

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION**

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**ORDER R4-2017-XXXX
NPDES NO. CA0056014**

**WASTE DISCHARGE REQUIREMENTS
FOR THE LAS VIRGENES MUNICIPAL WATER DISTRICT
TAPIA WATER RECLAMATION FACILITY**

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

Table 1. Discharger Information

Discharger/Permittee	Las Virgenes Municipal Water District (LVMWD, Permittee, or Discharger)
Name of Facility	Tapia Water Reclamation Facility (Tapia WRF or Facility) and its associated wastewater collection system and outfalls
Facility Address	731 Malibu Canyon Road
	Calabasas, CA 91302
	Los Angeles County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Tertiary Treated Effluent	34.081459° N	118.706471° W	Malibu Creek
002	Tertiary Treated Effluent	34.137032° N	118.704796° W	Las Virgenes Creek (tributary to Malibu Creek)
003	Tertiary Treated Effluent	34.078177° N	118.701709° W	Malibu Creek
005	Tertiary Treated Effluent	34.150750° N	118.648719° W	Arroyo Calabasas Creek (tributary to Los Angeles River)

Table 3. Administrative Information

This Order was adopted on:	June 01, 2017
This Order shall become effective on:	August 01, 2017
This Order shall expire on:	July 31, 2022
The Discharger shall file a Report of Waste Discharge as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations, and an application for reissuance of a National Pollutant Discharge Elimination System (NPDES) permit no later than:	180 days prior to the Order expiration date
The United States Environmental Protection Agency (USEPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Major

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

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REVISED TENTATIVE

I. FACILITY INFORMATION

Information describing the Tapia Water Reclamation Facility (Tapia WRF) 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 waste discharge requirements (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 U.S. EPA 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 authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.
- 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 through J are also incorporated into this Order.
- C. Provisions and Requirements Implementing State Law.** Some of the provisions/requirements in this Order and the Monitoring and Reporting Program (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.
- D. Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.
- 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. R4-2010-0165, 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 Discharger 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.

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 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 12 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 CWC.
- 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 or high level radiological waste is prohibited.

IV. DISCHARGE PROHIBITION FOR MALIBU CREEK

- A. The Santa Monica Bay Watershed includes Santa Monica Bay and the surrounding land area that drains naturally into the Bay, including the Malibu Creek Watershed. Malibu Creek flows through a steep-sided canyon to Malibu Lagoon and Surfrider Beach. The Santa Monica Bay Restoration Commission, formerly known as the Santa Monica Bay Restoration Project (SMBRP) developed the *Santa Monica Bay Restoration Plan* (BRP) that serves as the blueprint for the restoration and enhancement of the Bay. The Regional Water Board plays a leading role in the implementation of the plan. Two of the proposed priorities of the plan are reduction of pollutants of concern at the source (which includes municipal wastewater treatment plants) and implementation of mass emission caps on some of the pollutants of concern.
- B. The Malibu Creek Watershed Advisory Council (Council) became part of the Santa Monica Bay Restoration Project as a BRP implementing committee. As part of overall watershed management, the Council has identified the reduction of freshwater flows to the Lagoon, reduction of nutrients to the Creek and Lagoon, protection of human health in the Creek, Lagoon, and surfzone, and restoration of a fully functioning Lagoon, as high priorities. Previous investigations conducted for the SMBRP showed pathogens were detected in summer runoff at four storm drain or channel locations. Possible sources of pathogens include pet and livestock feces, illicit sewer connections to the storm drains, leaking sewer lines, malfunctioning septic systems, and improper waste disposal by recreational vehicles, campers or transients. Additional potential sources of human pathogens in nearshore waters include sewage overflows into storm drains, small boat waste discharges, and bathers.
- C. The Malibu Creek Watershed Natural Resources Plan completed in July 1995 by the Natural Resources Conservation Service (NRCS) demonstrated significant increases in flow in Malibu Creek from urban runoff. The U.S. Fish and Wildlife Service listed the Tidewater Goby (*Eucyclogobius newberry*) as an endangered species in February 1994. On August 18, 1997, the National Marine Fisheries Service listed the Southern California Steelhead Trout (*Oncorhynchus mykiss*) as an endangered species. The tidewater goby historically existed in Malibu Lagoon but died out in the 1950's. A tidewater goby population was successfully reintroduced to the Lagoon on April 5, in 1991. Population surveys conducted by the Resource Conservation District of the Santa Monica Mountains and UCLA show that the Goby population has remained stable since their reintroduction. Malibu Creek has the southernmost known sustained run of steelhead trout in North America.
- D. Los Angeles County Lifeguards favored reduced flow to the Lagoon, and thus, less time with an open sandbar during the dry season, because of a standing rip tide current that developed around the mouth of the creek opening and because they cannot drive emergency vehicles across the Creek mouth area to provide emergency service to the west side of Surfrider Beach.

- E. To minimize the contribution of Tapia WRF's discharge to the excess freshwater flow into Malibu Lagoon (which leads to elevated lagoon level and frequent breaching of the sandbar once or if the sandbar has formed), thus impacting both wildlife and human health beneficial uses, this Order continues to enforce the existing discharge prohibition from April 15 to November 15 of each calendar year, the time period of heaviest recreational use and historically-lowest freshwater flows in the watershed.

V. DISCHARGE PROHIBITION EXEMPTION FOR MALIBU CREEK

Malibu Creek: The Permittee shall not discharge as otherwise permitted by these requirements to Malibu Creek at any of its discharge points from April 15 to November 15 of each calendar year. This prohibition will not be in effect during any of the following events specified below. However, the exceptions specified below only apply to an exception of allowing a discharge during the prohibition period. They do not provide an exception for meeting the limitations contained in this Order:

A. Treatment Plant Upset or Operational Emergencies

Treatment plant upset or operational emergencies consist of exceptional incidents that result in unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger (40 C.F.R. § 122.41(n)). These factors exclude raw sewage spills, sludge spills, operational errors, improperly designed or inadequate treatment facilities, lack of preventive maintenance, careless or improper operation of the treatment plant and lack of reasonable engineering judgment to prevent noncompliance. The Permittee must demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that: a) an upset or operational emergency occurred and the Discharger can identify the cause(s) of the upset or operational emergency; b) the facility was properly operated and maintained; c) the Permittee has notified the Regional Board of the incident within 24-hours; and, d) the Permittee implemented immediate remedial measures to minimize the noncompliance and/or implemented corrective measures to prevent the noncompliance, or recurrence of the incident.

B. Qualifying Storm Events

The Permittee may discharge to Malibu Creek during the prohibition period during storm events without prior approval of the Executive Officer provided that all of the following conditions have been met:

1. The rainfall event produces 0.4 inches or greater of precipitation in 24 hours at the Facility Rain Gauge; and
2. The Malibu Lagoon Sand Bar is open; and
3. The spray fields at Rancho Las Virgenes Farm are saturated; and
4. There is no demand for recycled water; and
5. The capacity to send wastewater to the Los Angeles River has been exhausted; and
6. All other disposal options are exhausted.

For a rainfall event of less than 0.4 inches in 24 hours at the Facility Rain Gauge, the Permittee may discharge to Malibu Creek during the prohibition period during storm events with prior written notification to the Regional Water Board, including a discussion of which discharge prohibition exception applies, provided that all of the following conditions have been met:

1. The Malibu Lagoon Sand Bar is open; and

2. The spray fields at Rancho Las Virgenes Farm are saturated; and
3. There is no demand for recycled water; and
4. The capacity to send wastewater to the Los Angeles River has been exhausted; and
5. All other disposal options are exhausted.

The Permittee shall maintain a log of the discharge. The log shall include, but not be limited to, the date and time of discharge, the amount of discharge, weather conditions, the discharge outfalls, and the condition of the Malibu Lagoon sand bar.

Other factors that the Permittee shall consider before discharging due to a qualifying rain event are listed in Attachment J. If the Permittee discharges to Malibu Creek during a rainfall event of less than 0.4 inches in 24 hours, the Permittee shall submit a follow-up notification to the Regional Water Board within 15 days of ceasing discharge to Malibu Creek during the prohibition period indicating the time and length of discharge, the average flow rate, and confirmation that all of the conditions specified above were met.

C. Maintaining Minimal Streamflow for Endangered Species

The Discharger shall augment flow in the Malibu Creek, such that 2.5 cfs of maximum total flow is measured at the Los Angeles County gauging station F-130-R to sustain the steelhead trout habitat. Discharge to augment flow shall not be dependent on whether receiving water station RSW-MC004D (formerly known as station R-4) is dry or wet. The discharge shall not cause a breach of the sand bar at the Malibu Lagoon. During the prohibition period, the Discharger must ~~submit written notification to the Regional Water Board~~ obtain written permission from the Executive Officer to discharge to Malibu Creek for the purpose of this provision, including a discussion as to which prohibition exception applies, prior to discharging into Malibu Creek. The Permittee shall submit a follow-up notification to the Regional Water Board within 15 days of ceasing discharge to Malibu Creek during the prohibition period. The notification shall include the time and length of discharge, the average flow rate of the augmentation, and confirmation that the conditions specified above were met stream flow increase up to a maximum of 2.5 cfs was achieved at gauging station F-130-R, and confirmation that the discharge did not cause the sand bar at the Malibu Lagoon to breach.

VI. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001, 002, 003, and 005

1. Final Effluent Limitations – Discharge Point 001, 002, 003, and 005

- a. The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 001, 002, 003 into the Malibu Creek, and 005 into the Los Angeles River, with compliance measured at Monitoring Location EFF-001 for Discharge Point 001 and 003, Monitoring Location EFF-002 for Discharge Point 002, and Monitoring Location EFF-005 for Discharge Point 005, as described in the MRP, Attachment E:

Table 4. Final Effluent Limitations Applicable to Discharge Points 001, 002, 003, and 005

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Biochemical Oxygen Demand (BOD ₅ 20°C)	mg/L	10	--	20	--	--
	lbs/day ¹	1,000	--	2,000	--	--
Total Suspended Solids (TSS)	mg/L	5.0	--	10	--	--
	lbs/day ¹	500	--	1,000	--	--
Turbidity ²	NTU	2 ²	--	5 ²	--	10 ²
pH	standard units	--	--	--	6.5	8.5
Temperature	°F	--	--	86 ³	--	--
Chronic Toxicity ^{4,5}	Pass or Fail, % Effect (TST)	Pass ⁶	--	Pass or % Effect <50	--	--
Cyanide	µg/L	4.1	--	8.9	--	--
	lbs/day ¹	0.41	--	0.89	--	--
Mercury	µg/L	0.051	--	0.10	--	--
	lbs/day ¹	0.0051	--	0.01	--	--
Dichlorobromomethane	µg/L	46	--	69	--	--
	lbs/day ¹	4.6	--	6.9	--	--

- ¹ The mass emission rates are based on the plant design flow rate of 12 mgd, and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. The design capacity of the Tapia WRF was 16.1 mgd in the previous Order; however, the nutrient reduction facilities that were constructed in 2008/2009 that were designed to meet the nutrient limits in the 2005 Order were designed for an average daily flow of 12 mgd. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.
- ² 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 The temperature of wastes discharged shall not exceed 86°F except as a result of external ambient temperature.
- 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 Water Quality Based Effluent Limitation (WQBEL) is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. This final effluent limitation will be implemented using *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 the *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010) and *EPA Regions 8, 9, and 10, Toxicity Training Tool* (January 2010), (<https://www.epa.gov/sites/production/files/documents/ToxTrainingTool10Jan2010.pdf>).
- ⁶ This is a Median Monthly Effluent Limitation.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Radioactivity ⁷						
Combined Radium-226 and Radium 228	pCi/L	5 ⁷	--	--	--	--
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15 ⁷	--	--	--	--
Uranium	pCi/L	20 ⁷	--	--	--	--
Gross Beta/photon emitters	millirem/year	4 ⁷	--	--	--	--
Strontium-90	pCi/L	8 ⁷	--	--	--	--
Tritium	pCi/L	20,000 ⁷	--	--	--	--
Removal Efficiency for BOD and TSS	%	85	--	--	--	--
Settleable Solids	mL/L	0.1	--	0.2	--	--
Oil and Grease	mg/L	5	--	10	--	--
	lbs/day ¹	500	--	1,000	--	--
Total coliform ⁸	MPN or CFU/100 mL	23 ⁸	2.2 ⁸	240 ⁸	--	--
<i>E. coli</i>	MPN or CFU/100 mL	126 ⁹	--	235 ⁹	--	--
Total Residual Chlorine ¹⁰	mg/L	--	--	0.1	--	--
	lbs/day ¹	--	--	10	--	--
Methylene Blue Activated Substances (MBAS) ¹¹	mg/L	0.5	--	--	--	--
	lbs/day ¹	50	--	--	--	--

⁷ The radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, chapter 15, article 5, sections 64442 and 64443, of the California Code of Regulations (CCR), or subsequent revisions.

⁸ 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 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.

⁹ The *Malibu Creek Bacteria TMDL* and the *LA River Bacteria TMDL* both contain Waste Load Allocations (WLAs) for the Tapia WRF. WLAs are expressed as allowable exceedance days. The WLA for the Tapia WRF is set to zero days of exceedances of the bacteriological objectives and include a geometric mean limit of 126/100 mL, and a single sample limit not to exceed 235/100 mL, for *E. coli*.

¹⁰ Total residual chlorine concentration excursions of up to 0.3 mg/L, at the point in the treatment train immediately following dechlorination, shall not be considered violations of this requirement provided the total duration of such excursions do not exceed 15 minutes during any 24-hour period. Peaks in excess of 0.3 mg/L lasting less than one minute shall not be considered a violation of this requirement.

¹¹ Based on the secondary drinking water standard (CDPH 1992).

- b. To protect the underlying ground water basins, pollutants shall not be present in the wastes discharged at concentrations that pose a threat to ground water quality.
- 2. Effluent Limitations Applicable to Discharge Points 001, 002, and 003 – Malibu Creek**
- a. The Permittee shall maintain compliance with the effluent limitations in Table 5 at Discharge Points 001, 002, and 003 into Malibu Creek with compliance measured at the following locations as described in the attached MRP:
 - i. Monitoring Location EFF-001 for Discharge Points 001 and 003; and
 - ii. Monitoring Location EFF-002 for Discharge Point 002.
 - b. In no case shall the combined mass emission rate from Discharge Points 001, 002, and 003 exceed the mass emission rate, calculated by multiplying the concentration-based effluent limitation by the existing plant design flow rate, as specified in Table 5.

