates a detailed review of the waters in the Region that should be exempted from the potential MUN designations arising from SODW policy and the Regional Water Board's enabling resolution]." On February 15, 2002, the USEPA clarified its partial approval (May 26, 2000) of the 1994 Basin Plan amendments and acknowledged that the conditional designations do not currently have a legal effect, do not reflect new water quality standards subject to USEPA review, and do not support new effluent limitations based on the conditional designations stemming from the SODW Policy until a subsequent review by the Regional Water Board finalizes the designations for these waters. This permit is designed to be consistent with the existing Basin Plan.

2. **Title 22 of the California Code of Regulations (CCR Title 22).** The California Department of Public Health (CDPH) 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 beneficial use when that receiving groundwater is designated as MUN. 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."

3. **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 to prevent backsliding.

4. **Storm Water**. CWA section 402(p), as amended by the Water Quality Act of 1987, requires NPDES permits for storm water discharges. Pursuant to this requirement, in 1990, USEPA promulgated 40 CFR section 122.26 that established requirements for storm water discharges under an NPDES program. To facilitate compliance with federal regulations, on November 1991, the State Water Board issued a statewide general permit, *General NPDES Permit No. CAS000001 and Waste Discharge Requirements for Discharges of Storm Water Associated with Industrial Activities.* This permit was amended in September 1992 and reissued on April 17, 1997 in State Water Board Order No. 97-03-DWQ to regulate storm water discharges associated with industrial activity.

REVISED TENTATIVE

General NPDES Permit No. CAS000001 was renewed on April 1, 2014, which will become effective on July 1, 2015.

Storm water runoff from the Long Beach WRP is regulated under General NPDES permit No. CAS000001. On June 4, 1992, the Permittee filed a Notice of Intent to comply with the requirements of the general permit. The Permittee developed and currently implements a Storm Water Pollution Prevention Plan (SWPPP), to comply with State Water Board's General NPDES permit No. CAS000001.

5. **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 United States Code (USC) sections 1311 and 1342). The State Water Board adopted General WDRs for Sanitary Sewer Systems, (Water Quality Order No. 2006-0003-DWQ; SSO WDR) on May 2, 2006, to provide a consistent, statewide regulatory approach to address SSOs. The SSO WDR requires public agencies that own or operate sanitary sewer systems to apply for coverage under the SSO WDR, develop and implement sewer system management plans, and report all SSOs to the State Water Board's online SSO database. Regardless of the coverage obtained under the SSO WDR, the Permittee's collection system is part of the POTW that is subject to this NPDES permit. As such, pursuant to federal regulations, the Permittee must properly operate and maintain its collection system (40 CFR section 122.41 (e)), report any non-compliance (40 CFR section 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR section 122.41(d)).

   The requirements contained in this Order sections VI.C.3.b (Spill Cleanup Contingency Plan section), VI.C.4 (Construction, Operation and Maintenance Specifications section), and VI.C.6 (Spill Reporting Requirements section) are intended to be consistent with the requirements of the SSO WDR. The Regional Water Board recognizes that there may be some overlap between these NPDES permit provisions and SSO WDR requirements, related to the collection systems. The requirements of the SSO WDR are considered the minimum thresholds (see Finding 11 of State Water Board Order No. 2006-0003-DWQ). To encourage efficiency, the Regional Water Board will accept the documentation prepared by the Permittees under the SSO WDR for compliance purposes as satisfying the requirements in sections VI.C.3.b, VI.C.4, and VI.C.6, provided the more stringent provisions contained in this NPDES permit are also addressed. Pursuant to SSO WDR, section D, provision 2(iii) and (iv), the provisions of this NPDES permit supercede the SSO WDR, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative.

6. **Watershed Management -** This Regional Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles Region following the USEPA guidance in *Watershed Protection: A Project Focus* (EPA841-R-95-003, August 1995). The objective of the WMA is to provide a more comprehensive and integrated strategy resulting in water resource protection, enhancement, and restoration while balancing economic and environmental impacts within a hydrologically-defined drainage basin or watershed. 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. The WMA integrates activities across the Regional Water Board's diverse programs, particularly permitting, planning, and other surface water-oriented programs that have tended to operate somewhat independently of each other.

REVISED TENTATIVE

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 San Gabriel River, which was approved by the Regional Water Board on September 25, 2006.

The Regional Water Board has prepared and periodically updates its Watershed Management Initiative Chapter, the latest is updated December 2007. This document contains a summary of the region's approach to watershed management. It addresses each watershed and the associated water quality problems and issues. It describes the background and history of each watershed, current and future activities, and addresses TMDL development. The information can be accessed on our website: http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/watershed/index.shtml.

7. **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 waterbody for each pollutant of concern. TMDLs identify the maximum amount of pollutants that can be discharged to waterbodies without causing exceedances of water quality standards.

   a. **San Gabriel River and Tributaries Metals TMDL** - On March 26, 2007, USEPA established the San Gabriel River watershed metals TMDLs. This Order includes effluent limitations for metals based on USEPA's TMDLs. These effluent limitations are consistent with the concentration-based Waste Load Allocations (WLA) established for the POTWs and other point sources identified in these TMDLs. In this permit, the Regional Water Board translates the WLAs into effluent limitations by applying the CTR/SIP procedures or other applicable engineering practices authorized under federal regulations. On June 6, 2013, the Regional Water Board adopted Resolution No. R13-004, *Amendment to the Water Quality Control Plan – Los Angeles Region to Incorporate the Implementation Plan for the Total Maximum Daily Loads for Metals and Selenium in the San Gabriel River and Impaired Tributaries* (Implementation Plan). The OAL approved the Implementation Plan and it became effective on October 13, 2014.

   b. **Dominguez Channel and Greater Los Angeles and Long Beach Harbor Toxic Pollutants TMDL (Harbor Toxic TMDL)** – On May 5, 2011, the Regional Water Board established the Harbor Toxic TMDL, which became effective on March 23, 2012 upon USEPA's approval. The Harbor Toxic TMDL requires the responsible parties identified in the metals TMDLs for Los Angeles River and San Gabriel River to conduct water and sediment monitoring above the Los Angeles River Estuary and at the mouth of the San Gabriel River, respectively, to determine the rivers' contribution to the impairments in the Greater Harbor waters. The Joint Outfall System is identified as a responsible party in the metals TMDLs for the Los Angeles River and the San Gabriel River. Although WLAs are not assigned to the Los Angeles River and San Gabriel River Watershed Responsible Parties, the TMDL does require these parties to develop and implement a monitoring plan and submit annual reports regarding implementation. In this permit, the Permittee will be required to comply with the terms of the TMDL.

REVISED TENTATIVE

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source Permittees 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: 40 CFR section 122.44(a) requires that permits include applicable TBELs and standards; and 40 CFR section 122.44(d) requires that permits include WQBELs 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 discharges from the Facility 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.

A. 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 Point 001. It does not authorize any other types of discharges.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Technology-based effluent limitations require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies, while allowing the Permittee to use any available control techniques to meet the effluent limitations. 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" --that 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 that 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 for $BOD_5$20°C, TSS, and pH.

2. Applicable TBELs

This Facility is subject to the technology-based regulations for the minimum level of effluent quality attainable by secondary treatment for $BOD_5$20°C, TSS, and pH. However, all TBELs from the previous permit, Order No. R4-2007-0047, are based on tertiary-treated wastewater treatment standards. These effluent limitations have been carried over from the previous permit to avoid backsliding. Further, mass-based effluent limitations are based on a design flow rate of 25 mgd. 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-5. Summary of TBELs

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
$BOD_5$20°C	mg/L	20	30	45		

REVISED TENTATIVE

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
	lbs/day[4]	4,200	6,300	9,400		
TSS	mg/L	15	40	45		
	lbs/day[4]	3,100	8,300	9,400		
pH	standard units	--	--	--	6.5	8.5
Removal Efficiency for BOD and TSS	%	85	--	--		

This Facility is also subject to TBELs contained in similar NPDES permits, for similar facilities, based on the treatment level achievable by tertiary-treated wastewater treatment systems. These effluent limitations are consistent with State Water Board Order No. WQ 2004-0010 for the City of Woodland.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA section 301(b) and 40 CFR section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as a technology equivalence requirement that are necessary to achieve water quality standards. The Regional Water Board has considered the factors listed in CWC section 13241 in establishing these requirements. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements or other provisions, is discussed starting in section IV.C.2.

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, 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).

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 WQOs and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

[4] The mass-based effluent limitations are based on the plant design flow rate of 25 mgd, and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. During wet-weather storm events in which the flow exceeds the design capacity, the mass-based effluent limitations shall not apply, and concentration-based effluent limitations will be the only applicable effluent limitations during such events.

REVISED TENTATIVE

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. The Basin Plan establishes the beneficial uses for surface water bodies in the Los Angeles region. The beneficial uses of the Coyote Creek and San Gabriel River affected by the discharge have been described previously in this Fact Sheet.

b. The Basin Plan also specifies narrative and numeric WQOs applicable to surface water as shown in the following discussions.

i. **$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 in dissolved oxygen. As organic degradation takes place, 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 depleted of oxygen. 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, 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.

Long Beach WRP provides tertiary treatment. The Facility achieves solids removals that are better than secondary-treated wastewater by filtering the effluent.

The monthly average, the 7-day average, and the daily maximum effluent limitations cannot be removed because none of the anti-backsliding exceptions apply. Those limits were all included in the previous permit (Order No. R4-2007-0047) and the Long Beach WRP has been able to meet both limitations (monthly average and the daily maximum) for both BOD and TSS.