Table 5. Final Effluent Limitations Applicable to Discharge Points 001, 002, and 003

Parameter	Units	Effluent Limitations				
		Average Monthly	Seasonal Average ¹²	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Dissolved Solids	mg/L	2,000	--	--	--	--
	lbs/day ¹	200,000	--	--	--	--
Chloride	mg/L	500	--	--	--	--
	lbs/day ¹	50,000	--	--	--	--
Sulfate	mg/L	500	--	--	--	--
	lbs/day ¹	50,000	--	--	--	--
Boron	mg/L	2	--	--	--	--
	lbs/day ¹	200	--	--	--	--
Total Ammonia as Nitrogen	mg/L	2.5	--	12	--	--
	lbs/day ¹	250	--	1,200	--	--
Nitrite as Nitrogen	mg/L	1	--	--	--	--
	lbs/day ¹	100	--	--	--	--

¹² Consistent with Regional Water Board Resolution No. R16-009, *Amendment to the Water Quality Control Plan - Los Angeles Region to Incorporate an Implementation Plan for the U.S. EPA-Established Malibu Creek Nutrients TMDL and the U.S. EPA-Established Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments* (Resolution R16-009), which modified the Basin Plan to establish an Implementation Plan for two Total Maximum Daily Loads (TMDLs) that were previously established by USEPA for Malibu Creek and Lagoon, seasonal averages are calculated as the sum of all samples collected during the season divided by the number of samples collected during that season. ~~Resolution No. R16-009 was approved by the State Water Board on February 22, 2017, but is awaiting approval by the Office of Administrative Law (OAL).~~

Parameter	Units	Effluent Limitations				
		Average Monthly	Seasonal Average ¹²	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Nitrate + Nitrite as Nitrogen	mg/L	8 ¹³	--	--	--	--
	lbs/day ¹	800	--	--	--	--
Total Nitrogen ¹⁴ (Summer: April 15 th – November 15 th)	mg/L	--	1.0 ¹⁵	--	--	--
Total Nitrogen ¹⁴ (Winter: November 16 th – April 14 th)	mg/L	--	4.0 ¹⁶	--	--	--
Total Phosphorous (Summer: April 15 th - November 15 th)	mg/L	--	0.10 ¹⁵	--	--	--

¹³ The final effluent limitation for nitrate plus nitrite is based on the waste load allocation (WLA) in the *Malibu Creek Watershed Nutrients TMDL* developed by USEPA in 2003. This TMDL became effective on March 23, 2004. The WLA of 8 mg/L assigned to the Tapia WRF for nitrate plus nitrite as nitrogen was for the winter season (November 16 – April 14). Since the Tapia WRF has a Malibu Creek discharge prohibition during the summer season (April 15 – November 15), USEPA deemed any potential summer discharge from the Tapia WRF negligible in its nutrient loading, and therefore, did not establish a WLA for Tapia WRF for the summer season. For consistency, Order No. R4-2005-0074 assigned an effluent limitation of 8 mg/L for nitrate plus nitrite as nitrogen for the summer season. This Average Monthly Effluent Limitation (AMEL) for nitrate plus nitrite as nitrogen will be superseded by the seasonal total nitrogen limitation (during the summer season - April 15th to November 15th) ~~five years after the effective date of Resolution R16-009~~ on May 16, 2022.

¹⁴ Consistent with the *Malibu Creek & Lagoon TMDL for Sedimentation and Nutrients to Address Benthic Community Impairments* developed by USEPA on July 2, 2013, total nitrogen shall be the sum of organic nitrogen and inorganic nitrogen.

¹⁵ This TMDL WLA-based final effluent limitation shall ~~apply five years from the effective date of Resolution R16-009~~ become effective on May 16, 2022.

¹⁶ This TMDL WLA-based final effluent limitation shall ~~apply 13.5 years from the effective date of Resolution R16-009~~ become effective on November 16, 2030. The concentration-based final effluent limitation applies unless, due to a rain event, the Tapia WRF discharges the excess of 11 mgd to Malibu Creek or its tributaries and all other discharge options have been exhausted. In that case, the concentration-based final effluent limitation does not apply and the mass-based final effluent limitation is:

$$\sum_{i=1}^n x_i \times 1.0 \frac{mg}{L} \times 0.35 \times 8.34$$

where x = average flow at gage F-130 during the period of discharge (mgd)
 i = number of days when Tapia WRF's discharge is greater than 11 mgd

Compliance with the mass-based final effluent limitation shall be determined by:

$$\sum_{i=1}^n y_i \times z_i \times 8.34$$

where y = average effluent flow from Tapia WRF during the period of discharge (mgd)
 z = total nitrogen concentration in Tapia WRF's discharge (mg/L)
 i = number of days when Tapia's discharge is greater than 11 mgd

Parameter	Units	Effluent Limitations				
		Average Monthly	Seasonal Average ¹²	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Phosphorous (Winter: November 16 th - April 14 th)	mg/L	--	0.20 ¹⁷	--	--	--
Bis(2-ethylhexyl) Phthalate	µg/L	5.9	--	15	--	--
	lbs/day ¹	0.59	--	1.5	--	--

3. Effluent Limitations Applicable to Discharge Point 005 – Los Angeles River

- a. The Permittee shall maintain compliance with the following effluent limitations at Discharge Point 005 into the Los Angeles River with compliance measured at Monitoring Location EFF-005, as described in the attached MRP:

Table 6. Final Effluent Limitations Applicable to Discharge Point 005

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Dissolved Solids	mg/L	950	--	--	--	--
	lbs/day ¹	95,000	--	--	--	--
Chloride	mg/L	150 ¹⁸	--	--	--	--
	lbs/day ¹	15,000	--	--	--	--
Sulfate	mg/L	300	--	--	--	--
	lbs/day ¹	30,000	--	--	--	--
Bis(2-ethylhexyl) Phthalate	µg/L	4	--	--	--	--
	lbs/day ¹	0.4	--	--	--	--

¹⁷ This TMDL WLA-based final effluent limitation shall ~~apply 13.5 years from the effective date of Resolution R16-009~~ become effective on November 16, 2030. The concentration-based final effluent limitation applies unless, due to a rain event, the Tapia WRF discharges the excess of 11 mgd to Malibu Creek or its tributaries and all other discharge options have been exhausted. In that case, the concentration-based final effluent limitation does not apply and the mass-based final effluent limitation is:

$$\sum_{i=1}^n x_i \times 0.2 \frac{mg}{L} \times 0.62 \times 8.34$$

where x = average flow at gage F-130 during the period of discharge (mgd)
 i = number of days when Tapia WRF's discharge is greater than 11 mgd

Compliance with the mass-based WLA shall be determined by:

$$\sum_{i=1}^n y_i \times z_i \times 8.34$$

where y = average effluent flow from Tapia WRF during the period of discharge (mgd)
 z = total phosphorus concentration in Tapia WRF's discharge (mg/L)
 i = number of days when Tapia's discharge is greater than 11 mgd

¹⁸ The water quality based effluent limitation (WQBEL) for chloride is consistent with the administrative update of Chapter 3 of the Basin Plan, which among other things, subdivided the Los Angeles River into additional reaches and assigned a 150 mg/L water quality objective (WQO) to the Los Angeles River and tributaries upstream of the Sepulveda Flood Control Basin.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Ammonia as Nitrogen	µg/L	2.3 ¹⁹	--	10.1 ¹⁹	--	--
	lbs/day ¹	230	--	1000	--	--
Nitrate + Nitrite as Nitrogen	mg/L	8.0 ¹⁹	--	--	--	--
	lbs/day ¹	800	--	--	--	--
Nitrate as Nitrogen	mg/L	8.0 ¹⁹	--	--	--	--
	lbs/day ¹	800	--	--	--	--
Nitrite as Nitrogen	mg/L	1.0 ¹⁹	--	--	--	--
	lbs/day ¹	100	--	--	--	--
Total Phosphorous ²⁰	mg/L	3	--	4	--	--
	lbs/day ¹	300	--	400	--	--
Cadmium (wet weather) ²¹	µg/L	2.6	--	4.8	--	--
	lbs/day ¹	0.3 ²²	--	0.5	--	--
Copper (wet weather) ²¹	µg/L	11	--	21	--	--
	lbs/day ¹	1.1 ²²	--	2.1	--	--
Copper (dry weather) ²³	µg/L	25	--	49	--	--
	lbs/day ¹	2.5	--	4.9	--	--
Lead (wet weather) ²¹	µg/L	24	--	62	--	--
	lbs/day ¹	2.4 ²²	--	6.2	--	--
Lead (dry weather) ²³	µg/L	13	--	35	--	--
	lbs/day ¹	1.3	--	3.5	--	--
Zinc (wet weather) ²¹	µg/L	139	--	232	--	--
	lbs/day ¹	14 ²²	--	23	--	--
Selenium (dry weather) ²³	µg/L	4	--	8	--	--
	lbs/day ¹	0.4	--	0.8	--	--

¹⁹ This is a final effluent limitation consistent with the WLA set forth in the *Los Angeles River Nitrogen and Related Effects TMDL*, Resolution No. R12-010 that became effective on August 7, 2014.

²⁰ A WLA for phosphorus was not established in the *Los Angeles River Nitrogen Compounds TMDL*; however, reaches of the Los Angeles River are impaired for nutrients. Since phosphorus is a biostimulatory substance, the Basin Plan narrative objectives for excess nutrients and Best Professional Judgement were used to develop WQBELs reflective of plant performance for phosphorus at Discharge Point 005. The MDEL and MMEL were calculated using MINITAB software and are based on the 99th and 95th percentile of phosphorus data from November 2010 to December 2015.

²¹ Wet-weather effluent limitations apply when the maximum daily flow measured at the Los Angeles River Wardlow station is equal to or greater than 500 cubic feet per second (cfs).

²² According to *Revised LA River Metals TMDL*, the mass-based effluent limitations for cadmium, copper, lead, and zinc do not apply during wet weather when the influent exceeds the plant design flow rate of 12 mgd.

²³ Dry weather effluent limitations apply when the maximum daily flow measured at the Los Angeles River Wardlow station is less than 500 cubic feet per second (cfs).

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Trihalomethanes ²⁴	µg/L	80	--	--	--	--
	lbs/day ¹	8	--	--	--	--

4. Interim Effluent Limitations

Consistent with the *Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments* and the *Amendment to the Water Quality Control Plan – Los Angeles Region to Incorporate an Implementation Plan for the U.S. EPA-Established Malibu Creek Nutrients TMDL and the U.S. EPA-Established Malibu Creek Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments*, the interim WLAs for the Tapia WRF have been implemented in this Order through interim final effluent limitations based on the more stringent of either the Maximum Effluent Concentration (MEC) for total nitrogen and total phosphorus between 2013 and 2016, and the final effluent limitations in Order R4-2010-0165. For the effective life of this permit, the Discharger shall maintain compliance with the following interim effluent limitations in Table 7 of this Order at Discharge Point 001, 002, and 003, with compliance measured at monitoring locations EFF-001, EFF-002, and EFF-003, respectively. These interim effluent limitations shall apply in lieu of the final effluent limitations for total nitrogen and total phosphorus in Table 5, for the duration specified in the TMDL Implementation Plan Resolution R16-009.

Table 7. Interim Final Effluent Limitations Applicable to Discharge Points 001, 002, and 003

Parameter	Units	Effluent Limitations
		Seasonal Average ²⁵
Total Nitrogen (Summer: April 15 th – November 15 th) ²⁶	mg/L	10.3
Total Nitrogen (Winter: November 16 th – April 14 th) ²⁷	mg/L	10.3
Total Phosphorous (Summer: April 15 th - November 15 th) ²⁶	mg/L	3
Total Phosphorous ⁷ (Winter: November 16 th - April 14 th) ²⁷	mg/L	3

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Not Applicable

²⁴ Total trihalomethanes is the sum of the four individual trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane. This limitation is based on the Basin Plan WQO incorporation by reference of the Maximum Contaminant Levels of Title 22 of the California Code of Regulations for human health protection.

²⁵ Consistent with Resolution No. R16-009, seasonal averages are calculated as the sum of all nutrient concentration samples collected during the season divided by the number of samples collected during that season.

²⁶ This interim effluent limitation ~~becomes operable on the effective date of Resolution R16-009 and will expire on May 16, 2022-5 years after the effective date of Resolution R16-009.~~

²⁷ This interim effluent limitation ~~becomes operable upon the effective date of Resolution R16-009 and will expire on November 16, 2030-13.5 years after the effective date of Resolution R16-009.~~

VII. 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 Malibu Creek or the Los Angeles River:

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 Limits
E. coli density shall not exceed 126/100 mL.
 - b. Single Sample Limits
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 limits, as a result of wastes discharged:
 - a. Where natural turbidity is between 0 and 50 NTU, increases shall not exceed 20%.
 - b. Where natural turbidity is greater than 50 NTU, increases shall not exceed 10%.
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.
 - b. Receiving water and effluent toxicity testing shall be performed on the same day as close to concurrently as possible.
 - c. 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 according to Attachment E – MRP, Section V.A.7.
 - d. 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, the accelerated monitoring need not be implemented.

B. Groundwater Limitations

1. The discharge shall not cause the underlying groundwater to be degraded except as consistent with State Board Resolution No. 68-16, exceed WQOs, unreasonably affect beneficial uses, or cause a condition of pollution or nuisance.

VIII. 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 limits 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.
 - 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 specifications 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 liability 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 liability of up to \$10 per gallon per day or \$25 per 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 title 40 of the Code of

Federal Regulations (40 CFR) part 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 that may endanger health or the environment, 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 notification shall also be submitted via email with reference to CI-5675 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report.
- ~~z. State Water Board Resolution 2009-0011, Adoption of a Policy for Water Quality Control for Recycled Water (Revised January 22, 2013, effective April 25, 2013), directs the Regional Board to encourage recycling. Consistent with the Policy, the Permittee shall submit a feasibility report evaluating the feasibility of additional~~

~~recycling efforts to reduce the amount of treated effluent discharged as authorized in this Order and a recycled water progress report describing any updates to the development of increased recycled water production and/or distribution. These reports shall be included in the annual report submittal, as described in the Monitoring and Reporting Program (MRP).~~

B. Monitoring and Reporting Program (MRP) Requirements

The Discharger 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 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 parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to comply with any condition of this Order, endangerment to human health or the environment resulting from the permitted activity, or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the 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.
- 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, or the adoption/revision of any of the Los Angeles River or Malibu Creek Watershed Total Maximum Daily Loads (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. Upon the request of the Permittee, the Regional Water Board staff 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 ground water recharge (GWR) beneficial use, on a pollutant-by-pollutant basis, to evaluate and justify the need for revised water quality objectives in reaches impacted by Tapia WRF's discharge. 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.~~
- n. This NPDES permit may be reopened for modification to recalculate the final water quality based effluent limitations (WQBELs) for copper, to incorporate a revised margin of safety factor (MOSF) reflective of plant performance consistent with and up to the maximum limits allowed by the applicable TMDLs and SSOs, if LVMWD provides new information to the Regional Water Board showing the flow conditions or other extenuating circumstances cause a significant change in the water reclamation plant's treatment performance, and if antibacksliding and antidegradation requirements are met.
- o. This Order will be reopened if the Regional Water Board adopts a Basin Plan amendment, a site-specific objective, or a discharge-specific variance for chloride, and the permit will be modified, if appropriate, to be consistent with the Regional Water Board action. Regional Water Board staff will schedule a regulatory action for Regional Water Board consideration as soon as possible following the receipt of the complete Investigation, Evaluation, Identification of Options, and Recommendation TSO submittals.

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) work plan in accordance with Monitoring and Reporting Program section V.A.6.

b. 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,
- 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.