In addition to having mass-based and concentration-based effluent limitations for BOD and TSS, the Long Beach 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.

ii. **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. In accordance with 40 CFR section 133.102(c), the effluent values for pH shall be maintained within the limitations 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 limitation for

REVISED TENTATIVE

pH in this permit requiring that the wastes discharged shall at all times be within the range of 6.5 to 8.5 is taken from the Basin Plan, 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."

iii. **Settleable Solids**

Excessive deposition of sediments can destroy spawning habitat, blanket benthic (bottom dwelling) organisms, and abrade the gills of larval fish. The limitations for settleable solids are based on the Basin Plan narrative, "Waters shall not contain suspended or settleable material in concentrations that cause nuisance or adversely affect beneficial uses." The numeric limitations 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 the daily maximum limitations cannot be removed because none of the anti-backsliding exceptions apply. The monthly average and daily maximum limitations were both included in the previous permit (Order No. R4-2007-0047) and the Long Beach WRP has been able to meet both limitations.

iv. **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, and 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 narrative, "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. The monthly average and the daily maximum limits cannot be removed because none of the anti-backsliding exceptions apply. Both limits were included in the previous permit (Order No. R4-2007-0047) and the Long Beach WRP has been able to meet both limits.

v. **Residual Chlorine**

Disinfection of wastewaters with chlorine produces a chlorine residual. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is based on the Basin Plan narrative, "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 as of beneficial uses as a daily maximum limitation is. Chlorine is very toxic to aquatic life and short term exposures of chlorine may cause fish kills.

REVISED TENTATIVE

vi. **TDS, Chloride, Sulfate, and Boron**

The Long Beach WRP discharges into the San Gabriel River between Firestone Boulevard and San Gabriel River Estuary including Coyote Creek. There is no TDS, chloride, sulfate, and boron water quality objective for that reach of the Coyote Creek and San Gabriel River in the Basin Plan.

vii. **Total Inorganic Nitrogen (NO_2 + NO_3 as N)**

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.

(a). **Algae**

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 WQO for biostimulatory substances are based on Basin Plan (page 3-8) narrative, “Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses,” and other relevant information to arrive at a mass based-limit intended to be protective of the beneficial uses, pursuant to 40 CFR section 122.44(d). Total inorganic nitrogen will be the indicator parameter intended to control algae, pursuant to 40 CFR section 122.44(d)(1)(vi)(C).

(b). **Concentration-based limit**

Basin Plan Table reads, “no waterbody specific objectives,” for the San Gabriel River watershed between Firestone Boulevard and San Gabriel River Estuary (downstream from Willow Street) including Coyote Creek. In addition, there are no applicable water quality criteria for these constituents to protect the designated uses of this reach of the San Gabriel River. The effluent limit for total inorganic nitrogen of 8 mg/L was set based on the average concentration achievable by nitrification/denitrification (NDN) technology by the Permittee. The limit is intended to prevent the facility from discharging unlimited amounts of nutrients to the Los Coyotes and San Gabriel River.

(c). **Mass-based limit**

The mass-based limits are based on the plant design flow rate of 25 mgd.

viii. **Nitrite as Nitrogen**

For discharges to Coyote Creek/San Gabriel River, a final nitrite limitation of 1 mg/L is based upon the Regional Water Board’s best professional judgment, because in the process of reducing ammonia concentrations by a process such as nitrification-denitrification, the ammonia and organic nitrogen are oxidized to nitrite before final conversion to nitrate. Therefore, there is reasonable

REVISED TENTATIVE

potential for nitrite to be present in the discharge if the oxidation process is not complete.

$2NH_4$+ (ammonia) + $3O_2 \rightarrow 4H^+$ + $2NO_2^-$ (nitrite) + H_2O (water)

$2NO_2^-$ (nitrite) + $O_2 \rightarrow 2NO_3^-$ (nitrate)

ix. **Total ammonia**

Ammonia is a pollutant routinely found in the wastewater effluent of POTWs, in landfill-leachate, as well as in run-off 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 is able to diffuse 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. However, there is no GWR designated beneficial use 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.

(a) **San Gabriel River Ammonia**

The 1994 Basin Plan contained water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through Tables 3-4. However, those ammonia objectives were revised on April 25, 2002, by the Regional Water Board, with the adoption of Resolution No. 2002-011, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) with Beneficial Use designations for protection of Aquatic Life*. Resolution No. 2002-011 was approved by the State Water Board, OAL, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively, and is now in effect.

On December 1, 2005, the Regional Water Board adopted Resolution No. 2005-014, An Amendment to the *Water Quality Control Plant for the Los Angeles Region to Revise Early Life Stage Implementation Provision of the Freshwater Ammonia Objectives for Inland Surface Waters (including enclosed bays, estuaries and wetlands) for Protection of Aquatic Life.* This amendment contains ammonia objectives to protect Early Life Stages (ELS) of fish in inland surface water supporting aquatic life. This resolution was approved by the USEPA on April 5, 2007. This amendment revised the implementation provision included as part of the freshwater ammonia objectives relative to the protection of ELS of fish in inland surface waters.

On June 7, 2007, the Regional Water Board adopted Resolution No. 2007-005, *Amendments to the Water Quality Control Plan-Los Angeles Region-To Incorporate Site-Specific Objectives for Select Inland Surface Waters in the San Gabriel River, Los Angeles River and Santa Clara River Watersheds.* This amendment to the Basin Plan incorporates site-specific 30-day average objectives (30-day SSO) for ammonia along with corresponding site-specific early life stage implementation provisions for

REVISED TENTATIVE

select waterbody reaches and tributaries in the Santa Clara, Los Angeles, and San Gabriel River watersheds. The State Water Board, OAL, and USEPA approved this Basin Plan amendment on January 15, 2008, May 12, 2008, and March 30, 2009, respectively. Resolution No. 2007-005 became effective on April 23, 2009. As part of its triennial review process, the Regional Water Board may reconsider the continued appropriateness of the site-specific objectives.

The procedures for calculating the ammonia nitrogen effluent limitation based on Basin Plan amendment is discussed below:

(1) **Translation of Ammonia Nitrogen Objectives into Effluent Limitations Applicable to Discharge Point 001 – Coyote Creek/San Gabriel River**

Step 1 – Identify applicable water quality criteria.

From the Permittee's effluent, the following data are summarized below:

ELS Absent (year round):

pH = 7.6 at 50th percentile and temperature = 24.5°C

pH = 7.7 at 90th percentile and temperature = 24.5°C

From Table 3-1 of the Basin Plan, using 90th percentile pH 7.7;

One-hour Average Objective for Waters not Designated COLD and/or MIGR = 14.44 mg/L

The Facility discharges into a receiving waterbody that has "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." However, in the USEPA approval letter dated June 19, 2003, of the 2002 Ammonia Basin Plan Amendment, USEPA discussed it clearly that the acute criteria are dependent on pH and whether sensitive coldwater fish are present. Although the Estuary has an MIGR, it has no COLD beneficial use designation. There are no coldwater fish present in the receiving water. Therefore, the receiving water will be designated as "Waters not Designated Cold or MIGR." The one-hour average objective is pH dependent and fish species salmonids present but not temperature.

30-day Average Objective

The 30-day average ammonia SSO replaces Table 3-2 of the Basin Plan.

Substitute the 50th percentile pH = 7.6 and temperature = 24.5°C in the formula below.

The 30-day average SSO ELS absent will be calculated using the formula stated in the Resolution No. 2007-005 for Coyote Creek (Long Beach WRP to confluence with San Gabriel River):

REVISED TENTATIVE

ELS Absent (year round)

$$CCC = \left(\frac{0.0676}{1+10^{7.688-pH}} + \frac{2.912}{1+10^{pH-7.688}} \right) * 0.854 * 2.96 * 10^{0.028*(25-Max(T,7))}$$

Substituting the values of ph and temperature in the above formula, the 30-day Average SSO ELS absent = 4.26 mg/L

From Basin Plan amendment Resolution No. 2002-011;

4-day Average Objective = 2.5 times the 30-Day Ave. Obj.

4-day Average Objective = 2.5 x 4.26 = 10.66 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 Regional 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 adjust for variability. By using Table 3-6, calculated CV (i.e., standard deviation/mean for ammonia), the following are the ECA.

ECA multiplier when CV = 0.4 (ELS Absent)

One-hour Average = 0.463

Four-day Average = 0.664

30-day Average = 0.857

Using the LTA equations:

$LTA_{1\text{-hour}/99} = ECA_{1\text{-hour}}$ x ECA $\text{multiplier}_{1\text{-hour}99}$

= 14.44 x 0.463 = 6.693 mg/L

$LTA_{4\text{-day}/99} = ECA_{4\text{-day}}$ x ECA $\text{multiplier}_{4\text{-day}99}$

= 10.66 x 0.664 = 7.076 mg/L

$LTA_{30\text{-day}/99} = ECA_{30\text{-day}}$ x ECA $\text{multiplier}_{30\text{-day}99}$

= 4.26 x 0.857 = 3.653 mg/L

Step 4 – Select the (most limiting) of the LTAs derived in Step 3 (LTA_{min})

LTA_{min} = 3.653 mg/L

Step 5 – Calculate water quality based effluent limitation MDEL and AMEL by multiplying LTA_{min} as selected in Step 4, with a factor (multiplier) found in Table 3-7.

Monthly sampling frequency (n) is 30 times per month or less, and the minimum LTA is the $LTA_{30\text{-day}/99}$, therefore n = 30, CV = 0.4.

CV = 0.4

MDEL multiplier = 2.158

AMEL multiplier = 1.115

REVISED TENTATIVE

$$MDEL = LTA_{min} \times MDEL\ multiplier_{99} = 3.653 \times 2.158 = 7.9\ mg/L$$

$$AMEL = LTA_{min} \times AMEL\ multiplier_{95} = 3.653 \times 1.115 = 4.1\ mg/L$$

Table F-6. Summary of Ammonia Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia Nitrogen (ELS Absent, year round)	mg/L	4.1	--	7.9		
	lbs/day[4]	855	--	1,647		

(2) **Receiving Water Ammonia Limitation**

On July 30, 2009, the Regional Water Board approved the ammonia receiving water monitoring location based on the study conducted by the Permittee. The study concluded that the ammonia compliance monitoring shall be conducted 100 feet below the outfall. To ensure that downstream receiving waters are protected at all times, the Permittee shall monitor the ammonia concentrations at RSW-002, as described in the MRP, 100 feet from the discharge outfall. The purpose of the monitoring location is to ensure that ammonia water quality objectives are met in the receiving water, even immediately downstream of the discharge when there has been little time for uptake or volatilization of ammonia in the receiving water. Concurrent sampling of ammonia, pH, and temperature will be required at this monitoring location. The Permittee shall compare the ammonia results to Basin Plan ammonia water quality objectives, based on the real-time pH and temperature data collected at the time of ammonia sampling.

x. **Coliform**

Total and fecal 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 in cases where the disinfection process is not operating adequately. As such, the permit contains the following:

i. Effluent Limitations:

- The 7 day median number of coliform organisms at some point in the treatment process must not exceed a Most Probable Number (MPN) or Colony Forming Unit (CFU) of 2.2 per 100 milliliters,
- The number of coliform organisms must not exceed an MPN or CFU of 23 per 100 milliliters in more than one sample within any 30-day period, and
- No sample shall exceed an MPN or CFU of 240 total coliform bacteria per 100 milliliters.

These disinfection-based effluent limitations for coliform are for human health protection and are consistent with requirements established by the California Department of Public Health. These limitations for coliform must

REVISED TENTATIVE

be met at the point of the treatment train immediately following disinfection, as a measure of the effectiveness of the disinfection process.

ii. Receiving Water Limitation

- Geometric Mean Limits
  - E.coli density shall not exceed 126/100 mL.
- Single Sample Limits
  - E.coli density shall not exceed 235/100 mL.

These receiving water limitations are based on Resolution No. R10-005, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Update the Bacteria Objectives for Freshwaters Designated for Water Contact Recreation by Removing the Fecal Coliform Objective*, adopted by the Regional Water Board on July 8, 2010, and became effective on December 5, 2011.

xi. **Temperature**

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.

- 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).
- 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.
- 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 Basin Plan lists temperature requirements for the receiving waters. Based on the requirements of the Basin Plan and a white paper developed by Regional Water Board staff entitled *Temperature and Dissolved Oxygen Impacts on Biota in Tidal Estuaries and Enclosed Bays in the Los Angeles Region,* a maximum effluent temperature limitation of 86°F is included in the

REVISED TENTATIVE

Order. The white paper evaluated the optimum temperatures for steelhead, topsmelt, ghost shrimp, brown rock crab, jackknife clam, and blue mussel. The new temperature effluent limitation is reflective of new information available that indicates that the 100°F temperature, which was formerly used in permits, was not protective of aquatic organisms. A survey was completed for several kinds of fish and the 86°F temperature was found to be protective. It is impracticable to use a 7-day average or a 30-day average limitation for temperature, because it is not as protective as of beneficial uses as a daily maximum limitation is. A daily maximum limit is necessary to protect aquatic life and is consistent with the fishable/swimmable goals of the CWA.

Section IV.B.b. of the Order contains the following effluent limitation for temperature:

> "The temperature of wastes discharged shall not exceed 86°F except as a result of external ambient temperature."

The above effluent limitation for temperature has been used in all recent NPDES permits adopted by this Regional Water Board. Section V.A.1. of the Order explains how compliance with the receiving water temperature limitation will be determined.

xii. **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 which reads, "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" is based on the Basin Plan (page 3-17) and section 60301.320 of Title 22, Chapter 3, "Filtered Wastewater" of the CCR.

xiii. **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. The discharge is subject to the Basin Plan's narrative water quality objective on radionuclides, "Radionuclides shall not be present in concentrations that are deleterious to human, plant, animal, or aquatic life or that result in accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life."

c. **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 TSD specifies the procedures to conduct reasonable potential analyses for non-priority pollutants.

REVISED TENTATIVE

3. Determining the Need for WQBELs

The Regional Water Board developed WQBELs for copper, lead, and zinc, based upon Total Maximum Daily Loads (TMDLs). The TMDLs explicitly assign WLAs to the Long Beach WRP. The Regional Water Board developed water quality-based effluent limitations for these pollutants in compliance with 40 CFR section 122.44(d)(1)(vii).

In accordance with Section 1.3 of the SIP, the Regional Water Board conducted a reasonable potential analysis for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional 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 Regional Water Board 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 2009 to 2014.

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 a 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 section 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 Permittee will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional 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. Based on the SIP RPA, pollutants that demonstrate reasonable potential to cause or contribute to an exceedance of the CTR criteria are copper, lead, and zinc (Tier 3). The following priority pollutants also show reasonable potential: selenium, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The following Table summarizes results from RPA.

Table F-7. Summary of Reasonable Potential Analysis

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
1	Antimony	4300	0.6	1.64	No	C>B, C>MEC
2	Arsenic	150	3.51	5.08	No	C>B, C>MEC

REVISED TENTATIVE

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
3	Beryllium	Narrative	<0.25	<0.25	No	C>B, C>MEC
4	Cadmium	5.04	0.02	0.1	No	C>B, C>MEC
5a	Chromium III	220.4	ND	1.21	No	C>B, C>MEC
5b	Chromium VI	11	1.6	E 2.7	No	C>B, C>MEC
6	**Copper**	**20.3**	**8.05**	**28.2**	**Yes**	**TMDL; B>C and detected at the effluent. (Tier 2)**
7	**Lead**	**106.4**	**0.76**	**1.85**	**Yes**	**TMDL**
8	Mercury	0.051	0.0098	E 0.02	No	C>B, C>MEC
9	Nickel	55.7	1.51	3.86	No	C>B, C>MEC
10	**Selenium**	**5**	**0.92**	**5.32**	**Yes**	**B>C and detected at the effluent. (Tier 2)**
11	Silver	4.6	E 0.04	E 0.18	No	C>B, C>MEC
12	Thallium	6.3	<0.25	E 0.01	No	C>B, C>MEC
13	**Zinc**	**156.4**	**55**	**36.3**	**Yes**	**TMDL**
14	Cyanide	5.2	2.3	3.55	No	C>B, C>MEC
15	Asbestos	$7x10^{6}$ fibers/L	No sample	No sample	No	N/A
16	2,3,7,8-TCDD (Dioxin)	$1.4x10^{-08}$	$<1x10^{-5}$	$<1x10^{-5}$	No	C>B, C>MEC
17	Acrolein	780	0.64	<2	No	C>B, C>MEC
18	Acrylonitrile	0.66	<2	<2	No	C>B, C>MEC
19	Benzene	71	<0.5	<0.5	No	C>B, C>MEC
20	Bromoform	360	1.3	<0.5	No	C>B, C>MEC
21	Carbon Tetrachloride	4.4	<0.5	<0.5	No	C>B, C>MEC
22	Chlorobenzene	21,000	<0.5	<0.5	No	C>B, C>MEC
23	Dibromochloromethane	34	8.5	<0.5	No	C>B, C>MEC
24	Chloroethane	No criteria	<0.5	E 0.1	No	No criteria
25	2-chloroethyl vinyl ether	No criteria	<0.5	<0.5	No	No criteria
26	Chloroform	No criteria	27.4	E 0.2	No	No criteria
27	Dichlorobromomethane	46	18.6	<0.5	No	C>B, C>MEC
28	1,1-dichloroethane	No criteria	<0.5	<0.5	No	No criteria
29	1,2-dichloroethane	99	<0.5	<0.5	No	C>B, C>MEC
30	1,1-dichloroethylene	3.2	<0.5	<0.5	No	C>B, C>MEC
31	1,2-dichloropropane	39	<0.5	<0.5	No	C>B, C>MEC
32	1,3-dichloropropylene	1,700	<0.5	<0.5	No	C>B, C>MEC
33	Ethylbenzene	29,000	<0.5	<0.5	No	C>B, C>MEC
34	Methyl bromide	4,000	<0.5	<0.5	No	C>B, C>MEC
35	Methyl chloride	No criteria	E 0.09	<0.5	No	No criteria
36	Methylene chloride	1,600	E0.28	<0.05	No	C>B, C>MEC

REVISED TENTATIVE

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
37	1,1,2,2-tetrachloroethane	11	<0.5	<0.5	No	C>B, C>MEC
38	Tetrachloroethylene	8.85	<0.5	<0.5	No	C>B, C>MEC
39	Toluene	200,000	0.1	0.1	No	C>B, C>MEC
40	Trans 1,2-Dichloroethylene	140,000	<0.5	<0.5	No	C>B, C>MEC
41	1,1,1-Trichloroethane	No criteria	<0.5	<0.5	No	C>B, C>MEC
42	1,1,2-Trichloroethane	42	<0.5	<0.5	No	C>B, C>MEC
43	Trichloroethylene	81	<0.5	<0.5	No	C>B, C>MEC
44	Vinyl Chloride	525	<0.5	<0.5	No	C>B, C>MEC
45	2-chlorophenol	400	<5	<5	No	C>B, C>MEC
46	2,4-dichlorophenol	790	<5	<5	No	C>B, C>MEC
47	2,4-dimethylphenol	2,300	<2	<2	No	C>B, C>MEC
48	4,6-dinitro-o-cresol(aka 2-methyl-4,6-Dinitrophenol)	765	<5	<5	No	C>B, C>MEC
49	2,4-dinitrophenol	14,000	<5	<5	No	C>B, C>MEC
50	2-nitrophenol	No criteria	<10	<10	No	No criteria
51	4-nitrophenol	No criteria	<10	<10	No	No criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-cresol)	No criteria	<1	<1	No	No criteria
53	Pentachlorophenol	8.2	<1	<1	No	C>B, C>MEC
54	Phenol	4,600,000	1.2	<1	No	C>B, C>MEC
55	2,4,6-trichlorophenol	6.5	0.4	<10	No	C>B, C>MEC
56	Acenaphthene	2,700	<1	<1	No	C>B, C>MEC
57	Acenaphthylene	No criteria	<10	<10	No	No criteria
58	Anthracene	110,000	<10	<10	No	C>B, C>MEC
59	Benzidine	0.00054	<5	<5	No	C>B, C>MEC
60	Benzo(a)Anthracene	0.049	<5	<5	No	C>B, C>MEC
61	**Benzo(a)Pyrene**	**0.049**	**0.013**	**0.081**	**Yes**	**B>C and detected at the effluent. (Tier 2)**
62	**Benzo(b)Fluoranthene**	**0.049**	**0.01**	**0.057**	**Yes**	**B>C and detected at the effluent. (Tier 2)**
63	Benzo(ghi)Perylene	No criteria	<5	<5	No	No criteria
64	**Benzo(k)Fluoranthene**	**0.049**	**0.02**	**0.12**	**Yes**	**B>C and detected at the effluent. (Tier 2)**
65	Bis(2-Chloroethoxy) methane	No criteria	<5	<5	No	No criteria
66	Bis(2-Chloroethyl)Ether	1.4	<1	<1	No	C>B, C>MEC