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 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 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 Publicly-Owned Treatment Works (POTWs)

a. Sludge Disposal Requirements (Not Applicable)

b. Pretreatment Requirements

- 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. The Permittee has an industrial wastewater Pretreatment Program which was approved by the USEPA and the Regional Water Board in accordance with 40 CFR part 403, General Pretreatment Regulation. The Pretreatment Program regulates industries to protect the Permittee's wastewater collection and treatment system, to ensure effluent water quality and the quality of biosolids, and to protect health and safety of the treatment plant workers.
- iii. There are currently 2 CIU permittees in LVMWD's 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 part 403.18.
- v. Applications for renewal or modification of this Order must contain information about industrial discharges to the POTW pursuant to 40 CFR part 122.21(j)(6). Pursuant to 40 CFR part 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 part 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 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 Tapia WRF. In addition, the Permittee shall consider collection system overflow protection from such constituents as oil and grease, etc.

- vii. The Permittee shall comply with requirements contained in Attachment H – Pretreatment Reporting Requirements.

c. Collection System Requirements

Collection System. The Discharger is subject to the requirements of, and must comply with, State Water Resources Control Board (State Water Board) Order 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems as amended by State Water Board Order WQ 2013-0058-EXEC and any subsequent 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 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 VIII.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). For spills that reach surface freshwaters, the Permittee shall monitor for *E.coli* density. For spills that reach marine water, the Permittee shall monitor for total coliform, fecal coliform and *Enterococcus* density. The Permittee also shall analyze the samples for 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 VIII.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.anijelo@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.
 - (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 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, 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 VIII.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.
- 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 Municipal Separate Storm Sewer Systems (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 part 122.41 (e)), report any non-compliance (40 CFR part 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR part 122.41(d)).

The requirements contained in this Order in sections VIII.C.3.b (SCCP Plan section), VIII.C.4 (Construction, Operation and Maintenance Specifications section), and VIII.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 VIII.C.3.b, VIII.C.4, and VIII.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 supersede the SSO WDR, for all purposes, including enforcement, to the extent the requirements may be deemed duplicative.

7. Compliance Schedule for Nutrients in Malibu Creek

- a. The *Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic and Community Impairments* adopted by the USEPA on July 02, 2013, recommends that "the State implement the recommended WLAs in phases over time, using an adaptive management approach, in order to provide time to develop control strategies sufficient to implement the WLAs and to evaluate the efficacy of the interim allocations and other stressor control strategies." The compliance schedule and interim final effluent limitations in Section VI.A.4 of this Order are authorized under the TMDL Implementation Plan Resolution No. R16-009 adopted by the Regional Water Board on December 08, 2016. The TMDL Implementation Plan was approved by the State Water Board on February 22, 2017, and by the Office of Administrative Law (OAL) on May 16, 2017. a-is still awaiting approval by Office of Administrative Law (OAL); however, interim limitations and compliance schedules may be provided in a separate Time Schedule Order if the permit effective date precedes the effective date of Resolution No. R16-009.

b. TMDL-related Tasks for NPDES Compliance

On the effective date of this Order, the Permittee shall comply with the applicable TMDL-related tasks by the given deadlines, and future revisions thereto, contained in the TMDL Implementation Plan Resolution No. R16-009, and as specified below. The Compliance Schedule described below is subject to change during the permit term or during the permit renewal process. Since the projects outlined in the Compliance Schedule encompass 13.5 years, changes to the schedule are anticipated as the project plans become more developed. Although some of the interim milestones in the Compliance Schedule are expected to change, the Discharger shall comply with the final summer WLAs ~~by July 2022~~by May 16, 2022, and the final winter WLAs ~~by 2031~~by November 16, 2030.

- i. The Discharger shall notify the Regional Water Board in writing, no later than 14 days following each interim milestone date, of its compliance or noncompliance with the interim requirements.
- ii. The Discharger shall notify the Regional Water Board of any modification to the milestones described in this Order. The Discharger shall also submit a revised schedule when submitting an application to renew the NPDES order.
- iii. In order to monitor compliance with the interim and final effluent limitations for total nitrogen and total phosphorus, the Discharger shall monitor the effluent and influent total nitrogen and total phosphorus concentrations at the frequencies required in the Monitoring and Reporting Program. Each result shall be reported in the monthly report to track progress in achieving compliance with the final effluent limitations.
- ~~iv. The Permittee shall submit a PMP, as described in section VIII.C.3.c, to the Regional Water Board for Executive Officer approval within 60 days of the effective date of this permit.~~
- ~~v.iv.~~ The permittee may be subject to enforcement action for failure to complete the tasks by the given milestone dates, as specified in the table below and in Resolution No. R16-009.
- ~~vi.v.~~ The Discharger plans to achieve compliance with the winter WLAs through indirect potable reuse using surface water augmentation. The Discharger is developing the Pure Water Project. This project will convey excess recycled water produced at the Tapia WRF to a new off-site Advanced Water Treatment (AWT) facility that will treat the tertiary-treated recycled water from the Tapia WRF through microfiltration, reverse osmosis, and advanced oxidation. The purified water will be conveyed to Las Virgenes' existing potable water reservoir for indirect potable reuse through surface water augmentation. The brine from the AWT will be conveyed to the Calleguas Municipal Water District Salinity Management Pipeline in Ventura County. New facilities that will be constructed as part of this 13.5-year project include the AWT, an extension of the recycled water transmission system, a purified water pipeline to the Las Virgenes Reservoir, mixing facilities at the Las Virgenes Reservoir, and a brine disposal pipeline. In addition, the Discharger will complete a demonstration project to conduct testing and evaluate the design of the AWT. The Discharger is required to achieve winter WLAs within 13.5 years of the effective date of the TMDL Implementation Plan.
- ~~vii.vi.~~ The Discharger plans to achieve compliance with the summer WLAs through recycling; however, based on a determination from the California Department

of Fish and Game, National Marine Fisheries Service, and the U.S. Fish and Wildlife Service, the Discharger is required to maintain a minimum flow in the Malibu Creek of 2.5 cfs. In order to achieve the appropriate water quality for the supplemental river water, the Discharger is currently considering multiple options for additional treatment and dilution. The discharger is required to meet the summer WLAs within 5 years of the effective date of the TMDL Implementation Plan.

Table 8. Compliance Schedule and Milestone Dates

Task No.	Description	Completion Date
Compliance with the Summer WLAs		
1	Complete selection of the treatment process.	1 year from the effective date of Order No. R4-2017-XXXX <u>May 16, 2018</u>
2	Complete predesign and CEQA compliance.	2 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2019</u>
3	Complete design and begin construction of facilities.	3 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2020</u>
4	Complete construction and start-up of facilities.	4 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2021</u>
5	Complete testing and start-up of facilities.	5 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2022</u>
Compliance with the Winter WLAs		
1	Complete design of demonstration project. Provide progress report on pre-design,	1 year from the effective date of Order No. R4-2017-XXXX <u>May 16, 2018</u>
2	Complete construction and start-up of demonstration project. Submit progress report	2 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2019</u>
3	Complete research associated with the demonstration project. Submit progress report	3 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2020</u>
4	Complete pre-design, regulatory compliance, and CEQA analysis.	4 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2021</u>
5	Provide progress report on design and construction permitting.	5 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2022</u>
6	Provide progress report on design and construction permitting.	6 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2023</u>
7	Complete design and construction permitting.	7 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2024</u>
8	Complete construction contract bidding and equipment procurement.	8 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2025</u>
9	Provide progress report on the construction of facilities.	9 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2026</u>
10	Provide progress report on the construction of facilities.	10 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2027</u>
11	Provide progress report on the construction of facilities.	11 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2028</u>
12	Complete construction of facilities.	12 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2029</u>
13	Provide progress report on start-up and regulatory approval.	13 years from the effective date of Order No. R4-2017-XXXX <u>May 16, 2030</u>

Task No.	Description	Completion Date
14	Complete start-up and regulatory approval.	13.5 years from the effective date of Order No. R4-2017-XXXX November 16, 2030

IX. 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.

D. Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, a potential 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, a potential 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 potential 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 potential 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, a potential 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, a potential violation will be flagged and the Permittee will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). However, a potential 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, Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge In-stream Waste Concentration (IWC) response $\leq 0.75 \times$ Mean control response. A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail." The relative "Percent Effect" at the discharge IWC is defined and reported as: $((\text{Mean control response} - \text{Mean discharge IWC response}) \div \text{Mean control response}) \times 100$. This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations - in the case of Whole Effluent Toxicity (WET), only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or receiving water concentration differs from the control (the test result is "Pass" or "Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

The MDEL for chronic toxicity is exceeded and a violation will be flagged when a chronic toxicity test, analyzed using the TST statistical approach, results in "Fail" and the "Percent Effect" is $\geq 50\%$.

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 correspondence from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the No Observable Effect Concentration (NOEC) and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, invalid, anomalous, or inconclusive effluent (and receiving water) toxicity test measurement results from the TST statistical approach, 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 (ELAP) 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:

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

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 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.

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

where:

C_i = individual concentration of a dioxin or furan congener

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

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

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

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

Q. Bacterial Standards and Analysis

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

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

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

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

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).

ATTACHMENT A – DEFINITIONS

Arithmetic Mean (μ)

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

$$\text{Arithmetic mean} = \mu = \Sigma x / n \quad \text{where: } \Sigma x \text{ is the sum of the measured ambient water concentrations, and } n \text{ is the number of samples.}$$

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.

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 (WQBEL), 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 United States Environmental Protection Agency (USEPA) guidance (Technical Support Document For Water Quality-based Toxics Control, March 1991, second printing, EPA/505/2-90-001).

Enclosed Bays

Enclosed Bays means indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest distance between the headlands or outermost harbor works is less than 75 percent of the greatest dimension of the enclosed portion of the bay. Enclosed bays include, but are not limited to, Humboldt Bay, Bodega Harbor, Tomales Bay, Drake's Estero, San Francisco Bay, Morro Bay, Los Angeles-Long Beach Harbor, Upper and Lower Newport Bay, Mission Bay, and San Diego Bay. Enclosed bays do not include inland surface waters or ocean waters.

Estimated Chemical Concentration

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

Estuaries

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

Inland Surface Waters

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

Instantaneous Maximum Effluent Limitation

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

Instantaneous Minimum Effluent Limitation

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

Maximum Daily Effluent Limitation (MDEL)

The highest allowable daily discharge of a pollutant, over a calendar day (or 24-hour period). For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

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 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 WQBEL. 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 CWC section 13263.3(d), shall be considered to fulfill the PMP requirements.

Pollution Prevention

Pollution Prevention means any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant that is discharged into water and includes, but is not limited to, input change, operational improvement, production process change, and product reformulation (as defined in CWC 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 Name.

Reporting Level (RL)

The RL is the ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board Name either from Appendix 4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (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 Name 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;

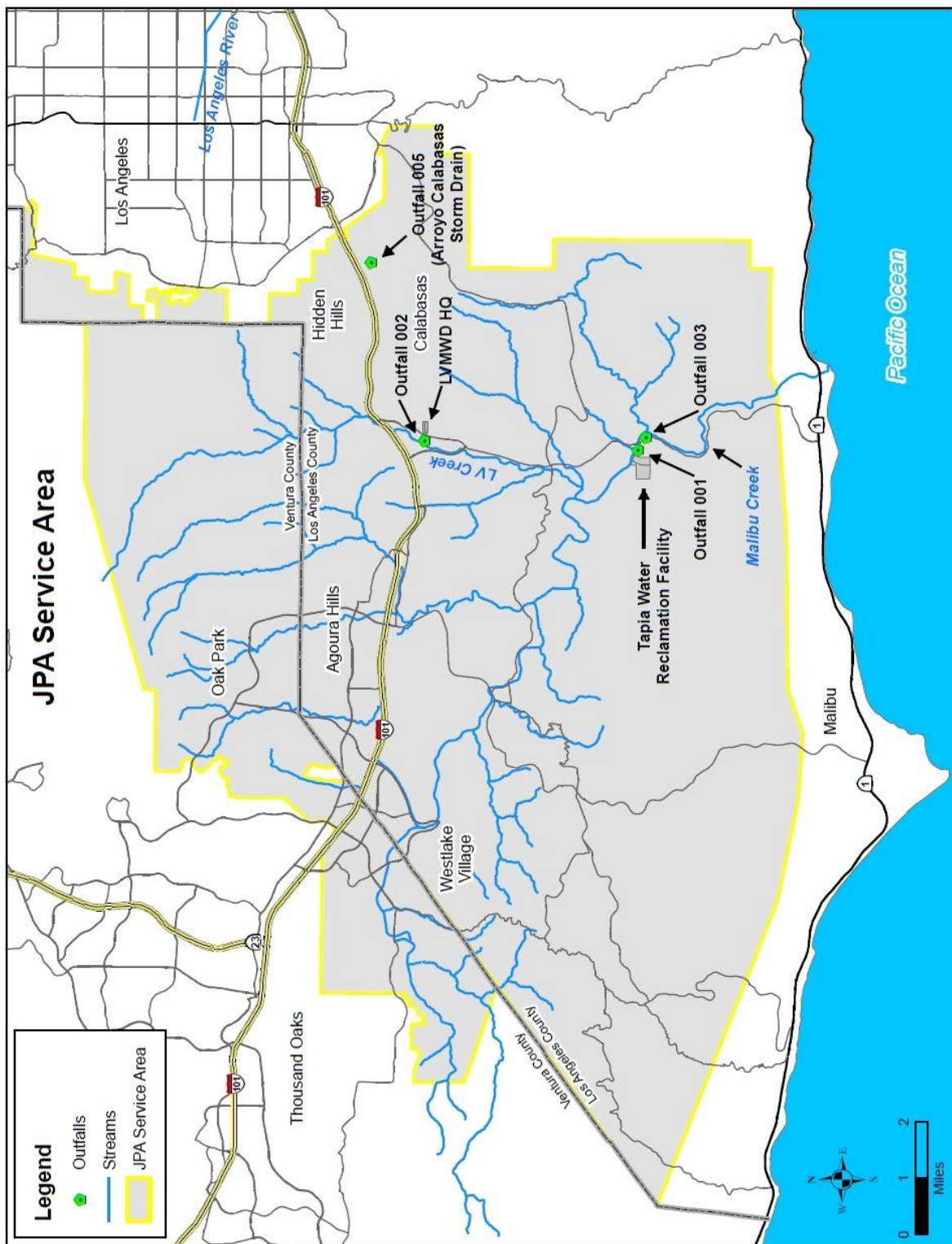
μ is the arithmetic mean of the observed values; and

n is the number of samples.

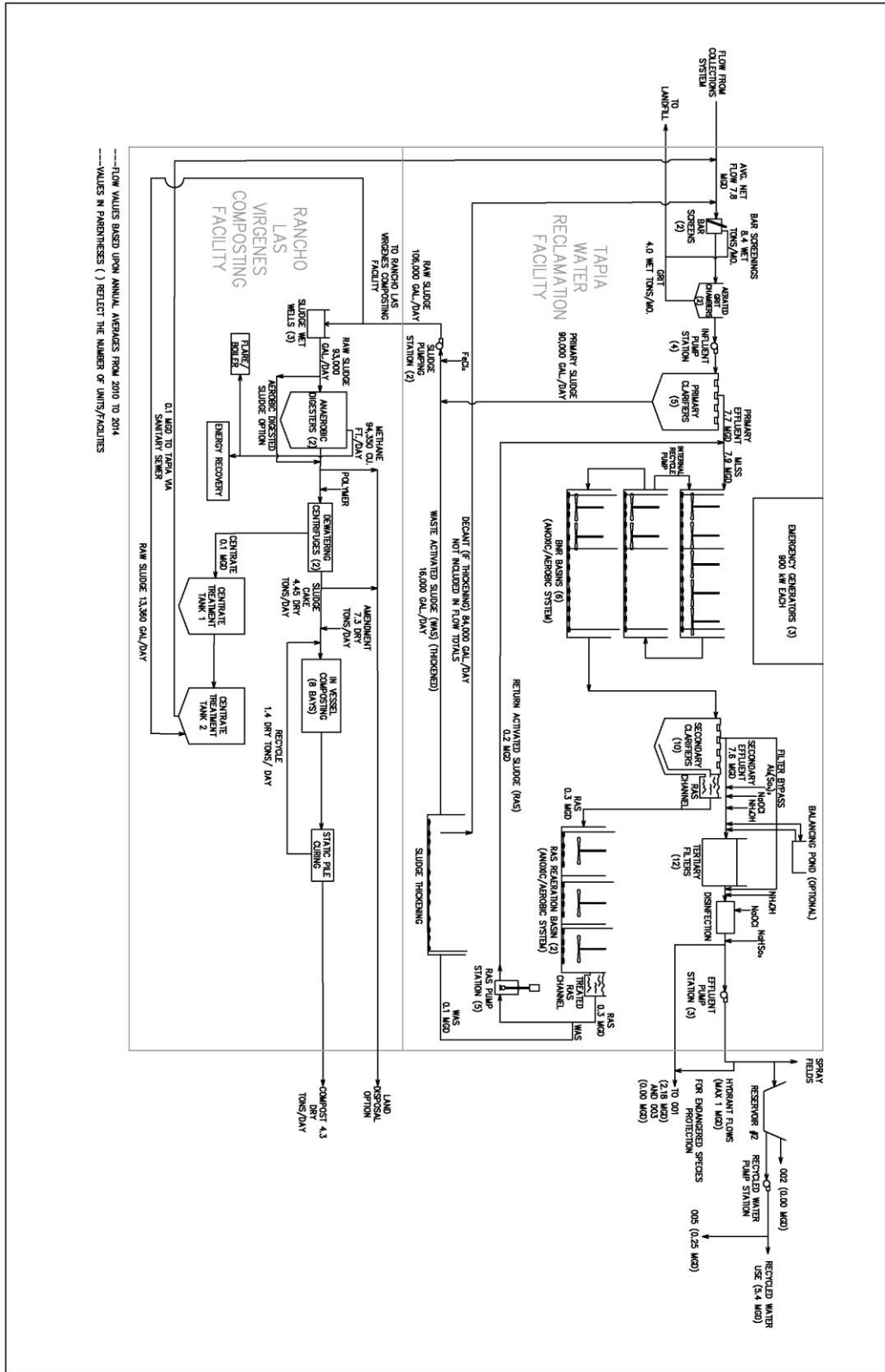
Toxicity Reduction Evaluation (TRE)

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.)

Attachment B – Las Virgenes-Trifuno Joint Powers Authority Service Area



Attachment C – Tapia WRF Flow Schematic



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order. (40 CFR § 122.41(e).)

D. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 CFR § 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 § 122.5(c).)

E. Inspection and Entry

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

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 CFR § 122.41(i)(1); CWC, §§ 13267, 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. § 1318(a)(4)(B)(ii); 40 CFR § 122.41(i)(2); CWC, §§ 13267, 13383);
3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C. § 1318(a)(4)(B)(ii); 40 CFR § 122.41(i)(3); CWC, §§ 13267, 13383); and

4. 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. § 1318(a)(4)(B); 40 CFR § 122.41(i)(4); CWC, §§ 13267, 13383.)

F. Bypass

1. Definitions
 - a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 CFR § 122.41(m)(1)(i).)
 - b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 CFR § 122.41(m)(1)(ii).)
2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.F.3, I.F.4, and I.F.5 below. (40 CFR § 122.41(m)(2).)
3. Prohibition of bypass. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 CFR § 122.41(m)(4)(i)):
 - a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 CFR § 122.41(m)(4)(i)(A));
 - b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 CFR § 122.41(m)(4)(i)(B)); and
 - c. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.F.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.F.3 above. (40 CFR § 122.41(m)(4)(ii).)
5. Notice
 - a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(i).)
 - b. Unanticipated bypass. The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). As of December 21, 2020, all notices must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J below. Notices shall

comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. (40 CFR § 122.41(m)(3)(ii).)

G. Upset

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

1. 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.G.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 CFR § 122.41(n)(2).)
2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 CFR § 122.41(n)(3)):
 - a. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 CFR § 122.41(n)(3)(i));
 - b. The permitted facility was, at the time, being properly operated (40 CFR § 122.41(n)(3)(ii));
 - c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b below (24-hour notice) (40 CFR § 122.41(n)(3)(iii)); and
 - d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above. (40 CFR § 122.41(n)(3)(iv).)
3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 CFR § 122.41(n)(4).)

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 Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 CFR § 122.41(f).)

B. Duty to Reapply

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

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 Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC. (40 CFR §§ 122.41(l)(3), 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 § 122.41(j)(1).)
- B. Monitoring must be conducted according to test procedures approved under 40 CFR part 136 for the analyses of pollutants unless another method is required under 40 CFR chapter 1, subchapters N or O. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 CFR part 136 for the analysis of pollutants or pollutant parameters or as required under 40 CFR chapter 1, subchapter N or O. For the purposes of this paragraph, a method is sufficiently sensitive when:
 - 1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
 - 2. The method has the lowest ML of the analytical methods approved under 40 CFR part 136 or required under 40 CFR chapter 1, subchapter N or O for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR part 136 or otherwise required under 40 CFR chapter 1, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 CFR §§ 122.21(e)(3).

IV. STANDARD PROVISIONS – RECORDS

- A. Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements (40 CFR § 122.41(j)(3)(i));
 - 2. The individual(s) who performed the sampling or measurements (40 CFR § 122.41(j)(3)(ii));
 - 3. The date(s) analyses were performed (40 CFR § 122.41(j)(3)(iii));
 - 4. The individual(s) who performed the analyses (40 CFR § 122.41(j)(3)(iv));
 - 5. The analytical techniques or methods used (40 CFR § 122.41(j)(3)(v)); and
 - 6. The results of such analyses. (40 CFR § 122.41(j)(3)(vi).)
- B. Claims of confidentiality for the following information will be denied (40 CFR § 122.7(b)):
 - 1. The name and address of any permit applicant or Discharger (40 CFR § 122.7(b)(1)); and
 - 2. Permit applications and attachments, permits and effluent data. (40 CFR § 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger 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 Discharger 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 § 122.41(h); CWC, §§ 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 CFR § 122.41(k).)
2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA). (40 CFR § 122.22(a)(3).)
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 § 122.22(b)(1));
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 CFR § 122.22(b)(2)); and
 - c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 CFR § 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 § 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 inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 CFR § 122.22(d).)
6. Any person providing the electronic signature for documents described in Standard Provisions – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B., and shall ensure that all

relevant requirements of 40 CFR part 3 (Cross-Media Electronic Reporting) and 40 CFR part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 CFR § 122.22(e).)

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 § 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 Name or State Water Board for reporting the results of monitoring, sludge use, or disposal practices. As of December 21, 2016, all reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J and comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127.
3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR part 136, or another method required for an industry-specific waste stream under 40 CFR chapter 1, 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.
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order.

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 § 122.41(l)(5).)

E. Twenty-Four Hour Reporting

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

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

As of December 21, 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 CFR part 3, 40 CFR section 122.22, and 40 CFR part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 CFR § 122.41(l)(6)(i).)

2. The following shall be included as information that must be reported within 24 hours:
 - a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(A).)
 - b. Any upset that exceeds any effluent limitation in this Order. (40 CFR § 122.41(l)(6)(ii)(B).)
3. The Regional Water Board may waive the above required written report on a case-by-case basis if an oral report has been received within 24 hours. (40 CFR § 122.41(l)(6)(ii)(B).)

F. Planned Changes

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

J. Initial Recipient for Electronic Reporting Data

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

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, 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 part 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 part 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 part 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 part 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 § 122.42(b)):

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP), CI-5675

Section 308 of the federal Clean Water Act (CWA) and sections 122.41(h), (j)-(l), 122.44(i), and 122.48 of title 40 of the Code of Federal Regulations (40 CFR) require that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. California Water Code (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 the federal and California laws and/or regulations.

I. GENERAL MONITORING PROVISIONS

- A. All samples shall be representative of the waste discharge under conditions of peak load. Quarterly analyses and sampling shall be performed during the 1st quarter (January, February, and March) the 2nd quarter (April, May, and June), the 3rd quarter (July, August, and September), and the 4th quarter (October, November, and December). Semiannual analyses and sampling shall be performed during the 1st quarter (January, February, and March) and the 3rd quarter (July, August, and September). Annual analyses shall be performed during the 3rd quarter (July, August, and September) with the exception of bioassessment per MRP section VIII.B. 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 the MRP.
- B. Pollutants shall be analyzed using the analytical methods described in 40 CFR parts 136.3, 136.4, and 136.5; or where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board.
- C. Laboratory Certification. Laboratories analyzing monitoring samples shall be certified by the State Water Resources Control Board (State Water Board), in accordance with the provision of CWC section 13176, and must include quality assurance/quality control data with 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.
- D. Water/wastewater samples must be analyzed within allowable holding time limits as specified in 40 CFR part 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.
- E. The Permittee shall calibrate and perform maintenance procedures on all monitoring instruments to ensure accuracy of measurements, or shall ensure that both equipment activities will be conducted.
- F. 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.
- G. Each monitoring report must affirm in writing that “all analyses were conducted at a laboratory certified for such analyses by the Environmental Laboratory Accreditation Program (ELAP),

Division of Drinking Water (DDW) or approved by the Executive Officer and in accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program.”

- H. 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 RL.
- I. 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.
- J. 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 K, below, the Permittee's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.
- K. 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.

- L. 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 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.
- M. 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 Waste Discharge Requirements (WDRs) 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.
- N. For all bacteriological analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 2 to 16,000 per 100 ml for total and fecal coliform, at a minimum, and 1 to 1000 per 100 ml for *Enterococcus*). The detection methods used for each analysis shall be reported with the results of the analyses.
 - 1. 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.
- O. The Permittee shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

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

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order. The locations of the receiving water monitoring stations are presented in Figure E-1.

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 where representative samples of the influent can be obtained. Latitude: 34.082994°N Longitude: 118.710167°W

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
Effluent Monitoring Station		
001 003	EFF-001	The effluent sampling station for all constituents shall be located downstream of the dechlorination process and inside the plant, where representative samples can be obtained. Under normal conditions, treated effluent discharged to Malibu Creek is conveyed through Discharge Point 001. Discharge Point 001: Latitude: 34.081459°N Longitude: 118.706471°W Discharge Point 003: Latitude: 34.078177°N Longitude: 118.701709°W
002	EFF-002	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 Reservoir #2 overflows discharged through Discharge Point 002 can be obtained. Sampling at this station shall only be performed when discharging at this location. Latitude: 34.137032°N Longitude: 118.704796°W
005	EFF-005 ¹	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 excess recycled water that discharges through Discharge Point 005 can be obtained. If the excess recycled water consists of a mixture of effluent pumped directly from the Tapia WRF as well as from the Reservoir #2, then the Discharger shall select a location downstream of where the two sources of recycled water mix. If a sampling location cannot be provided at a location that collects samples representative of the said mixture, the Discharger may be required to obtain flow-weighted composite samples of the tertiary-treated effluent from the two locations (Tapia WRF and Reservoir #2). Latitude: 34.150750°N Longitude: 118.648719°W
Receiving Water Monitoring Stations		
--	RSW-MC001U	Malibu Creek upstream from Discharge Point 001 at the Salvation Army Camp Bridge (Dorothy Drive); (formerly known as station R-1). Latitude: 34.084832°N Longitude: 118.712406°W
--	RSW-MC002D	Malibu Creek at Malibu Canyon Road (County Highway N1); (formerly known as station R-2). Latitude: 34.081247°N Longitude: 118.704041°W
--	RSW-MC003D	Malibu Creek at a point below Rindge Dam; (formerly known as station R-3) Latitude: 34.046974°N Longitude: 118.689381°W
--	RSW-MC004D	Malibu Creek at Cross Creek Road; (formerly known as station R-4). Latitude: 34.04288°N Longitude: 118.684444°W
--	RSW-MC007D	Las Virgenes Creek 100 feet downstream from Discharge Point 002; (formerly known as station R-7) Latitude: 34.134616°N Longitude: 118.706624°W

¹ The Discharger may conduct a study to demonstrate the consistency of water quality between the Tapia WRF effluent and the water from Reservoir #2. The Regional Water Board staff will evaluate the possibility of removing monitoring location EFF-005 after the Discharger submits a full report and request to remove the monitoring location to the Regional Water Board.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	RSW-MC009U	Malibu Creek at a point 100 feet upstream of the confluence of Malibu and Las Virgenes Creeks; (formerly known as station R-9) Latitude: 34.097950°N Longitude: 118.721572°W
--	RSW-MC011D	At the center of Malibu Lagoon, near the west shore; (formerly known as station R-11) Latitude: 34.033896°N Longitude: 118.682837°W
--	RSW-MC013D	Malibu Creek at a point 100 feet downstream of Discharge Point 003. (formerly known as station R-13) Latitude: 34.077569°N Longitude: 118.701859°W
--	RSW-MC001F RSW-MC002F RSW-MC003F	These "floating" stations shall be located at given sites for periods of up to twelve months and then moved to different locations in order to more fully define water quality in the receiving waters. Initially the "floating" stations shall be located along Las Virgenes Creek at: RSW-MC001F Latitude 34.143706°N Longitude 118.700454°W RSW-MC002F Latitude 34.125933°N Longitude 118.707178°W RSW-MC003F Latitude 34.046348°N Longitude 118.717849°W Las Virgenes shall submit a proposal for shifting the station locations, after consultation with the Malibu Creek Watershed Advisory Council or other appropriate stakeholder group, for approval by the Executive Officer every twelve months.
--	RSW-LA001U	Upstream of Discharge Point 005. (formerly known as station RL-1). This location is inside an underground storm drain that eventually daylights into an open channel known as Arroyo Calabasas. The Discharger shall monitor from this location only if it is accessible and safe to do so. Latitude: 34.150342°N Longitude: 118.648958°W
--	RSW-LA002D	Downstream of the Discharge Point 005, (formerly known as station RL-2). This location is inside an underground storm drain that eventually daylights into an open channel known as Arroyo Calabasas. Latitude: 34.154867°N Longitude: 118.647645°W
TMDL Wet-Weather Flow Monitoring Station		
--	RSW-LA003D	TMDL Wet-weather Flow Monitoring Station at the County of Los Angeles Department of Public Works' Wardlow Gage Station No. F319-R, in Los Angeles River, just below Wardlow River Road. The only required monitoring at this station is for flow, which is necessary to determine whether the Discharger must comply with wet or dry weather effluent limits for cadmium, copper, lead, zinc, and selenium. Latitude: 34.815980°N Longitude: 118.205520°W

The North latitude and West longitude information in Table E-1 are approximate for administrative purposes. A map of the receiving water monitoring stations along Malibu Creek are shown in Figure E-1 and the receiving water monitoring locations along the Los Angeles River are shown in Figure E-2.