REVISED TENTATIVE

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
67	Bis(2-Chloroisopropyl) Ether	170,000	<2	<2	No	C>B, C>MEC
68	Bis(2-Ethylhexyl)Phthalate	5.9	0.3	0.3	No	C>B, C>MEC
69	4-Bromophenyl Phenyl Ether	No criteria	<5	<5	No	No criteria
70	Butylbenzyl Phthalate	5,200	<10	<10	No	C>B, C>MEC
71	2-Chloronaphthalene	4,300	<10	<10	No	C>B, C>MEC
72	4-Chlorophenyl Phenyl Ether	No criteria	<5	<5	No	No criteria
73	**Chrysene**	**0.049**	**0.014**	**0.13**	**Yes**	**B>C and detected at the effluent. (Tier 2)**
74	**Dibenzo(a,h) Anthracene**	**0.049**	**0.023**	**0.15**	**Yes**	**B>C and detected at the effluent. (Tier 2)**
75	1,2-Dichlorobenzene	17,000	<0.5	<0.5	No	C>B, C>MEC
76	1,3-Dichlorobenzene	2,600	<0.5	<0.5	No	C>B, C>MEC
77	1,4-Dichlorobenzene	2,600	<0.5	<0.5	No	C>B, C>MEC
78	3-3'-Dichlorobenzidine	0.077	<5	<5	No	C>B, C>MEC
79	Diethyl Phthalate	120,000	0.35	<2	No	C>B, C>MEC
80	Dimethyl Phthalate	2,900,000	<2	<2	No	C>B, C>MEC
81	Di-n-Butyl Phthalate	12,000	<10	<10	No	C>B, C>MEC
82	2-4-Dinitrotoluene	9.1	<5	<5	No	C>B, C>MEC
83	2-6-Dinitrotoluene	No criteria	<5	<5	No	No criteria
84	Di-n-Octyl Phthalate	No criteria	<10	<10	No	No criteria
85	1,2-Diphenylhydrazine	0.54	<1	<1	No	C>B, C>MEC
86	Fluoranthene	370	<1	<1	No	C>B, C>MEC
87	Fluorene	14,000	<10	<10	No	C>B, C>MEC
88	Hexachlorobenzene	50	<1	<1	No	C>B, C>MEC
89	Hexachlorobutadiene	50	<1	<1	No	C>B, C>MEC
90	Hexachlorocyclopentadiene	17,000	<5	<5	No	C>B, C>MEC
91	Hexachloroethane	8.9	<1	<1	No	C>B, C>MEC
92	**Indeno(1,2,3-cd)Pyrene**	**0.049**	**0.033**	**0.11**	**Yes**	**B>C and detected at the effluent. (Tier 2)**
93	Isophorone	600	<1	<1	No	C>B, C>MEC
94	Naphthalene	No criteria	<1	<1	No	No criteria
95	Nitrobenzene	1,900	<1	<1	No	C>B, C>MEC
96	N-Nitrosodimethylamine	8.1	<1	<1	No	C>B, C>MEC

REVISED TENTATIVE

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
97	N-Nitrosodi-n-Propylamine	1.4	<5	<5	No	C>B, C>MEC
98	N-Nitrosodiphenylamine	16	<1	<1	No	C>B, C>MEC
99	Phenanthrene	No criteria	<5	<5	No	No criteria
100	Pyrene	11,000	<10	<10	No	C>B, C>MEC
101	1,2,4-Trichlorobenzene	No criteria	<5	<5	No	No criteria
102	Aldrin	0.00014	<0.005	<0.005	No	C>B, C>MEC
103	Alpha-BHC	0.013	<0.01	<0.01	No	C>B, C>MEC
104	Beta-BHC	0.046	<0.005	<0.005	No	C>B, C>MEC
105	Gamma-BHC (aka Lindane)	0.063	0.004	<0.01	No	C>B, C>MEC
106	delta-BHC	No criteria	<0.005	<0.005	No	No criteria
107	Chlordane	0.00059	<0.05	<0.05	No	B>C, but not detected at the effluent.
108	4,4'-DDT	0.00059	<0.01	<0.01	No	C>B, C>MEC
109	4,4'-DDE	0.00059	<0.01	<0.01	No	C>B, C>MEC
110	4,4'-DDD	0.00084	<0.01	<0.01	No	C>B, C>MEC
111	Dieldrin	0.00014	<0.01	<0.01	No	C>B, C>MEC
112	Alpha-Endosulfan	0.056	<0.01	<0.01	No	C>B, C>MEC
113	Beta-Endosulfan	0.056	<0.01	<0.01	No	C>B, C>MEC
114	Endosulfan Sulfate	240	<0.01	<0.01	No	C>B, C>MEC
115	Endrin	0.036	<0.01	<0.01	No	C>B, C>MEC
116	Endrin Aldehyde	0.81	<0.01	<0.01	No	C>B, C>MEC
117	Heptachlor	0.00021	<0.01	<0.01	No	C>B, C>MEC
118	Heptachlor Epoxide	0.00011	<0.01	<0.01	No	C>B, C>MEC
119	PCB 1016	0.00017	<0.1	<0.1	No	C>B, C>MEC
120	PCB 1221	0.00017	<0.5	<0.5	No	C>B, C>MEC
121	PCB 1232	0.00017	<0.3	<0.3	No	C>B, C>MEC
122	PCB 1242	0.00017	<0.1	<0.1	No	C>B, C>MEC
123	PCB 1248	0.00017	<0.1	<0.1	No	C>B, C>MEC
124	PCB 1254	0.00017	<0.05	<0.05	No	C>B, C>MEC
125	PCB 1260	0.00017	<0.1	<0.05	No	C>B, C>MEC
126	Toxaphene	0.0002	<0.5	<0.5	No	C>B, C>MEC

REVISED TENTATIVE

4. 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. **San Gabriel River Metals TMDL**. Section 7 - Implementation Recommendations of the EPA-established metals TMDLs for San Gabriel River and Impaired Tributaries describes the implementation procedures and regulatory mechanisms that could be used to provide reasonable assurances that water quality standards will be met. On June 6, 2013, the Regional Water Board adopted Resolution No. R13-004, *Amendment to the Water Quality Control Plan – Los Angeles Region to Incorporate the Implementation Plan for the Total Maximum Daily Loads for Metals and Selenium in the San Gabriel River and Impaired Tributaries* (Implementation Plan). The OAL approved the Implementation Plan and it became effective on October 13, 2014. For POTWs NPDES permits, USEPA suggests that permit writers could translate waste load allocations (WLAs) into effluent limits by applying the SIP procedures or other applicable engineering practices authorized under federal regulations.

According to Table 2-9, Summary of dry-weather and wet weather impairments, Coyote Creek has wet-weather impairments for copper, lead, and zinc. The San Gabriel River Estuary has only a dry-weather impairment for copper. Although Coyote Creek has no dry-weather impairment for copper, a concentration-based allocation should be developed for an upstream source, i.e., Coyote Creek, which discharges to the Estuary indirectly. Discharges to upstream reaches can cause or contribute to exceedances of water quality standards and contribute to impairments downstream. Therefore, a dry-weather allocation was assigned to Coyote Creek and its tributaries to meet the copper TMDL in the Estuary.

For copper, dry- and wet-weather allocations will be applied to the facility's effluent discharge to meet the TMDLs in downstream reaches. By following the USEPA recommendations discussed above, copper is subject to both dry- and wet-weather allocations. Therefore, for copper, the facility would have an average monthly effluent limit based on dry-weather WLA and two separate daily maximum limitations based on the dry- and wet-weather WLAs.

Lead and zinc did not exceed the metals water quality criteria. However, Tier 3 was triggered because these constituents have established WLAs described in San Gabriel River Metals TMDL, therefore these metals have reasonable potential. Consistent with the SIP Procedures and TMDL WLAs, effluent limitations for these metals have been prescribed. The final effluent limitations for lead and zinc shall apply to wet-weather conditions only. Wet-weather is defined as the condition in the Coyote Creek when maximum daily flow at the Los Angeles County Department of Public Works (LACDPW) gauging station F354-R is equal to or greater than 156 cubic feet per second. Station F354-R is designated as RSW-007 in this permit.

<u>Calculation of Copper Effluent Limitations</u>

<u>Wet-Weather Criteria:</u>

REVISED TENTATIVE

i. The CTR acute criteria is adjusted for hardness using the following equations:

CMC_{SIP} = WER x (Acute Conversion Factor) x (exp{mA[ln(hardness)] + bA})

= 1 x 0.96 x (exp{0.9422[ln(105)] – 1.700})

= 14.07 µg/L $_{\text{Dissolved Metal}}$

where, hardness is equal to the TMDL median hardness of 105 mg/L as $CaCO_3$, from Table 3-4, page 19.

ii. The WQBELs adjusted using the Site Specific Provisional Translators using the following equations:

$CMC_{\text{Total Recoverable Metal}}$ = CMC_{SIP}/Site-specific Provisional Translator $_{\text{Acute}}$

= 14.07 µg/L/0.53

= 26.5 µg/L

Using the calculated CMC of 26.5 µg/L in the SIP calculation spreadsheet, the wet-weather effluent limitation for copper is 27 µg/L. According to the TMDL implementation recommendation, the wet-weather allocation will only be used to set maximum daily limits.