Figure E-1. Tapia WRF Malibu Creek Receiving Water Stations

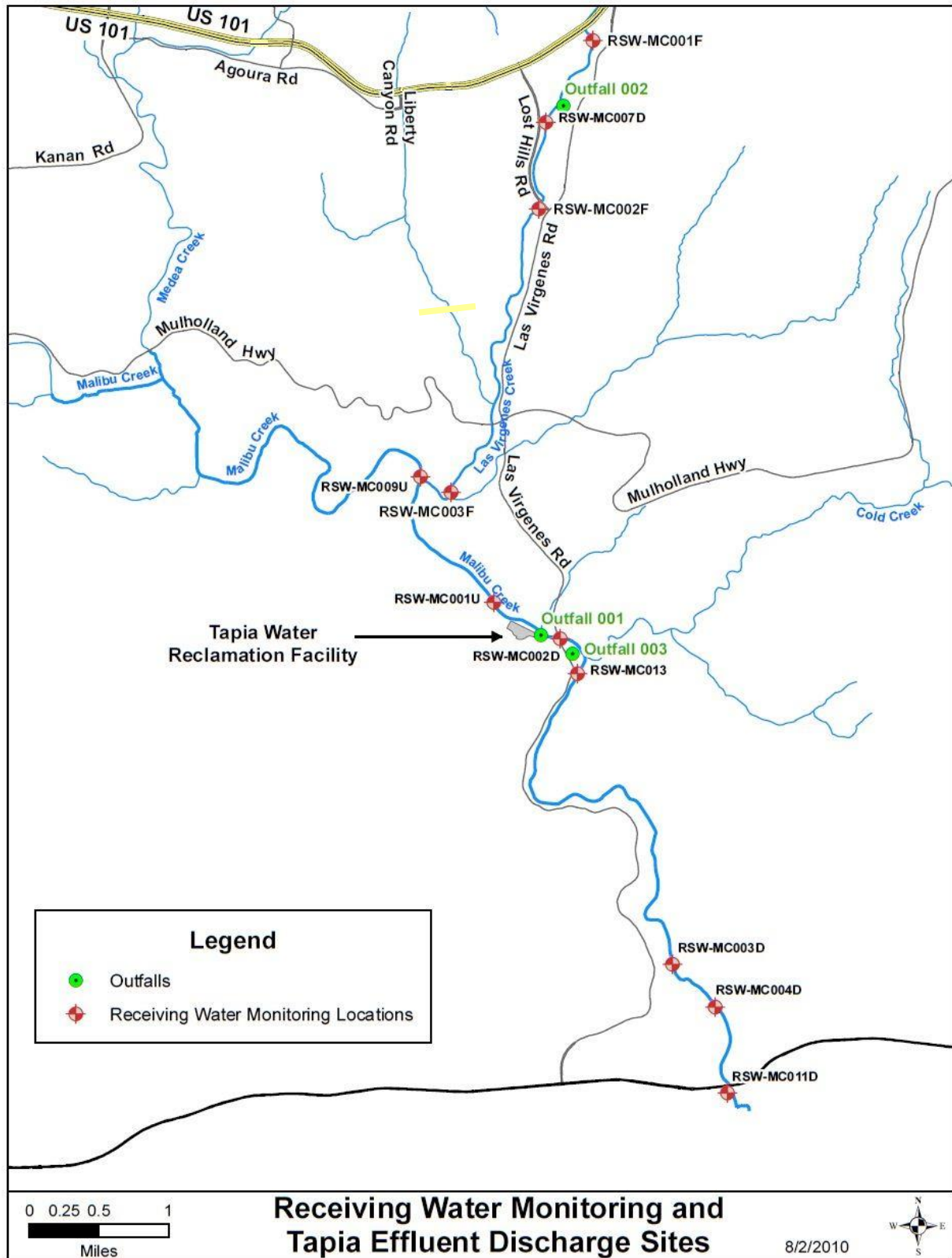
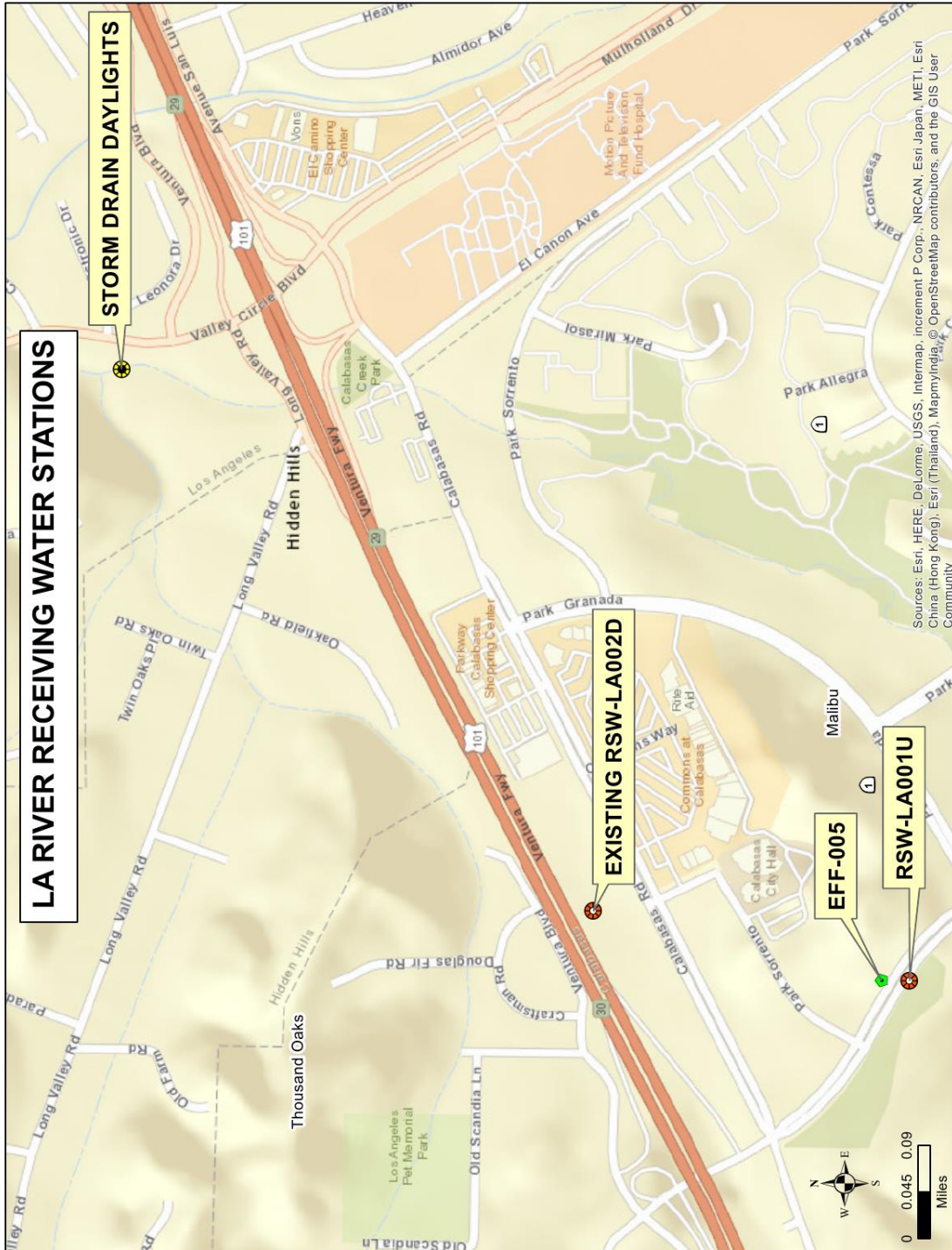


Figure E-2. Tapia WRF Los Angeles River Receiving Water Stations



III. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to:

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

A. Monitoring Location INF-001

1. The Discharger 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 ²	2
pH	pH unit	grab	weekly	3
Total suspended solids	mg/L	24-hour composite	weekly	3
BOD ₅ 20°C	mg/L	24-hour composite	weekly	3
Ammonia nitrogen	mg/L	24-hour composite	quarterly	3
Nitrate + Nitrite as Nitrogen	mg/L	24-hour composite	quarterly	3
Total Nitrogen	mg/L	24-hour composite	quarterly	3
Total Phosphorus	mg/L	24-hour composite	quarterly	3
Cadmium	µg/L	24-hour composite	quarterly	3
Copper	µg/L	24-hour composite	quarterly	3
Lead	µg/L	24-hour composite	quarterly	3
Zinc	µg/L	24-hour composite	quarterly	3
Selenium	µg/L	24-hour composite	quarterly	3
Cyanide	µg/L	grab	quarterly	3
Bis(2-Ethylhexyl)Phthalate	µg/L	24-hour composite	monthly	3
Dichlorobromomethane	µg/L	24-hour composite	quarterly	3
Total Trihalomethanes ⁴	µg/L	24-hour composite	semiannually	3
Barium	µg/L	24-hour composite	semiannually	3
PCBs as aroclors ⁵	µg/L	24-hour composite	annually	3

² 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).

³ 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.

⁴ Total trihalomethanes shall be the sum of the four individual trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

⁵ 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.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
PCBs as congeners ⁶	pg/L	24-hour composite	annually	3
Remaining USEPA priority pollutants ⁷ excluding asbestos and PCBs	µg/L	24-hour composite; grab for VOCs and chromium	semiannually	3

IV. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to:

1. Determine compliance with NPDES permit conditions and water quality standards.
2. Assess plant performance, identify operational problems and improve plant performance.
3. Provide information on wastewater characteristics and flows for use in interpreting water quality and biological data.
4. Determine reasonable potential analysis for toxic pollutants.
5. Determine TMDL effectiveness in Waste Load Allocation (WLA) compliance.

A. Monitoring Location EFF-001, EFF-002, EFF-003, and EFF-005

1. Minimum Level (ML) and Analytical Method Selection

USEPA published regulations for the Sufficiently Sensitive Methods Rule (SSM Rule) which became effective September 18, 2015. For the purposes of the NPDES program, when more than one test procedure is approved under 40 CFR part 136 for the analysis of a pollutant or pollutant parameter, the test procedure must be sufficiently sensitive as defined at 40 CFR 122.21(e)(3) and 122.44(i)(1)(iv). Both 40 CFR sections 122.21(e)(3) and 122.44(i)(1)(iv) apply to the selection of a sufficiently sensitive analytical method for the purposes of monitoring and reporting under NPDES permits, including review of permit applications. A USEPA-approved analytical method is sufficiently sensitive where:

- a. The ML is at or below both the level of the applicable water quality criterion/objective and the permit limitation for the measured pollutant or pollutant parameter; or
- b. In permit applications, the ML is above the applicable water quality criterion/objective, but the amount of the pollutant or pollutant parameter in a

⁶ PCBs as congeners shall 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, or quantified as co-elutions as appropriate. 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 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.

⁷ Priority pollutants are those constituents referred to in 40 CFR part 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or

- c. The method has the lowest ML of the USEPA-approved analytical methods where none of the USEPA-approved analytical methods for a pollutant can achieve the MLs necessary to assess the need for effluent limitations or to monitor compliance with a permit limitation.
- 2. The MLs in SIP Appendix 4 remain applicable. However, there may be situations when analytical methods are published with MLs that are more sensitive than the MLs for analytical methods listed in the SIP. For instance, USEPA Method 1631E for mercury is not currently listed in SIP Appendix 4, but it is published with an ML of 0.5 ng/L that makes it a sufficiently sensitive analytical method. Similarly, USEPA Method 245.7 for mercury is published with an ML of 5 ng/L.
- 3. The Permittee shall monitor the discharge of tertiary-treated effluent at EFF-001, EFF-002, and EFF-005, as described below. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding ML:

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 ⁸	8
Turbidity ⁹	NTU	recorder	continuous ⁸	10
Total residual chlorine	mg/L	recorder	continuous ¹¹	--

⁸ Where continuous monitoring of a constituent is required at monitoring locations EFF-001 and EFF-005, the following shall be reported:

Total waste flow – Total daily and peak daily flow (24-hr basis);

Turbidity – Maximum daily value, total amount of time each day the turbidity exceeded 5 NTU, flow proportioned average daily value. A flow-weighted 24-hour composite sample may be used in place of the recorder to determine the flow-proportioned average daily value. Continuous monitoring for total waste flow and turbidity is not required at monitoring location EFF-002. Monitoring for total waste flow and turbidity at monitoring location EFF-002 may be conducted via grab sample collected once per discharge day at a minimum.

⁹ Coliform and turbidity samples shall be obtained at some point in the treatment process when wastewater flow and characteristics are most demanding on the treatment facilities, filtration, and disinfection procedures. Fecal coliform testing shall be conducted only if total coliform test result is positive.

¹⁰ 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.

¹¹ Total residual chlorine shall be recorded continuously at monitoring locations EFF-001 and EFF-005. 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 reported on the monthly monitoring reports. The continuous monitoring data are not intended to be used for compliance determination purposes. Continuous monitoring for total residual chlorine is not required at monitoring location EFF-002. Monitoring for total residual chlorine at EFF-002 may be conducted via a grab sample once daily per discharge day, at a minimum.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Total residual chlorine	mg/L	grab	daily ¹²	10
Total coliform ⁹	MPN/100ml or CFU/100ml	grab	daily ¹³	10
Fecal coliform ⁹	MPN/100ml or CFU/100ml	grab	daily ¹³	10
<i>E. coli</i> ¹⁴	MPN/100ml or CFU/100ml	grab	daily ¹³	10
Temperature ¹⁶	°F	grab	weekly monthly	10
pH ¹⁶	pH units	grab	weekly	10
Settleable Solids	mL/L	grab	weekly	10
Total Suspended Solids (TSS)	mg/L	24-hour composite	weekly	10
BOD ₅ 20°C	mg/L	24-hour composite	weekly ¹⁵	10
Oil and grease	mg/L	grab	monthly	10
Dissolved oxygen	mg/L	grab	monthly	10
Total Dissolved Solids	mg/L	24-hour composite	monthly	10
Sulfate	mg/L	24-hour composite	monthly	10
Chloride	mg/L	24-hour composite	monthly	10
Fluoride	mg/L	24-hour composite	quarterly	10
Boron	mg/L	24-hour composite	quarterly	10
Ammonia Nitrogen ¹⁶	mg/L	24-hour composite	monthly	10
Nitrite nitrogen ¹⁶	mg/L	24-hour composite	monthly	10
Nitrate nitrogen ¹⁶	mg/L	24-hour composite	monthly	10
Nitrate plus nitrite nitrogen	mg/L	24-hour composite	monthly	10
Organic nitrogen ¹⁶	mg/L	24-hour composite	monthly	10

¹² Daily grab samples shall be collected at monitoring location EFF-001 and EFF-005, 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.4. shall be followed.

Continuous monitoring for total chlorine residual is not required at monitoring location EFF-002. Monitoring for total residual chlorine at this location may be conducted via a grab sample once per discharge day at a minimum.

¹³ Daily grab samples for total coliform, fecal coliform, and *E.coli* shall be collected at monitoring location EFF-001, EFF-002, and EFF-005, Monday through Friday only, except for holidays.

¹⁴ *E. coli* testing shall be conducted only if fecal coliform testing is positive. If fecal coliform analysis results in no detection, a result of less than the reporting limit for fecal coliform will be reported for *E. coli*.

¹⁵ 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.

¹⁶ Nitrate nitrogen, nitrite nitrogen, ammonia nitrogen, organic nitrogen, total Kjeldahl nitrogen, pH, and temperature sampling shall be conducted concurrently or as close to concurrently as possible.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
Total Kjeldahl nitrogen (TKN) ¹⁶	mg/L	24-hour composite	monthly	10
Total nitrogen ¹⁷	mg/L	24-hour composite	monthly	10
Total phosphorus	mg/L	24-hour composite	monthly	10
Orthophosphate as phosphorus	mg/L	24-hour composite	monthly	10
Surfactants (MBAS)	mg/L	24-hour composite	monthly	10
Surfactants (CTAS)	mg/L	24-hour composite	monthly	10
Total hardness (CaCO ₃)	mg/L	24-hour composite	monthly	10
Chronic toxicity	Pass or Fail, % Effect (TST)	24-hour composite	monthly	10,18
Cadmium	µg/L	24-hour composite	monthly	10
Copper	µg/L	24-hour composite	monthly	10
Lead	µg/L	24-hour composite	monthly	10
Zinc	µg/L	24-hour composite	monthly	10
Selenium	µg/L	24-hour composite	monthly	10
Cyanide	µg/L	grab	monthly	10
Iron	µg/L	grab	semiannually	10
Barium	µg/L	grab	semiannually	10
Bis(2-Ethylhexyl)Phthalate	µg/L	24-hour composite	monthly	10
Diazinon ¹⁹	µg/L	24-hour composite	semiannually	10
Antimony	µg/L	24-hour composite	quarterly	10
Arsenic	µg/L	24-hour composite	quarterly	10
Total Chromium	µg/L	grab	quarterly	10
Chromium III	µg/L	calculation	quarterly	10
Chromium VI	µg/L	grab	quarterly	10
Mercury ²⁰	µg/L	24-hour composite	quarterly	10
Nickel	µg/L	24-hour composite	quarterly	10

¹⁷ Consistent with the *Malibu Creek & Lagoon TMDL for Sedimentation and Nutrients to Address Benthic Community Impairments*, total nitrogen shall be the sum of organic nitrogen and inorganic nitrogen.

¹⁸ 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.”

¹⁹ Diazinon sampling shall be conducted concurrently with the receiving water chronic toxicity sampling.

²⁰ The mercury effluent samples shall be analyzed using EPA method 1631E, per 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
2,3,7,8-TCDD ²¹	pg/L	24-hour composite	semiannually	10
Perchlorate	µg/L	grab	semiannually	22
1,4-Dioxane	µg/L	grab	semiannually	22
1,2,3-Trichloropropane	µg/L	grab	semiannually	22
Methyl tert-butyl-ether (MTBE)	µg/L	grab	semiannually	22
2,4,5-TP (Silvex)	µg/L	24-hour composite	semiannually	10
2,4-D	µg/L	24-hour composite	semiannually	10
Pesticide ²³	µg/L	24-hour composite	semiannually	10
Total trihalomethanes ²⁴	µg/L	grab/calculated sum	monthly	10
Dichlorobromomethane	µg/L	24-hour composite	monthly	10
PCBs as aroclors ²⁵	µg/L	24-hour composite	annually	10

²¹ In accordance with the SIP, the Discharger shall conduct 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-002D, located downstream of discharge point 001. The Discharger 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 x TEF_i). Compliance with the Dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

$$\text{Dioxin concentration in effluent} = \sum_{i=1}^{17} (\text{TEQ}_i) = \sum_{i=1}^{17} (C_i)(\text{TEF}_i)$$

²² Emerging chemicals include 1,4-dioxane (USEPA 8270M test method), perchlorate (USEPA 314 test method, or USEPA method 331 if a detection limit of less than 6 µg/L is achieved), 1,2,3-trichloropropane (USEPA 504.1, 8260B test method, or USEPA 524.2 in SIM mode), and methyl tert-butyl ether (USEPA 8260B test method or USEPA method 624 if a detection level of less than 5 µg/L is achieved, and if the Permittee received ELAP certification to run USEPA method 624).

²³ Pesticides are, for the purposes of this Order, those six constituents referenced in 40 CFR part 125.58(p), (demeton, guthion, malathion, mirex, methoxychlor, and parathion).

²⁴ Total trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

²⁵ 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.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method and (Minimum Level, units), respectively
PCBs as congeners ²⁶	pg/L	24-hour composite	annually	10
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 and uranium)	pCi/L	24-hour composite	semiannually	27
Remaining USEPA priority pollutants ²⁸ excluding asbestos and PCBs	µg/L	24-hour composite; grab for VOCs	semiannually	10

4. Total Residual Chlorine Additional Monitoring

Continuous monitoring of total residual chlorine at monitoring station EFF-001 and EFF-005 shall serve as an internal trigger for the increased grab sampling at EFF-001 and EFF-005 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.

²⁶ PCBs as congeners shall 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, or quantified as co-elutions as appropriate. 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 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.

²⁷ 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.

²⁸ Priority pollutants are those constituents referred to in 40 CFR part 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

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 Toxicity Identification Evaluation (TIE) studies, if necessary, at each sampling event. All toxicity tests shall be conducted as soon as possible following sample collection. No more than 36 hours shall elapse before the conclusion of sample collection and test initiation.

3. Chronic Freshwater Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity <1 parts per thousand (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).

4. 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 *Pimephales promelas*, a second and third sample may be collected for use as test solution renewal water as the seven-day toxicity test progresses. However, that same sample shall be used to renew both the *Ceriodaphnia dubia* and the *Pimephales promelas*. 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.

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. 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, Table A-1 and Appendix B, Table B-1. The null hypothesis (H₀) 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 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

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
Fathead Minnow, <i>Pimephales promelas</i> , 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, <i>Ceriodaphnia dubia</i> , 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)

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
Green Alga, <i>Selenastrum capricornutum</i> , Growth Toxicity Test Method 1003.0. (Table 3 of the test method, above)	Mean cell density of at least 1 X 10 ⁶ cells/mL in the controls; and variability (CV%) among control replicates less than or equal to 20%. (required)

- d. 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. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported using EC25²⁹.
- f. 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 and the rationale is explained in the Fact Sheet (Attachment F).

6. Preparation of an Initial Investigation Toxicity Reduction Evaluation (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. 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,

²⁹ 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.

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. 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 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 TIE and/or TRE process is taking place. Additional accelerated monitoring and TRE work plans are not required once a TRE 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. 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, including:

- 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-7.
- b. A 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, 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 (Comprehensive Environmental Toxicity Information System), 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 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

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 the facility's effluent bioassay samples in the laboratory when the recycled water demand is high and there is no effluent water available for sampling over the weir after the dechlorination process.

VI. LAND DISCHARGE MONITORING REQUIREMENTS (NOT APPLICABLE)

VII. RECYCLING MONITORING REQUIREMENTS (NOT APPLICABLE)

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location

1. The Discharger shall monitor Malibu Creek at RSW-MC001U, RSW-MC002D, RSW-MC003D, RSW-MC004D, RSW-MC007D, RSW-MC009U, RSW-MC011D, and RSW-MC013D; and Los Angeles River at RSW-LR001U and RSW-LR002D, as follows:

Table E-5. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total flow	cfs	calculation	monthly ³⁰	31
Turbidity	NTU	grab	monthly ³⁰	31
Total residual chlorine	mg/L	grab	monthly ³⁰	31
<i>E. coli</i>	MPN/100ml or CFU/100ml	grab	monthly ³⁰	31
Temperature	°F	grab	monthly ³⁰	31
pH	pH units	grab	monthly ³⁰	31
salinity	mg/L	grab	monthly ³⁰	31
Settleable Solids	mL/L	grab	monthly ³⁰	31
Total Suspended Solids	mg/L	grab	monthly ³⁰	31
BOD ₅ 20°C	mg/L	grab	monthly ³⁰	31
Chemical oxygen demand (COD)	mg/L	grab	monthly ³⁰	31
Oil and grease	mg/L	grab	monthly ³⁰	31
Dissolved oxygen	mg/L	grab	monthly ³⁰	31
Conductivity	µmhos/cm	grab	monthly ³⁰	31
Total Dissolved Solids	mg/L	grab	monthly ³⁰	31
Sulfate	mg/L	grab	monthly ³⁰	31
Chloride	mg/L	grab	monthly ³⁰	31
Boron	mg/L	grab	monthly ³⁰	31
Fluoride	mg/L	grab	monthly ³⁰	31
Ammonia nitrogen	mg/L	grab	monthly ³⁰	31
Nitrate nitrogen	mg/L	grab	monthly ³⁰	31
Nitrite nitrogen	mg/L	grab	monthly ³⁰	31
Nitrate plus Nitrite as nitrogen	mg/L	grab	monthly ³⁰	31
Organic nitrogen	mg/L	grab	monthly ³⁰	31
Total Kjeldahl nitrogen (TKN)	mg/L	grab	monthly ³⁰	31
Total nitrogen	mg/L	grab	monthly ³⁰	31
Total phosphorus	mg/L	grab	monthly ³⁰	31

³⁰ Monitoring at RSW-MC001U, RSW-MC002D, RSW-MC003D, RSW-MC004D, RSW-MC007D, RSW-MC009D, RSW-MC011D, and RSW-MC013D, is only required during months when discharge from EFF-001 or EFF-003 occurs to Malibu Creek, or when discharge from EFF-002 occurs to Las Virgenes Creek.

Monitoring at RSW-LR001U and RSW-LR002D is only required during months when discharge from EFF-005 occurs to the Los Angeles River.

³¹ 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.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Orthophosphate-P	mg/L	grab	monthly ³⁰	31
Algal Biomass as chlorophyll a ³²	mg/cm ²	grab	annually	31
Surfactants (MBAS)	mg/L	grab	monthly ³⁰	31
Surfactants (CTAS)	mg/L	grab	monthly ³⁰	31
Total hardness (CaCO ₃)	mg/L	grab	monthly ³⁰	31
Chronic toxicity ³³	Pass or Fail, % Effect (TST)	grab	quarterly	31
Iron	µg/L	grab	monthly ³⁰	31
Cadmium	µg/L	grab	monthly ³⁰	31
Copper	µg/L	grab	monthly ³⁰	31
Lead	µg/L	grab	monthly ³⁰	31
Zinc	µg/L	grab	monthly ³⁰	31
Bis(2-Ethylhexyl)Phthalate	µg/L	grab	monthly ³⁰	31
Diazinon ³⁴	µg/L	grab	semiannually	31
Chromium III	µg/L	calculation	semiannually	31
Chromium VI	µg/L	grab	semiannually	31
Total Chromium	µg/L	grab	semiannually	31
Mercury ³⁵	µg/L	grab	monthly ³⁰	31
Selenium	µg/L	grab	monthly ³⁰	31
Barium	µg/L	grab	semiannually	31
Bromodichloromethane	µg/L	grab	monthly ³⁰	31
Total Trihalomethanes	µg/L	calculated	semiannually	31

³² Algal biomass or chlorophyll a samples shall be collected by obtaining scrapings from the substrate. This will be a measure of the benthic algae, rather than algae in the water column. Percent cover shall also be reported. Algal biomass shall be conducted with the annual bioassessment program. Since RSW-LR001U is inside a closed, underground storm drain, algal biomass monitoring is not required to be conducted at this location.

³³ 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.

³⁴ Diazinon sampling shall be conducted concurrently with the receiving water chronic toxicity sampling.

³⁵ The mercury samples shall be analyzed using EPA method 1631E, per 40 CFR part 136.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Methyl tert-butyl-ether (MTBE)	µg/L	grab	semiannually	36
Perchlorate	µg/L	grab	semiannually	36
1,2,3-Trichloropropane	µg/L	grab	semiannually	36
1,4-Dioxane	µg/L	grab	semiannually	36
2,3,7,8-TCDD ³⁷	pg/L	grab	semiannually	31
Pesticides ³⁸	µg/L	grab	semiannually	31
2,4-D	µg/L	grab	semiannually	31
2,4,5-TP (Silvex)	µg/L	grab	semiannually	31
PCBs as aroclors	µg/L	grab	annually	31
PCBs as congeners	pg/L	grab	annually	31
Remaining USEPA priority pollutants ³⁹ excluding asbestos and PCBs	µg/L	grab	semiannually	31

- The Discharger shall monitor at the following three “floating” stations: RSW-MC001F, RSW-MC002F, and RSW-MC003F, as specified in Table E-6. The Discharger shall also conduct monthly visual observations at these three floating stations. These floating stations shall be located at given sites for periods of up to 12 months and then moved to different locations as needed to more fully define water quality in the receiving waters. Every twelve months, the Discharger shall evaluate the need to shift the station locations after consultation with the Malibu Creek Advisory Council or other appropriate stakeholder groups. If there is a need to shift the station locations, the Discharger shall submit a proposal to shift the station locations for approval by the Executive Officer.

³⁶ Emerging chemicals include 1,4-dioxane (USEPA 8270M test method), perchlorate (USEPA 314 test method, or USEPA method 331 if a detection limit of less than 6 µg/L is achieved), 1,2,3-trichloropropane (USEPA 504.1, 8260B test method, or USEPA 524.2 in SIM mode), and methyl tert-butyl ether (USEPA 8260B test method or USEPA method 624 if a detection level of less than 5 µg/L is achieved, and if the Permittee received ELAP certification to run USEPA method 624).

³⁷ In accordance with the SIP, the Discharger shall conduct 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-MC002D, located downstream of discharge point 001. The Discharger 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 x TEF_i). Compliance with the Dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

$$\text{Dioxin concentration in effluent} = \sum_1^{17} (\text{TEQ}_i) = \sum_1^{17} (C_i)(\text{TEF}_i)$$

³⁸ Pesticides are, for purposes of this Order, those six constituents referred in 40 CFR part 125.58(p), (demeton, guthion, malathion, mirex, methoxychlor, and parathion).

³⁹ Priority pollutants are those constituents referred to in 40 CFR part 401.15; a list of these pollutants is provided as Appendix A to 40 CFR part 423.