<u>Dry-Weather Criteria:</u>

i. The CTR chronic criteria adjusted for hardness using the following equations:

CCC_{SIP} = WER x (exp{mC[ln(hardness)] + bC})

= 1 x (exp{0.8545[ln(249)] – 1.702})

= 20.34 µg/L Total Recoverable Metal

where, hardness is equal to the TMDL median hardness of 249 mg/L as $CaCO_3$, Footnote 3, page 40.

There is no site specific translator for dry-weather criteria. Therefore, 20.34 µg/L becomes the final chronic criteria value that will be used to calculate the final effluent limitations using SIP procedures.

ii. Average Monthly Limitation based on Dry-weather:

Using the calculated chronic criteria above, SIP calculation spreadsheet yields a dry-weather average monthly effluent limitation of 18 µg/L. According to TMDL implementation recommendation, the dry-weather allocation is only used to set average monthly limitations.

iii. Maximum Daily Limitation based on Dry-weather:

Following the USEPA recommendation, the maximum daily limitation based on dry-weather is calculated by using the chronic criteria of 20.34 µg/L as the basis for the SIP calculation. The SIP calculation spreadsheet indicates that the maximum daily limitation based on dry-weather is equal to 20 µg/L.

iv. Maximum Daily Limitation based on Wet-weather:

Prior calculation of the maximum daily limitation based on wet-weather indicates that it is equal to 27 µg/L.

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.

REVISED TENTATIVE

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 POTWs in place of average weekly limitations.

Sample SIP calculation for selenium:

Step 1: Identify applicable water quality criteria.

From California Toxics Rule (CTR), we can obtain the Criterion Maximum Concentration (CMC) and the Criterion Continuous Concentration (CCC).

Freshwater Aquatic Life Criteria:

CMC = NA µg/L (CTR page 31712, column B1) and

CCC = 5.0 µg/L (CTR page 31712, column B1); and

Human Health Criteria for Organisms only = narrative (CTR page 31712, column D2).

Step 2: Calculate effluent concentration allowance (ECA)

ECA = Criteria in CTR, since no dilution is allowed.

Step 3: Determine long-term average (LTA) discharge condition

i. Calculate CV:

CV = Standard Deviation/Mean

= 0.4

Find the ECA Multipliers from SIP Table 1 (page 7), or by calculating them using equations on SIP page 6. When CV = 0.4, then:

ECA Multiplier acute = 0.419

ECA Multiplier chronic = 0.625

LTA acute = ECA acute x ECA Multiplier acute

= (NA) µg/L x 0.419 = NA µg/L

LTA chronic = ECA chronic x ECA Multiplier chronic

= 5.0 µg/L x 0.625 = 3.124 µg/L

Step 4: Select the lowest LTA

Lowest LTA = 3.124 µg/L

Step 5: Calculate the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for AQUATIC LIFE

i. Find the multipliers. You need to know CV and n (frequency of sample collection per month). If effluent samples are collected 4 times a month or less, then n = 4. CV was determined to be 0.4 in a previous step.

AMEL Multiplier = 1.386

MDEL Multiplier = 2.389

REVISED TENTATIVE

ii. AMEL aquatic life = lowest LTA (from Step 4) x AMEL Multiplier

= 3.124 µg/L x 1.386 = 4.328 µg/L

iii. MDEL aquatic life = lowest LTA (from Step 4) x MDEL Multiplier

= 3.124 µg/L x 2.389 = 7.462 µg/L

Step 6: Find the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for HUMAN HEALTH

i. Find factors. Given CV = 0.4 and n = 4.

For AMEL human health limitation, there is no factor.

The MDEL/AMEL human health factor = 1.720

ii. AMEL human health = ECA = NA µg/L

iii. MDEL human health = ECA x MDEL/AMEL factor

= NA µg/L x 1.720 = NA 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

i. Lowest AMEL = 4.3 µg/L (Based on aquatic life protection)

ii. Lowest MDEL = 7.5 µg/L (Based on aquatic life protection)

d. **Impracticability Analysis**

Federal NPDES regulations contained in 40 CFR section 122.45(d) states that, for continuous discharges, all permit effluent limitations, standards, and prohibitions, including those to achieve water quality standards, shall unless impracticable be stated as maximum daily and average monthly discharge limitations for all Permittees other than POTWs, and average weekly and average monthly discharge limitations for POTWs.

As stated by USEPA in its long standing guidance for developing WQBELs, average alone limitations are not practical for limiting acute, chronic, and human health toxic effects.

For example, a POTW sampling for a toxicant to evaluate compliance with a 7-day average limitation could fully comply with this average limitation, 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. For these reason, USEPA recommends daily maximum and 30-day average limitations for regulating toxics in all NPDES discharges. For the purposes of protecting the acute effects of discharges containing toxicants (CTR human health for the ingestion of fish), daily maximum limitations have been established in this NPDES permit for mercury because it is considered to be a carcinogen, endocrine disruptor, and is bioaccumulative.

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. Fish exposed to these endocrine disrupting chemicals will be passed on to the human consumer. Endocrine disrupters alter hormonal functions by several means. These substances can:

REVISED TENTATIVE

i. Mimic or partly mimic the sex steroid hormones estrogens and androgens (the male sex hormone) by binding to hormone receptors or influencing cell signaling pathways.

ii. Block, prevent and alter hormonal binding to hormone receptors or influencing cell signaling pathways.

iii. Alter production and breakdown of natural hormones.

iv. Modify the making and function of hormone receptors.

e. **Mass-based limitations**. 40 CFR section 122.45(f)(1) requires that, except under certain conditions, all permit limitations, standards, or prohibitions be expressed in terms of mass units. 40 CFR section 122.45(f)(2) allows the permit writer, at its discretion, to express limitations in additional units (e.g., concentration units). The regulations mandate that, where limitations are expressed in more than one unit, the permittee must comply with both.

Generally, mass-based limitations ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limitations. Concentration-based effluent limitations, on the other hand, discourage the 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 limitations, 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 limitations. To account for this, this permit includes mass and concentration limitations for some constituents.

Table F-8. Summary of WQBELs for Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Copper (dry-weather)[5]	µg/L	18	--	20		
	lbs/day[4]	3.8	--	4.2		
Copper (wet-weather)[6]	µg/L	--	--	27		
	lbs/day[4]	--	--	5.6		
Lead (wet-weather)[6]	µg/L	--	--	106		
	lbs/day[4]	--	--	22		
Zinc (wet-weather)[6]	µg/L	--	--	156		
	lbs/day[4]	--	--	32		
Selenium	µg/L	4.3	--	7.5		
	lbs/day[4]	0.90	--	1.6		

[5] Dry-weather effluent limitations for Coyote Creek shall apply when the maximum daily flow in the creek is less than 156 cubic feet per second as measured at the LACDPW flow gauging station F354-R (RSW-007).

[6] Wet-weather effluent limitations for Coyote Creek shall apply when the maximum daily flow in the creek is equal to or greater than 156 cfs as measured at LACDPW flow gauging station F354-R (RSW-007).

REVISED TENTATIVE

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Benzo(a)Pyrene	µg/L	0.049	--	0.098		
	lbs/day[4]	0.01	--	0.02		
Benzo(b)Fluoranthene	µg/L	0.049	--	0.098		
	lbs/day[4]	0.01	--	0.02		
Benzo(k)Fluoranthene	µg/L	0.049	--	0.098		
	lbs/day[4]	0.01	--	0.02		
Chrysene	µg/L	0.049	--	0.098		
	lbs/day[4]	0.01	--	0.02		
Dibenzo(a,h)Anthracene	µg/L	0.049	--	0.098		
	lbs/day[4]	0.01	--	0.02		
Indeno(1,2,3-cd)Pyrene	µg/L	0.049	--	0.098		
	lbs/day[4]	0.01	--	0.02		
Ammonia Nitrogen	µg/L	4.1	--	7.9		
	lbs/day[4]	855	--	1,647		
Chronic Toxicity[7, 8]	Pass or Fail, % Effect (TST)	Pass[9]	--	Pass or % Effect < 50		

REVISED TENTATIVE

5. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) testing protects receiving waters 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 longer period of time and may measure mortality, reproduction, and growth. Chronic

[7] The median monthly effluent limitation (MMEL) shall be reported as "Pass" or "Fail." The maximum daily effluent limitation (MDEL) shall be reported "Pass" or "Fail" and "% Effect." The MMEL for chronic toxicity shall only apply when there is a discharge on more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail."

[8] A numeric WQBEL is established because effluent data showed that there ~~was~~is 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 will be implemented using the *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (USEPA 2002, EPA-821-R-02-013),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),* *http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010*.

[9] This is a Median Monthly Effluent Limitation.

toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Because of the nature of industrial discharges into the POTW sewershed, it is possible that other toxic constituents could be present in the Long Beach WRP effluent, or could have synergistic or additive effects.

One exceedance of the 1.0 TUc monthly median trigger for accelerated monitoring was observed in the final effluent in December 2011. In addition, an exceedance of the 1.0 TUc in a single test was observed in March 2009, November 2012, and December 2013 chronic toxicity samples. These data are previously presented in Table F-3. All acute toxicity testing results from the same period did not exceed any acute toxicity requirements, therefore there is no reasonable potential for acute toxicity. The Regional Water Board determined that, pursuant to the SIP, reasonable potential exists for chronic toxicity. As such, the permit contains effluent limitations for chronic toxicity.

The 2007 permit contained final effluent limitations for acute toxicity and chronic toxicity, but the 2015 permit only contains final effluent limitations for chronic toxicity, expressed as a median monthly and a maximum daily. Since chronic toxicity is a more stringent requirement than acute toxicity, removal of the numeric acute toxicity effluent limitation from the 2007 permit does not constitute backsliding.

The effluent limitations for chronic toxicity were established because effluent data showed that there is reasonable potential for the pollutants to be present in the discharge at levels that would cause or contribute to a violation of water quality standard. The chronic toxicity data that exceeded 1.0 TUc is presented in Table F-3.

In the past, the State Water Board reviewed the circumstances warranting a numeric chronic toxicity effluent limitation when there is reasonable potential with respect to SWRCB/OCC Files A-1496 & A-1496(a) [Los Coyotes/Long Beach Petitions]. On September 16, 2003, at a public hearing, the State Water Board adopted Order No. 2003-0012 (Los Coyotes Order) deferring the issue of numeric chronic toxicity effluent limitations until a subsequent Phase of the SIP is adopted. In the meantime, the State Water Board replaced the numeric chronic toxicity limit with a narrative effluent limitation and a 1.0 TUc trigger, in the Long Beach and Los Coyotes WRP NPDES permits. The Long Beach WRP 2007 permit contained a narrative chronic toxicity limitation consistent with the direction received of the State Water Board.

However, many facts have changed since the State Water Board adopted the Los Coyotes Order in 2003. USEPA published two new guidance documents with respect to chronic toxicity testing; the Los Angeles Regional Water Board adopted NPDES permits for industrial facilities incorporating TST-based effluent limitations for chronic toxicity and has adopted numeric chronic toxicity effluent limitations for industrial facilities and POTWs with TMDL WLAs of 1.0 TUc; and the Santa Ana Regional Water Board adopted an NPDES permit for a POTW incorporating TST-based effluent limitations for chronic toxicity. In addition to these factual developments, the State Water Board has not adopted a revised policy that addresses chronic toxicity effluent limitations in NPDES permits for inland discharges, as anticipated by the Los Coyotes Order. 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 Regional Water Board in 2014 as compared to the facts that were the basis for the Los Coyotes Order in 2003, the Regional Water Board concludes that the Los Coyotes Order does not require inclusion of narrative rather than numeric effluent limitations for chronic toxicity. Further, the Regional Water

REVISED TENTATIVE

Board finds that numeric effluent limitations for chronic toxicity are necessary, feasible, and appropriate.

On July 7, 2014, the Chief Deputy of the Water Quality Division announced that the State Water Board would be releasing a revised version of the Chronic Toxicity Plan for public comment within a few weeks. The Regional Water Board await its release. Because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the water quality objective, the Long Beach WRP 2015 permit contains numeric chronic toxicity effluent limitations. Compliance with the chronic toxicity requirement contained in the 2015 Order is determined in accordance to section VII.J of this Order.

For this permit, chronic toxicity in the discharge is evaluated using a median monthly effluent limitation and a maximum daily effluent limitation that utilize USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach. The chronic toxicity effluent limitations are expressed as "Pass" for the median monthly summary results and "Pass" or <50% Effect" for each maximum daily individual results.

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 Technical Support Document (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 WQS. Moreover, an average weekly requirement comprising 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 Effluent Limitation (MMEL).

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 USEPA's WET test methods. Section 9.4.1.2 of USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to 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.

REVISED TENTATIVE

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[10]. 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).

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.

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 Regional 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.

REVISED TENTATIVE

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

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 Regional Water Board, in consultation with USEPA and the State Water Board's Quality Assurance Officer and Environmental Laboratory Accreditation Program (40 CFR section 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water 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.

The Permittee may submit a request for a time schedule order upon an exceedance of the effluent limitations for chronic toxicity in this Order. In determining whether a time schedule order is appropriate, and the conditions and duration of such an order, the Regional Water Board or Executive Officer will consider the following factors among other relevant considerations: the facility's history of compliance with effluent limitations for chronic toxicity, including the magnitude and duration of any exceedances; history of and information acquired from past TIEs or TREs conducted for the facility; and the efforts of the Permittee to achieve compliance with effluent limitations for chronic toxicity.

This Order contains a reopener to allow the Regional Water Board to modify the permit, if necessary, to make it consistent with any new policy, law, or regulation.

D. Final Effluent Limitation Considerations

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, with certain exceptions. 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 as stringent as those in the prior permit, Order No. R4-2007-0047, with the exception of the effluent limitations for 4,4'-DDE, ammonia nitrogen, and acute toxicity. The relaxation of effluent limitations for these constituents is consistent with the anti-backsliding exceptions allowed in the CWA and federal regulations.

Section 402(o)(2) of the Clean Water Act 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." (CWA section 402(o)(2)(B)(i)).

The effluent limitations for 4,4'DDE that were included in the prior permit are not included in this Order because the discharge did not show reasonable potential to cause or contribute to an exceedance of the applicable water quality standard. The reasonable potential analysis was based on the most recent monitoring data, which constitutes new information and justifies removal of the effluent limitation for 4,4'-DDE in this Order. In addition, CWA section 303(d)(4)(B) allows revision 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 antidegradation policy.

REVISED TENTATIVE

Coyote Creek and San Gabriel River are not impaired for 4,4'-DDE and thus in attainment for that pollutant. The removal of effluent limitations for this pollutant is consistent with the state and federal antidegradation policies because the discharge is in compliance with existing water quality objectives for 4,4'DDE in these waters. The removal of effluent limitations for this pollutant is therefore consistent with the anti-backsliding provisions.

The effluent limitations for ammonia nitrogen in this Order are less stringent than those effluent limitations in the prior permit as a result of the new site-specific 30-day average objectives (30-day SSO) for ammonia, coefficient of variation, and recent pH and temperature data used in the effluent limitation calculations. The Basin Plan amendment establishing the 30-day SSO for ammonia became effective on April 23, 2009, which was after adoption of the previous permit. The effluent limitations for ammonia nitrogen in this Order are based on this information and justifies the less stringent effluent limitations.

The previous permit contained effluent limitations for acute toxicity and chronic toxicity trigger for accelerated monitoring. In this Order, the effluent limitation for acute toxicity has been removed. This Order contains effluent limitations for chronic toxicity, expressed as a median monthly and a maximum daily. Chronic toxicity is a more stringent requirement than acute toxicity. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Therefore, removal of the numeric acute toxicity effluent limitation from the previous permit does not constitute backsliding.

2. Antidegradation Policies

40 CFR section 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 No. 68-16, *Statement of Policy with Respect to Maintaining the Quality of the Waters of the State*. Resolution No. 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 No. 86-17 and an October 7, 1987 guidance memorandum, interpreted Resolution No. 68-16 to be fully consistent with the federal antidegradation policy contained in 40 CFR section 131.12. 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 Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies.

Discharges permitted in this Order are consistent with the antidegradation provisions of 40 CFR section 131.12 and State Water Board Resolution No. 68-16. The discharge will not degrade any existing high quality water. The San Gabriel River, to which Coyote Creek is a tributary of, is included on the State's CWA section 303(d) List for several pollutants and therefore is not a high quality water with respect to those pollutants. This Order contains effluent limitations to protect beneficial uses of the receiving waters. Removal of the 4,4'-DDE and acute toxicity effluent limitations, and the relaxation of the ammonia nitrogen effluent limitation, in this Order will not degrade the receiving waters. The Regional Water Board is also implementing TMDL-based requirements in this Order so that water quality standards in the receiving waters can be attained at a future date. No changes to the plant's treatment facilities or processes are planned that would impact

REVISED TENTATIVE

the concentrations of these constituents in the discharged effluent. Monitoring for these constituents in the effluent and receiving waters continue to be required under this Order. The Regional 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.

3. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, TSS, pH, and percent removal of BOD and TSS. Restrictions on BOD, TSS and pH are discussed in section IV.B. 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 pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR section 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and WQOs contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR section 131.21(c)(1). 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.

Table F-9. Summary of Final Effluent Limitations for Discharge Point 001

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
$BOD_5 20^oC$	mg/L	20	30	45			Tertiary treatment technology
	lbs/day[4]	4,200	6,300	9,400			
TSS	mg/L	15	40	45			Tertiary treatment technology
	lbs/day[4]	3,100	8,300	9,400			
pH	standard units	--	--	--	6.5	8.5	Basin Plan
Removal Efficiency for BOD and TSS	%	85	--	--			40 CFR part 133
Oil and Grease	mg/L	10	--	15			Basin Plan narrative and BPJ
	lbs/day[4]	2,100	--	3,100			

REVISED TENTATIVE

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Settleable Solids	ml/L	0.1	--	0.3			Basin Plan narrative and BPJ
Total Residual Chlorine	mg/L	--	--	0.1			Basin Plan
	lbs/day[4]	--	--	21			
Ammonia Nitrogen	mg/L	4.1	--	7.9			Basin Plan
	lbs/day[4]	855	--	1,647			
Nitrate + Nitrite (as N)	mg/L	8	--	--			Basin Plan
	lbs/day[4]	1,670	--	--			
Nitrite (as N)	mg/L	1	--	--			BPJ
	lbs/day[4]	210	--	--			
Copper (dry-weather)[5]	µg/L	18	--	20			TMDL SIP/CTR
	lbs/day[4]	3.8	--	4.2			
Copper (wet-weather)[6]	µg/L	--	--	27			TMDL SIP/CTR
	lbs/day[4]	--	--	5.7			
Lead (wet-weather)[6]	µg/L	--	--	106			TMDL
	lbs/day[4]	--	--	22			
Zinc (wet-weather)[6]	µg/L	--	--	156			TMDL
	lbs/day[4]	--	--	32			
Selenium	µg/L	4.3	--	7.5			SIP/CTR
	lbs/day[4]	0.90	--	1.6			
Benzo(a)Pyrene	µg/L	0.049	--	0.098			SIP/CTR
	lbs/day[4]	0.01	--	0.02			
Benzo(b)Fluoranthene	µg/L	0.049	--	0.098			SIP/CTR
	lbs/day[4]	0.01	--	0.02			
Benzo(k)Fluoranthene	µg/L	0.049	--	0.098			SIP/CTR
	lbs/day[4]	0.01	--	0.02			
Chrysene	µg/L	0.049	--	0.098			SIP/CTR
	lbs/day[4]	0.01	--	0.02			
Dibenzo(a,h)Anthracene	µg/L	0.049	--	0.098			SIP/CTR
	lbs/day[4]	0.01	--	0.02			
Indeno(1,2,3-cd)Pyrene	µg/L	0.049	--	0.098			SIP/CTR
	lbs/day[4]	0.01	--	0.02			
Chronic Toxicity[7,8]	Pass or Fail, % Effect (TST)	Pass[9]	--	Pass or % Effect < 50			TST and USEPA Guidance

REVISED TENTATIVE

E. Interim Effluent Limitations

No interim effluent limitations are included in this Order.