Table E-6. Receiving Water Monitoring Requirements for Floating Stations

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	pH units	grab	monthly ⁴⁰	41
Temperature	°F	grab	monthly ⁴⁰	41
Dissolved oxygen	mg/L	grab	monthly ⁴⁰	41
BOD ₅ 20°C	mg/L	grab	monthly ⁴⁰	41
Ammonia nitrogen	mg/L	grab	monthly ⁴⁰	41
Nitrate nitrogen	mg/L	grab	monthly ⁴⁰	41
Nitrite nitrogen	mg/L	grab	monthly ⁴⁰	41
Nitrate plus Nitrite as nitrogen	mg/L	grab	monthly ⁴⁰	41
Organic nitrogen	mg/L	grab	monthly ⁴⁰	41
Total Kjeldahl nitrogen (TKN)	mg/L	grab	monthly ⁴⁰	41
Total nitrogen	mg/L	grab	monthly ⁴⁰	41
Total phosphorus	mg/L	grab	monthly ⁴⁰	41
Orthophosphate-P	mg/L	grab	monthly ⁴⁰	41
Total Coliform	MPN/100ml or CFU/100ml	grab	monthly ⁴⁰	41
<i>E. coli</i> /Fecal Coliform	MPN/100ml or CFU/100ml	grab	monthly ⁴⁰	41

- Receiving water samples may not be collected during or within 72-hours following the flow of rainwater runoff into the Malibu Creek. For small storm events that create a minimal increase in flow to the creek, the 72-hour waiting period to collect a sample may not be necessary. Whenever it is safe to wade in the creek, receiving water sampling shall resume immediately. 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.

B. Bioassessment Monitoring Program

- The bioassessment program shall be conducted annually in the spring/summer period 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 monitoring stations RSW-MC001U, RSW-MC002D, RSW-MC003D, RSW-MC004D, RSW-MC007D, RSW-MC009D, RSW-MC011D, RSW-MC013D for Malibu Creek.

This program shall be implemented by appropriately trained staff. Alternatively, a professional subcontractor qualified to conduct bioassessments may be selected to

⁴⁰ Monitoring at RSW-MC001F, RSW-MC002F, and RSW-MC003F, is only required during months when there is discharge to Malibu Creek.

⁴¹ 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.

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

2. The Discharger must provide a copy of their Standard Operation Procedures (SOPs) for the Bioassessment Monitoring Program to the Regional 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.
3. 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 Discharger or an independent auditor. These visits shall report on all aspects of the field procedure with corrective action occurring immediately.
4. 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 Discharger may request the return of their sample voucher collections) and remnant collections. The laboratory should participate in an (external) laboratory taxonomic validation program at a recommended level of 10% or 20%. External QA/QC can be arranged through the California Department of Fish and Game's Aquatic Bioassessment Laboratory located in Rancho Cordova, California.

C. Monitoring Location RSW-LA003D, Los Angeles River Wardlow Stations

1. The Discharger shall report the maximum daily flow in the Los Angeles River downstream of Discharge Point 005, at the LA County Department of Public Works' Gage Station No. F319-R Los Angeles River below Wardlow, as specified in Table E-7, only when discharging at Discharge Point 005. For the purposes of this permit, this station is also known as RSW-LA003D. This information is necessary to determine the wet-weather and dry-weather conditions of the river as defined by the *Los Angeles River Metals TMDL*. If the gauging station is not operational, an estimated maximum daily flow may be submitted.

Table E-7. TMDL Receiving Water Monitoring Requirements

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

IX. OTHER MONITORING REQUIREMENTS

A. Malibu Creek and Los Angeles River Watershed Monitoring Program

1. Pursuant to the 40 CFR section 122.41(j) and section 122.48(b), the monitoring program for a discharger receiving an NPDES permit must be designed to determine compliance with NPDES permit terms and conditions, and demonstrate that State water quality standards are met.

Since compliance monitoring focuses on the effects of a point source discharge, it is not designed to assess impacts from other sources of pollution (e.g., non-point source runoff, aerial fallout) or to evaluate the current status of important ecological resources on a regional basis.

The goals of the comprehensive watershed-wide monitoring program include evaluating or assessing: compliance with receiving water objectives, trends in surface water quality, impacts to beneficial uses, the health of the biological community, data needs for modeling contaminants of concern, and attaining the goals of the TMDLs through implementation in Malibu Creek and the Los Angeles River.

2. A draft Malibu Creek Watershed Monitoring Plan was prepared by LVMWD and submitted to the Regional Water Board for review on March 28, 2012. Although this plan was prepared with the participation of the stakeholder agencies, it has not been reviewed and updated by the participating agencies and no commitments have been made with respect to the proposed implementation plan. The Discharger shall continue to work with the stakeholders to further develop this watershed-wide monitoring program and implementation plan.
3. The Los Angeles River Watershed Monitoring Program (LARWMP) was developed for the Los Angeles River Watershed by the City of Los Angeles in cooperation with the Los Angeles Regional Water Quality Control Board and USEPA staff, as well as with several other local stakeholders. The LARWMP was approved by the Executive Officer on August 8, 2008. The Discharger shall participate in the implementation of the LARWMP as indicated in that plan. In coordination with interested stakeholders in the Los Angeles River Watershed, LARWMP shall conduct instream bioassessment monitoring once a year, during the spring/summer period (unless an alternate sampling period is approved by the Executive Officer). Over time, bioassessment monitoring will provide a measurement of the physical condition of the waterbody and the integrity of its biological communities.
4. Changes to the compliance monitoring program may be required over time to fulfill the goals of the watershed-wide monitoring program, while retaining the compliance monitoring component required to evaluate compliance with the NPDES permit. Revisions to the Discharger's program will be made under the direction of the Regional Water Board's Executive Officer, as necessary, to accomplish the goal, and may include a reduction or increase in the number of parameters to be monitored, the frequency of monitoring, and/or the number of samples collected.

B. Tertiary Filter Treatment Bypasses

1. During any day that filters are bypassed, the Discharger shall monitor the effluent for BOD, suspended solids, settleable solids, and oil and grease, on daily basis, until it is demonstrated that the filter "bypass" has not caused an adverse impact on the receiving water.
2. The Discharger 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 Discharger shall notify Regional Water Board staff by telephone within 24 hours of the filter bypass event.
 4. The Discharger 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 IX.B.1. above, shall be submitted to the Regional Water Board as the results become available.

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.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly, quarterly, semiannual, 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 samples and performs analyses (other than for process/operational control, startup, research, or equipment testing) on any influent, effluent, or receiving water constituent more frequently than required by this MRP using approved analytical methods, the results of those analyses shall be included in the report. These results shall be reflected in the calculation of the average used in demonstrating compliance with limitations set forth in this Order.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	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
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	1 st day of calendar month through last day of calendar month	By the 15 th 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 Discharger shall report with each sample result the applicable RL and the current MDL, as determined by the procedure in 40 CFR part 136.

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

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

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 Discharger shall be deemed out of compliance with effluent limitations if the concentration of the priority pollutant in the monitoring sample is greater than the effluent limitation and greater than or equal to the RL.

6. Multiple Sample Data. When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
 - 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 Discharger shall submit SMRs in accordance with the following requirements:
 - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the 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. DMRs are USEPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at:
http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring.

D. Other Reports

1. Within two years (by May 16, 2019) from the effective date of the *Amendment to the Water Quality Control Plan - Los Angeles Region to Incorporate an Implementation Plan for the U.S. EPA-Established Malibu Creek Nutrients TMDL and the U.S. EPA-Established Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments* (TMDL Implementation Plan Resolution R16-009), the Discharger shall submit to the Regional Water Board, a TMDL effectiveness monitoring plan for the nutrients and benthic community evaluations individually or in collaboration with other responsible entities.

2. The Discharger shall report the results of any special studies, chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions – VIII.C. The Permittee shall submit reports in compliance with SMR reporting requirements described in subsection X.B. above.
3. **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, and a recycled water progress report describing any updates to the development of increased recycled water production and/or distribution. 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.
4. 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/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 California Toxics Rule (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.
5. 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.
6. 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.

ATTACHMENT F – FACT SHEET

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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 Dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B190104001
Discharger/Permittee	Las Virgenes Municipal Water District
Name of Facility	Tapia Water Reclamation Facility and its associated wastewater collection system and outfalls
Facility Address	731 Malibu Canyon Road
	Calabasas, CA 91302
	Los Angeles County
Facility Contact, Title and Phone	Brett Dingman, Water Reclamation Manager, (818) 251-2330
Authorized Person to Sign and Submit Reports	David W. Pedersen, General Manager, (818) 251-2122
Mailing Address	4232 Las Virgenes Road, Calabasas, CA 91302
Billing Address	Same as above
Type of Facility	Publicly Owned Treatment Works
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Recycling Requirements	Yes
Facility Permitted Flow	12 million gallons per day (mgd)
Facility Design Flow	12 mgd
Watershed	Malibu Creek and Los Angeles River Watersheds
Receiving Water	Malibu Creek and Los Angeles River
Receiving Water Type	Inland surface water

- A. The Las Virgenes Municipal Water District (LVMWD, Discharger, or Permittee) operates the Tapia Water Reclamation Facility (Tapia WRF or Facility), a publicly-owned treatment works (POTW), and its associated wastewater collection system and outfalls. Tapia WRF is jointly owned by LVMWD and the Trifuno Sanitation Districts.

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

- B. The Facility discharges wastewater to the Malibu Creek and Los Angeles River, waters of the United States, and is currently regulated by Order No. R4-2010-0165 and National Pollutant Discharge Elimination System (NPDES) permit No. CA0056014, which was adopted on September 02, 2010, and expired on August 10, 2015. The terms and conditions of the current NPDES order have been automatically continued and remain in effect until new Waste Discharge Requirements (WDRs) and NPDES permit are adopted pursuant to this Order and take effect.
- C. The Discharger filed a report of waste discharge and submitted an application for reissuance of its WDRs and NPDES permit on January 27, 2015. Supplemental information was requested on February 23, 2015, and received on March 16, 2015. The application was deemed complete on November 20, 2015. A site visit was conducted on February 09, 2017, to observe operations and collect additional data to develop permit limitations and conditions.
- D. Regulations at Title 40 of the Code of Federal Regulations (40 CFR) section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. However, pursuant to California Code of Regulations (CCR), title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.
- E. **Regulatory Background.** This Permit/Order contains discharge prohibition, a carry-over requirement from previous permits. The following highlights the background information and provides the regulatory context for the discharge prohibition.

Prior to Order No. 2005-0075, LVMWD discharged tertiary-treated wastewater, from the Tapia WRF under two separate Orders. Order No. 97-135 regulated the discharges to Malibu Creek and Order No. 99-066 regulated the discharges to Arroyo Calabasas which is a tributary to Los Angeles River. Order No. 97-135 and Order No. 99-066 were adopted by this Regional Water Board on November 3, 1997, and July 8, 1999, respectively. Those Orders served as the permit under the National Pollutant Discharge Elimination System (NPDES No. CA0053619). Both Orders were amended as follows:

1. Order No. 97-135 (discharges to Malibu Creek): On April 13, 1998, the Regional Water Board adopted Order No. 98-030 amending Order No. 97-135. Again on December 9, 1999, the Regional Water Board adopted Order No. 99-142 amending Order No. 98-030.
 - a. Order No. 98-030: Order No. 97-135 contains a provision prohibiting discharges from Tapia WRF to Malibu Creek from May 1st to November 1st each year, except under certain conditions. Implementation of the prohibition under Order No. 97-135 was subject to further discussions among the Regional Water Board, National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Game. After discussions among these agencies, it was concluded that Las Virgenes apply for an incidental "take" permit as required by Endangered Species Act § 10(a)(1)(B). It was also recommended that a minimum flow of 2.5 cfs be maintained throughout the year to sustain endangered species.

Also, extreme weather conditions in the winter of 1998 caused the Lagoon to remain open for an extended period. Heavy rains at that time also resulted in more runoff into the Malibu Creek and Lagoon and created a condition resulting in less demand for reclaimed water during the period the discharge prohibition was in effect.

To address these issues, the following revisions were made to Order No. 97-135 through Order No. 98-030:

- i. The Permittee shall not discharge as otherwise permitted by these requirements to Malibu Creek at any of its discharge points commencing either:
(a) May 1st of each calendar year, or (b) the first natural closure of Malibu Lagoon by sand buildup, whichever is later, through and including October 31st of each calendar year. This prohibition will not be in effect during any of the following events:
Discharge Prohibition:
 - (a) Treatment plant upset or other operational emergencies;
 - (b) Storm events; or
 - (c) The existence of minimal streamflow conditions that require flow augmentation in Malibu Creek to sustain endangered species.
 - ii. The Discharger shall submit an application for an Incidental Take Permit.
- b. Order No. 99-142: On November 19, 1998, after a hearing on the petitions filed by the Permittee, the stake holders and the interested parties, the State Water Resources Control Board (State Water Board) adopted Order No. WQ 98-11 (remanded Order No. 97-135) directing the Regional Water Board to make revisions consistent with the Findings and Conclusions in the remand order. As a result, the following are the revisions to Order No. 97-135, adopted through Order No. 99-142:
- i. Two changes were made to the Discharge Prohibition. The Discharge Prohibition was extended from April 15 to November 15; except during any of the following events: (No change in above mentioned exception 'a')
 - (a) Storm events as determined by the Executive Officer; or
 - (b) The existence of minimal stream flow conditions that require flow augmentation in Malibu Creek to sustain endangered species as determined by the Executive Officer.
 - ii. Order No. 98-030 strengthened permit Finding No. 27 found in Order No. 97-135 to reflect the State Water Board's conclusion that unseasonable freshwater inputs from Tapia WRF and other sources cause the Lagoon to flood and/or breach when it otherwise would not.
 - iii. Circumstances were defined under which exemptions to discharge prohibitions were allowed.
 - iv. Deleted a provision that otherwise would require the Discharger to apply for an Incidental Take Permit.
 - v. Changed the nitrate limitation as daily maximum from 10 mg/l to 8 mg/L.
 - vi. WQ 2001-03: The Discharger challenged the 8 mg/L limitation in a petition to the State Water Board dated January 7, 2000. The State Water Board upheld the petition, and on February 15, 2001, adopted Order No. WQ-2001-03, changing the final nitrate limitation back to 10 mg/L. The Order also stated that the Regional Water Board could, "after making adequate findings and otherwise complying with law" establish lower limitations in order to implement applicable water quality standards and protect beneficial uses in Malibu Creek and Lagoon.
2. Order No. 99-066 (discharges to Los Angeles River): During the discharge prohibition period for Malibu Creek and when there is no recycled water demand, the Permittee has the option to discharge up to 2 million gallons per day (mgd) of recycled water from Tapia

WRF to the Los Angeles River. Order No. 99-066 contains a provision that allows the discharges from Tapia WRF to the Los Angeles River from May 1st to November 1st of each calendar year during the time the discharge prohibition applies to Malibu Creek. However, Order No. 98-030, adopted on April 13, 1998, was amended by Order No. 99-142 on December 9, 1999, to extend the discharge prohibition from May 1st through October 31st to April 15th through November 15th of each calendar year. Subsequently, the Discharger requested an amendment to the Order No. 99-066 to reflect the changed prohibition made on December 9, 1999.

Also, the Permittee submitted a work plan on February 15, 2000, to relocate the discharge outfall from Dry Canyon Creek to a lined portion of the Arroyo Calabasas Creek.