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications

The production, distribution, and reuse of recycled water are presently regulated under Water Reclamation Requirements (WRRs) Order No. 87-47, adopted by this Board on April 27, 1987. Pursuant to CWC section 13523, the Regional Water Board readopted Order No. 87-47 without change in Order No. 97-072, adopted on May 12, 1997. Additionally, recycled water from the Long Beach WRP used for street sweeping and sanitary sewer flushing by the City of Long Beach is regulated under the Non-Irrigation General Water Reuse Permit, Order No. R4-2009-0049, adopted by the Regional Board on April 2, 2009.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

Receiving water limitations are based on WQOs contained in the Basin Plan and are a required part of this Order.

VI. RATIONALE FOR PROVISIONS

A. 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 Permittee 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. 40 CFR section 123.25(a)(12) 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 section 122.41(j)(5) and (k)(2) because the enforcement authority under the CWC is more stringent. In lieu of these conditions, this Order incorporates by reference CWC section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. This provision is based on 40 CFR part 123. The Regional 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, or adoption of new regulations by the State Water Board or Regional Water Board, including revisions to the Basin Plan.

2. Special Studies and Additional Monitoring Requirements

a. **Constituents of Emerging Concern (CEC)**. In recent years, the Los Angeles Regional Water Board has incorporated monitoring of a select group of man-made chemicals, particularly pesticides, pharmaceuticals and personal care products, known collectively as CECs, into permits issued to POTWs to better understand the

REVISED TENTATIVE

propensity, persistence and effects of CECs in our environment. Recently adopted permits in this region contain requirements for CEC effluent monitoring and submittal of a work plan identifying the CECs to be monitored in the effluent, sample type, sampling frequency and sampling methodology. Based on feedback we have received from permittees and our review of the results of a recent CEC-related study by the Southern California Coastal Water Research Project (SCCWRP) and the State Water Board, we have modified our CEC monitoring program to respond to feedback while proceeding to fill identified data gaps without overly burdening any one permittee.

The Permittee has completed annual CEC monitoring for two years. The Regional Water Board has determined that two years is an appropriate time period to determine those CECs that are present in POTW effluent. Analysis under this section is for monitoring purposes only. Analytical results obtained for this study will not be used for compliance determination purposes, since the methods have not been incorporated into 40 CFR part 136.

b. **Antidegradation Analysis and Engineering Report for Proposed Plant Expansion.** This provision is based on the State Water Board Resolution No. 68-16, which requires the Regional Water Board in regulating the discharge of waste to maintain high quality waters of the state. Prior to expanding the plant capacity, the Permittee must demonstrate that it has implemented adequate controls (e.g., adequate treatment capacity) to ensure that high quality waters will be maintained. This provision requires the Permittee to clarify that it has increased plant capacity through the addition of new treatment system(s) to obtain alternative effluent limitations for the discharge from the treatment system(s). This provision requires the Permittee to report specific time schedules for the plants projects. This provision requires the Permittee to submit report to the Regional Water Board for approval.

c. **Operations Plan for Proposed Expansion.** This provision is based on section 13385(j)(1)(D) of the CWC and allows a time period not to exceed 90 days in which the Permittee may adjust and test the treatment system(s). Prior to start-up of an expansion project, this provision requires the Permittee to submit an Operations Plan describing the actions the Permittee will take during the period of adjusting and testing to prevent violations.

d. **Treatment Plant Capacity.** The treatment plant capacity study required by section VI.C.2.c of this Order shall serve as an indicator for the Regional Water Board regarding Facility's increasing hydraulic capacity and growth in the service area.

3. Best Management Practices and Pollution Prevention

a. **Pollutant Minimization Program (PMP).** This provision is based on the requirements of section 2.4.5 of the SIP.

4. Construction, Operation, and Maintenance Specifications

a. This provision is based on the requirements of 40 CFR section 122.41(e) and the previous permit.

5. Special Provisions for Municipal Facilities (POTWs Only)

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,

REVISED TENTATIVE

handling, and disposal requirements. It is the responsibility of the Permittee to comply with said regulations that are enforceable by USEPA, because California has not been delegated the authority to implement this program. The Permittee 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 Water Boards, Arizona Department of Environmental Quality or USEPA, as applicable, if the Facility's biosolids will be transported and applied to that jurisdiction.

b. **Pretreatment Requirements.** This permit 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 permit 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. **Spill Reporting Requirements.** This Order established 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 General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (SSO WDR) on May 2, 2006. The Monitoring and Reporting Requirements for the SSO WDR were amended by Water Quality Order WQ 2008-0002-EXEC on February 20, 2008. The SSO WDR 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 SSO WDR. The SSO WDR requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

Furthermore, the SSO WDR contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. Inasmuch that the Permittee's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the SSO WDR. The Permittee must comply with both the SSO WDR and this Order. The Permittee and public agencies that are discharging wastewater into the Facility were required to obtain enrollment for regulation under the SSO WDR by December 1, 2006.

In the past, the Los Angeles Regional Water Board has experienced loss of recreational use in coastal beaches and in recreational areas as a result of major sewage spills. The SSO requirements are intended to prevent or minimize impacts to receiving waters as a result of spills.

6. Other Special Provisions (Not Applicable)

7. Compliance Schedules (Not Applicable)

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 308(a) of the federal Clean Water Act 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. CWC sections 13267 and 13383 also authorizes the

REVISED TENTATIVE

Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP 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.

A. 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; and,
- As a requirement of the PMP

B. Effluent Monitoring

The Permittee is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit 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 Regional 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 CWC, and Regional Water Board policies. The MRP also contains sampling program specific for the Permittee'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, a 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.

Table F-10. Effluent Monitoring Frequency Comparison

Parameter	Monitoring Frequency (2007 Permit)	Monitoring Frequency (2015 Permit)
Total waste flow	continuous	continuous
Total residual chlorine	5 days/week	daily, except weekends and holidays
Turbidity	continuous	continuous
Temperature	daily	daily
pH	daily	daily
Settleable solids	daily	daily
Total suspended solids	daily	daily
Oil and grease	monthly	monthly
BOD	weekly	weekly
Total coliform	daily	daily
Fecal Coliform	daily	weekly

REVISED TENTATIVE

Parameter	Monitoring Frequency (2007 Permit)	Monitoring Frequency (2015 Permit)
E.coli	daily (as necessary)	weekly (as necessary)
Total Dissolved Solids	semiannually	semiannually
Sulfate	semiannually	semiannually
Chloride	semiannually	semiannually
Boron	semiannually	semiannually
MBAS	monthly	monthly
Total hardness	monthly	monthly
Ammonia nitrogen	monthly	monthly
Nitrate + nitrite (as nitrogen)	monthly	monthly
Nitrite nitrogen	monthly	monthly
Nitrate nitrogen	monthly	monthly
Chronic toxicity	monthly	monthly
Acute toxicity	quarterly	deleted
Total Nitrogen	monthly	monthly
Total Phosphorus	not required	monthly
Fluoride	semiannually	semiannually
Antimony	quarterly	quarterly
Arsenic	quarterly	quarterly
Beryllium	quarterly	quarterly
Cadmium	quarterly	quarterly
Chromium III	quarterly	quarterly
Chromium VI	quarterly	quarterly
Copper	monthly	monthly
Lead	monthly	monthly
Mercury	quarterly	quarterly
Nickel	quarterly	quarterly
Selenium	quarterly	monthly
Silver	quarterly	quarterly
Thallium	quarterly	quarterly
Zinc	monthly	monthly
Cyanide	quarterly	quarterly
Benzo(a)Pyrene	semiannually	monthly
Benzo(b)Fluoranthene	semiannually	monthly
Benzo(k)Fluoranthene	semiannually	monthly
Chrysene	semiannually	monthly
Dibenzo(a,h)Anthracene	semiannually	monthly
Indeno(1,2,3-cd)Pyrene	semiannually	monthly
4,4'-DDE	monthly	semiannually~~quarterly~~
Diazinon	not required	semiannually~~quarterly~~
2,3,7,8-TCDD (Dioxin)	semiannually	semiannually
Perchlorate	semiannually	semiannually
1,4-Dioxane	semiannually	semiannually
1,2,3-Trichloropropane	semiannually	semiannually
Methyl-tert-butyl-ether (MTBE)	semiannually	semiannually
PCBs as arochlors	semiannually	annually
PCBs as congeners	not required	annually
Remaining USEPA priority pollutant not listed on this Table	semiannually	semiannually

REVISED TENTATIVE

C. WET Requirements

The rationale for WET has been discussed extensively in section IV.C.5 of this Fact Sheet.

D. Receiving Water Monitoring

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.

2. Groundwater – (Not Applicable)

E. Other Monitoring Requirements

1. Watershed Monitoring and Bioassessment Monitoring

The goals of the Watershed-wide Monitoring Program including the bioassessment monitoring for the San Gabriel River Watershed are to:

- Determine compliance with receiving water limits.
- Monitor trends in surface water quality.
- Ensure protection of beneficial uses.
- Provide data for modeling contaminants of concern.
- Characterize water quality including seasonal variation of surface waters within the watershed.
- Assess the health of the biological community.
- Determine mixing dynamics of effluent and receiving waters in the estuary.

VIII. CONSIDERATION OF NEED TO PREVENT NUISANCE AND CWC SECTION 13241 FACTORS.

Some of the provisions/requirements in this Order are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations. As required by CWC section 13263, the Regional Water Board has considered the need to prevent nuisance and the factors listed in CWC section 13241 in establishing the state law provisions/requirements. The Regional Water Board finds, on balance, that the state law requirements in this Order are reasonably necessary to prevent nuisance and to protect beneficial uses identified in the Basin Plan, and the section 13241 factors are not sufficient to justify failing to protect those beneficial uses.

A. Need to prevent nuisance: The state law requirements in this Order are required to prevent pollution or nuisance as defined in section 13050, subdivisions (l) and (m), of the CWC. Many are also required in accordance with narrative water quality objectives in the Basin Plan. These state requirements include, but are not limited to, groundwater limitations, spill prevention plans, operator certification, sanitary sewer overflow reporting, and requirements for standby or emergency power.

B. 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 III.C.1.

C. Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto: The environmental characteristics are discussed in the

REVISED TENTATIVE

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 water, will be improved by compliance with the requirements of this Order. Additional information on the San Gabriel River and watershed is available at http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/watershed/.

D. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area: The beneficial uses of the waterbodies in the San Gabriel River watershed can reasonably be achieved through the coordinate control of all factors that affect water quality in the area. TMDLs have been developed (as required by the Clean Water Act) for many of the impairments in the watershed. A number of Regional Water Board programs and actions are in place to address the water quality impairments in the watershed, including regulation of point source municipal and industrial discharges with appropriate NPDES permits and non-point source discharges such as irrigated agriculture. All of these regulatory programs control the discharge of pollutants to surface and ground waters to prevent nuisance and protect beneficial uses. These regulatory programs have resulted in watershed solutions and have improved water quality. Generally, improvements in the quality of the receiving waters impacted by the permittee's discharges can be achieved by reducing the volume of discharges to receiving waters (e.g., through increased recycling), reducing pollutant loads through source control/pollution prevention, including operational source control such as public education (e.g., disposal of pesticides, pharmaceuticals, and personal care products into the sewer) and product or materials elimination or substitution, and removing pollutants through treatment.

E. Economic considerations: The Permittee did not present any evidence regarding economic considerations related to this Order. However, the Regional Water Board has considered the economic impact of requiring certain provisions pursuant to state law. The technology-based requirements for turbidity and bacteria are required to protect human health from virus/bacteria, and are indicative of properly operated filters and disinfection processes. The additional costs, if any, associated with complying with state law requirements are reasonably necessary to prevent nuisance and protect beneficial uses identified in the Basin Plan. Further, the loss of, or impacts to, beneficial uses would have a detrimental economic impact. Economic considerations related to costs of compliance are therefore not sufficient, in the Regional Water Board's determination, to justify failing to prevent nuisance and protect beneficial uses.

F. Need for developing housing within the region: The Regional Water Board has no evidence regarding the need for developing housing within the region or how the Permittee's discharge will affect that need. The Regional Water Board, however, 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 re-use. 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 improved water quality.

REVISED TENTATIVE

G. Need to develop and use recycled water: The State Water Board's Recycled Water Policy requires the Regional 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.

IX. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for Long Beach WRP. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification to Permittee and Interested Persons

The Regional Water Board notified the Permittee and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. ~~((*This sentence will be updated when information arrives).~~ Notification was provided by posting notices at public notice bulletin board, Long Beach City Hall, front entrance to the control building, Long Beach WRP, and at JOS administration office, Whittier, California.~~)~~

The public had access to the agenda and any changes in dates and locations through the Regional Water Board's website at: http://www.waterboards.ca.gov/losangeles/.

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments where due either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order, or by email submitted to losangeles@waterboards.ca.gov.

To be considered by the Regional Water Board, the written comments were due at the Regional Water Board office by **5:00 p.m. on May 4, 2015**. Comments received after the deadline are generally not accepted because to do so may prejudice the Regional Water Board and parties.

C. Public Hearing

The Regional 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:	June 11, 2015
Time:	9:00 a.m.
Location:	Metropolitan Water District of Southern California, Board Room 700 North Alameda Street Los Angeles, California

Interested persons were invited to attend. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be received by the State

REVISED TENTATIVE

Water Board at the following address within 30 calendar days of the Regional Water Board's action:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

For instructions on how to file a petition for review, see
http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml

E. Information and Copying

The ROWD, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (213) 576-6600.

F. 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 Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Raul Medina at (213) 620-2160.

REVISED TENTATIVE

ATTACHMENT G – TOXICITY REDUCTION EVALUATION (TRE) WORK PLAN

INFORMATION AND DATA ACQUISITION

REVISED TENTATIVE

A. Operations and performance review

1. NPDES permit requirements
   a. Effluent limitations
   b. Special conditions
   c. Monitoring data and compliance history
2. POTW design criteria
   a. Hydraulic loading capacities
   b. Pollutant loading capacities
   c. Biodegradation kinetics calculations/assumptions
3. Influent and effluent conventional pollutant data
   a. Biochemical oxygen demand (BOD5)
   b. Chemical oxygen demand (COD)
   c. Suspended solids (SS)
   d. Ammonia
   e. Residual chlorine
   f. pH
4. Process control data
   a. Primary sedimentation - hydraulic loading capacity and BOD and SS removal
   b. Activated sludge - Food-to-microorganism (F/M) ratio, mean cell residence time (MCRT), mixed liquor suspended solids (MLSS), sludge yield, and BOD and COD removal
   c. Secondary clarification - hydraulic and solids loading capacity, sludge volume index and sludge blanket depth
5. Operations information
   a. Operating logs
   b. Standard operating procedures
   c. Operations and maintenance practices
6. Process sidestream characterization data
   a. Sludge processing sidestreams
   b. Tertiary filter backwash
   c. Cooling water
7. Combined sewer overflow (CSO) bypass data
   a. Frequency

b. Volume

8. Chemical coagulant usage for wastewater treatment and sludge processing
   a. Polymer
   b. Ferric chloride
   c. Alum

B. POTW influent and effluent characterization data

1. Toxicity
2. Priority pollutants
3. Hazardous pollutants
4. SARA 313 pollutants,
5. Other chemical-specific monitoring results

C. Sewage residuals (raw, digested, thickened and dewatered sludge and incinerator ash) characterization data

1. EP toxicity
2. Toxicity Characteristic Leaching Procedure (TCLP)
3. Chemical analysis

D. Industrial waste survey (IWS)

1. Information on IUs with categorical standards or local limits and other significant non-categorical IUs
2. Number of IUs
3. Discharge flow
4. Standard Industrial Classification (SIC) code
5. Wastewater flow
   a. Types and concentrations of pollutants in the discharge
   b. Products manufactured
6. Description of pretreatment facilities and operating practices
7. Annual pretreatment report
8. Schematic of sewer collection system

REVISED TENTATIVE

9. POTW monitoring data
    a. Discharge characterization data
    b. Spill prevention and control procedures
    c. Hazardous waste generation
10. IU self-monitoring data
    a. Description of operations
    b. Flow measurements
    c. Discharge characterization data
    d. Notice of sludge loading
    e. Compliance schedule (if out of compliance)
11. Technically based local limits compliance reports
12. Waste hauler monitoring data manifests
13. Evidence of POTW treatment interferences (i.e., biological process inhibition

REVISED TENTATIVE

ATTACHMENT H – PRETREATMENT REPORTING REQUIREMENTS

The Joint Outfall System (Permittee) is required to submit annual Pretreatment Program Compliance Report (Report) to the Regional 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 (WDR), those contained in the WDR will prevail.

REVISED TENTATIVE

A. Pretreatment Requirements

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 permit 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.

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 nondomestic 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 nondomestic user, upon commencement of the discharge.

3. The Permittee shall perform the pretreatment functions as required in 40 CFR part 403 including, but not limited to:

   a. Implement the necessary legal authorities as provided in 40 CFR section 403.8(f)(1);

   b. Enforce the pretreatment requirements under 40 CFR parts 403.5 and 403.6;

   c. Implement the programmatic functions as provided in 40 CFR section 403.8(f)(2); and

   d. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR section 403.8(f)(3).

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 permit, 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 15 of each year. The report shall contain, but not be limited to, the following information:

a. 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 District is not required to sample and analyze for asbestos. Sludge sampling and analysis are covered in the sludge section of this permit. The District 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;

b. A discussion of Upset, Interference or Pass Through incidents, if any, at the treatment plant which the District 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;

c. An updated list of the District'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 District 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;

d. The District shall characterize the compliance status of each SIU by providing a list or table which includes the following information:

   i. Name of the SIU;
   ii. Category, if subject to federal categorical standards;
   iii. The type of wastewater treatment or control processes in place;
   iv. The number of samples taken by the POTW during the year;
   v. The number of samples taken by the SIU during the year;
   vi. For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;
   vii. A list of the standards violated during the year. Identify whether the violations were for categorical standards or local limits;
   viii. 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
   ix. 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.

e. A brief description of any programs the POTW implements to reduce pollutants from nondomestic users that are not classified as SIUs;

f. 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

REVISED TENTATIVE

the program's administrative structure, local limits, monitoring program or monitoring frequencies, legal authority, enforcement policy, funding levels, or staffing levels;

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

h. 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).

B. LOCAL LIMITATIONS EVALUATION

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) within 180 days of issuance or reissuance of the JWPCP NPDES permit.

C. SIGNATORY REQUIREMENTS AND REPORT SUBMITTAL

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.

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 submittal in the event there will be a planned service interruption for electronic submittal.

A copy of the Annual Report must be sent to USEPA electronically to the following address:

R9Pretreatment@epa.gov

REVISED TENTATIVE