3. Order No. 00-046: On April 13, 2000, the Regional Water Board adopted Order No. 00-046 amending Order No. 99-066 and incorporated the requested changes. The discharge period was changed from May 1st through October 31st to April 15th through November 15th of each calendar year.
4. Order No. R4-2002-158: On September 26, 2002, the Regional Water Board adopted WDRs, Order No. R4-2002-158, for LVMWD, authorizing the discharge of tertiary-treated wastewater from its Tapia WRF to Percolation Ponds (Constructed Wetlands). The percolation ponds are located immediately adjacent to Malibu Creek near the Tapia WRF. LVMWD planned to rehabilitate the percolation ponds and convert them to constructed wetlands to treat a portion of Malibu Creek flows for the removal of pathogens and nutrients. Construction of the wetlands has been cancelled because the necessary permit could not be obtained from the California Coastal Commission.
5. Order No. R4-2005-074: On November 3, 2005, the Regional Water Board adopted Order No. R4-2005-074, which superseded and consolidated the WDRs contained in Orders No. 97-135 and 99-066, thus regulating the discharges to Malibu Creek and the Los Angeles River under a single WDR and NPDES permit.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment and Controls

1. The Discharger owns and operates Tapia WRF, a tertiary wastewater treatment plant located at 731 Malibu Canyon Road, Calabasas, CA 91302. Attachment B shows the location of the plant. Tapia WRF currently serves an estimated population of 100,000 residents in western Los Angeles and eastern Ventura Counties (Agoura Hills, Calabasas, Hidden Hills, Thousand Oaks, and Westlake Village) with a service area of over 109 square miles. The wastewater is a mixture of domestic, commercial, and industrial wastewater that is pre-treated pursuant to 40 CFR § 403. The Tapia WRF has a design capacity of 12 million gallons per day (mgd) and treats an average flow of 7.9 mgd. The design capacity of the Tapia WRF was previously 16.1 mgd; however, the nutrient reduction facilities constructed in 2008/2009 were designed to meet the nutrient limits imposed by the 2005 NPDES permit at an average daily flow of 12 mgd. In 2015, on average, Tapia WRF processed 7.9 mgd and discharged 2.2 mgd to Malibu Creek and about 0.29 mgd to the Los Angeles River. Tapia WRF recycled the remainder of the tertiary-treated wastewater.
2. Tapia WRF uses the following process sequence: Coarse screening, grit removal, primary sedimentation, activated sludge biological treatment with nitrification and denitrification, secondary sedimentation, tertiary filtration, disinfection by chloramination, and dechlorination. The return activated sludge (RAS), prior to returning to the secondary treatment system, undergoes reaeration treatment to facilitate nitrogen and phosphorus

removal as well as to provide favorable conditions for the development of a facultative anaerobic biomass. Attachment C shows the schematic of wastewater flow.

3. The following are brief descriptions of the major unit processes, operations, and/or equipment:
 - a. *Screening and grit removal:* Bar screens mechanically remove approximately 4 wet tons of large debris per month from the waste stream and grit chambers remove approximately 11 wet tons per month of grit from the waste stream. This material is sent to a landfill for disposal.
 - b. *Primary sedimentation:* The main objective of primary sedimentation is to remove solids from the wastewater by gravity. The heavier solids (settleable solids) precipitate out and are scraped out of the primary sedimentation basin. The lighter solids float to the top and are skimmed off. However, some solids remain in suspension.
 - c. *NDN Activated sludge:* The activated sludge process is a treatment system in which the incoming wastewater is mixed with existing biological floc (microorganisms or activated sludge) in an aeration basin. Activated sludge converts non-settleable and dissolved organic contaminants into biological floc, which can then be removed from the wastewater with further treatment. The nitrification process converts ammonia nitrogen into nitrate plus nitrite nitrogen (inorganic nitrogen). The denitrification process converts the inorganic nitrogen into gaseous nitrogen, thus removing it from the wastewater. The activated sludge biological treatment at Tapia WRF uses the Ludzak-Ettinger process consisting of aerobic and anoxic zones, and recirculation and mixing pumps to remove nitrogen from the wastewater.
 - d. *Secondary sedimentation with coagulation:* The main objective of secondary sedimentation is to remove biological floc from the wastewater. Aluminum sulfate (alum) is added prior to filtration to enhance solids removal. Alum causes the biological floc to combine into larger clumps (coagulate), making it easier to remove the floc.
 - e. *Inert media filtration:* The filtration process is used to remove or reduce suspended or colloidal matter from a liquid stream, by passing the water through a bed of graded granular material. Filters remove the solids that the secondary sedimentation process did not remove, thus, improving the disinfection efficiency and reliability.
 - f. *Disinfection:* Sodium hypochlorite and ammonia are added to the treated effluent prior to the filters to destroy bacteria, pathogens and viruses, and to minimize algal growth in the filters. After filtration and prior to entering the contact chamber, the wastewater is fed an additional dose of sodium hypochlorite and ammonia.
 - g. *Dechlorination:* Prior to discharge, sodium bisulfite is added to the treated effluent to remove residual chlorine.
 - a. *Sludge:* Prior to 1993 the principal solids treatment route was aerobic digestion at Tapia WRF and land application at the Rancho Las Virgenes Farm. Since the startup of the Rancho Las Virgenes Composting Facility in 1993, primary and secondary sludge from the wastewater treatment at Tapia WRF are combined and pumped to the Rancho Las Virgenes Composting Facility (Rancho) (also operated by LVMWD), a 91-acre site approximately three miles from the Tapia WRF, located at 3700 Las Virgenes Road. At Rancho, the sludge is anaerobically digested, dewatered, mixed with small woodchips or sawdust, and composted. Since United

States Environmental Protection Agency (USEPA) has not delegated the authority to regulate biosolids/sludge under 40 CFR part 503 to the state of California, sludge from LVMWD is regulated directly by USEPA. However, the composting activity at the Rancho facility is permitted by a State Water Board Order and a City of Calabasas Conditional Use Permit. Upon completion of meeting 40 CFR 503 requirements, the compost is tested and given away or sold to consumers for land application as class "A" exceptional quality product. In the past, centrate has shown to be a significant source of nitrogen to the Tapia WRF, making it difficult to achieve compliance with the nutrient effluent limitations. As of September 2009, Tapia WRF's centrate undergoes treatment provided by the Centrate Treatment Unit (CTU), to reduce nitrogen. The treatment provided by the CTU, which consists of two 800,000 gallon tanks connected to pumps and blowers, consists of aeration, mixing, settling, and decanting. The CTU operation includes centrate flow pacing, so that the centrate flow can be spread out over 24 hours a day, seven days a week. Centrate treatment and flow pacing are expected to level out the spikes in nitrogen concentrations in the effluent due to untreated centrate return flows, resulting in lower, more consistent nitrogen concentrations, as well as an increase in nitrogen removal efficiency. The treated centrate is returned to the Tapia WRF through the sanitary sewer.

Alternatively, sludge may be either aerobically digested at Tapia WRF and pumped to the Rancho Las Virgenes Farm, a 91-acre site located at 3240 Las Virgenes Road, for subsurface sludge injection, or sludge can be anaerobically digested at Rancho Las Virgenes for subsurface sludge injection. Sludge injection has not occurred since 2003 and is permitted under Order 79-107.

B. Discharge Points and Receiving Waters

The Tapia WRF discharges tertiary-treated wastewater to Malibu Creek and the Los Angeles River, waters of the United States as described below. Tapia WRF discharges to Malibu Creek primarily during the winter (November 16 through April 14) and occasionally discharges to the Los Angeles River in the summer (April 15 to November 15) of each year. Tapia WRF's tertiary-treated effluent is reclaimed year-round for irrigation or industrial uses throughout the Malibu Creek Watershed and the excess is discharged directly into Malibu Creek from November 16th to April 14th of each year. During summer months, discharge from the Tapia WRF to the Los Angeles River is significantly reduced due to increased sales of reclaimed water to irrigation customers. The discharge prohibition for Malibu Creek is described in greater detail under Section IV.A of the Fact Sheet.

Malibu Creek, Malibu Lagoon and Surfrider Beach (Malibu Beach):

Malibu Creek flows year round except during extended drought periods when flows in the creek are minimal. The reach immediately above Malibu Lagoon usually dries each fall for periods ranging from a few weeks (wet years) to several months (dry years). The main stem of Malibu Creek originates as an overflow from Malibu Lake. Approximately one mile upstream from Tapia WRF, Las Virgenes Creek joins Malibu Creek from the north. Malibu Creek passes through Malibu Creek State Park and the Tapia WRF Segment of Malibu Creek State Park which is owned and operated by California Department of Parks and Recreation. Tapia WRF discharges into Malibu Creek in the Monte Nido area at two points, one upstream and one downstream of the confluence with Cold Creek. Below Monte Nido, Malibu Creek courses through Malibu Canyon, spills over Rindge Dam, and emerges into a small alluvial plain, located adjacent to Sierra Retreat and the City of Malibu Civic Center. At its mouth, Malibu Creek forms a lagoon at the ocean shore. This area constitutes Malibu Lagoon State

Park. The Surfrider Beach (Malibu Beach) is located adjacent to the Malibu Lagoon is owned by the State and managed by Los Angeles County.

The Malibu Lagoon is closed by a sand bar during low flow months. The sandbar reduces the amount of Creek and Lagoon water directly reaching the surf zone at Surfrider Beach. The input of imported water into the Malibu Creek watershed has resulted in significant freshwater flows into Malibu Lagoon. The high water level in the Lagoon caused flooding of roads and properties in the Malibu Colony area and saturated the ground under the Cross Creek Shopping Center, which resulted in a septic tank overflow. Due to freshwater inputs, in the past, the sand bar was artificially breached periodically by the California Department of Parks and Recreation during the dry season. Artificial breaching of the sandbar has now been prohibited by the Army Corps of Engineers because it resulted in lower water levels, increased tidal interaction, increased salinity and potential impacts on Lagoon fauna and flora. Rapid changes in salinity after breaching are a likely cause of low species diversity in Lagoon invertebrates. During winter months, the Lagoon is usually open to the ocean due to sustained flow in Malibu Creek.

The following are the discharge points to Malibu Creek:

1. Discharge Point. 001 - Primary Discharge Point to Malibu Creek.

Latitude: 34.081459°N

Longitude: 118.706471°W

Discharge Point 001 is the primary discharge outfall into Malibu Creek and is located adjacent to the Tapia WRF. Tertiary-treated effluent from the Tapia WRF's effluent pond is discharged through this outfall.

Waste discharged to Malibu Creek from Discharge Point 001 shall be limited to winter months from November 16 through April 14 of each calendar year.

2. Discharge Point 002 – Recycled Water Reservoir No. 2 Outfall.

Latitude: 34.137032°N

Longitude: 118.704796°W

Discharge Point 002 is used to release surplus effluent from the LVMWD's Recycled Water Reservoir #2, which is an open reservoir covered with shade balls used to temporarily store tertiary-treated wastewater prior to distribution to the recycled water system. Reservoir #2 is an earthen structure (with a concrete bottom and lined sides) surrounded by a perimeter fence. The outfall is connected to the Reservoir #2 overflow via an approximately 1,400-foot long, 48-inch diameter pipeline. Reservoir #2, located behind the LVMWD headquarters building, has a holding capacity of 14.7 million gallons, which is less than a two-day supply during the high demand in summer. Effluent is pumped from the Tapia WRF effluent pump station to Reservoir #2 through 16-inch diameter and 26-inch diameter recycled water pipelines.

Overflow from Reservoir #2 is discharged to Las Virgenes Creek, a tributary to Malibu Creek, near the LVMWD headquarters building located at 4232 Las Virgenes Road in Calabasas. Discharges are infrequent from this outfall and are caused by rain events, during which storm water, including runoff from the surrounding areas, enters this open reservoir and causes overflow. Therefore, discharge from this outfall may consist of a mixture of tertiary-treated effluent, storm water, loose solids, and possible contributions from avian sources.

Under Order No. R4-2010-0165, LVMWD discharged from Discharge Point 002 between February 01, 2015 and March 25, 2015, while Reservoir #2 was under maintenance.

3. Discharge Point 003 - Above Los Angeles County Gauging Station.

Latitude: 34.078177°N

Longitude: 118.701709°W

Discharge Point 003 is located along Malibu Creek, above the Los Angeles County Gauging Station RSW-MC13, and is approximately 2000 feet from the Tapia WRF's lined effluent pond. The intake structure is adjacent to the Discharge Point 001 intake structure. When Outfall 003 is used, flow from the lined effluent pond passes through a concrete flume and then into a 10-inch diameter dedicated pipeline, which conveys the flow to Outfall 003. Outfall 003 was established along with the percolation ponds to offer a bypass option in times of extremely high flow conditions to regulate flow and protect the pond structures. Discharge through this outfall is infrequent and last occurred in February 2005.

4. Discharge Point 004 – Percolation Pond Area

Latitude: 34.688889°N

Longitude: 118.691667°W

Discharge Point 004 was initially constructed to discharge final effluent to percolation ponds owned by the California Department of Parks and Recreation located adjacent to Malibu Creek. The ponds were damaged by severe storms in 1992 and plans to rehabilitate the ponds was cancelled because the necessary permit could not be obtained from the California Coastal Commission. Discharge Point 004 was last used in 1992, has not been maintained, and LVMWD does not intend on using this discharge point in the future.

The following is the discharge point to the Los Angeles River:

5. Discharge Point 005 – LVMWD moved Discharge Point 005 from Dry Canyon Creek to a location further downstream, in a fully lined section of the Arroyo Calabasas Creek to eliminate the potential impacts of the discharge on the soft-bottomed portions of Dry Canyon Creek. Order No. 99-066 was amended on April 13, 2000, through Order No. 00-046, to incorporate this new discharge location. Discharge Point to Arroyo Calabasas Creek, a tributary to the Upper Los Angeles River.

Latitude: 34.150750°N

Longitude: 118.648719°W

Discharge Point 005 or Outfall 005 is used during the discharge prohibition period (April 15th to November 15th) to dispose of excess recycled water. Discharge from Outfall 005, which is a storm drain terminus that feeds into Arroyo Calabasas Creek, may consist of a mixture of tertiary-treated effluent from Reservoir #2 and from the suction header as well as flows from other sources conveyed through the storm drain. Since Reservoir #2 is an open reservoir covered with shade balls, flows from the reservoir may contain rainwater (including stormwater runoff from the vicinity), contributions from avian sources, loose solids, in addition to the tertiary-treated effluent.

The following describes the processes involved in conveying the tertiary-treated effluent from the Tapia WRF to Outfall 005. Effluent from the Tapia WRF is pumped via the Tapia WRF effluent pump station to Reservoir #2 (using 16-inch diameter and 24-inch diameter recycled water pipelines) or directly to the recycled water pump station suction header and then to the recycled water distribution system. Water in Reservoir #2 is stored until it is fed to the recycled water pump station. Excess recycled water in the recycled water distribution system's pipeline is conveyed to an underground storm drain

that eventually daylight into an open channel known as Arroyo Calabasas. The location where the storm drain daylight is near Valley Circle Blvd and the 101 Freeway. The location where the recycled water distribution system’s pipeline connects to the underground storm drain is in Parkway Calabasas near the intersection with Park Sorrento.

A schematic of the conveyance of the effluent to the various Discharge Points is included in Attachment C.

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

Effluent limitations contained in the existing Order for discharges from Discharge Points 001, 002, 003, and 005 (Monitoring Locations EFF-001, EFF-002, and EFF-005) and representative monitoring data from the term of the previous Order are as follows:

Table F-2. Order No. R4-2010-0165 Effluent Limitations and Monitoring Data

(Unless otherwise noted, the effluent limitations in Table F-2 are applicable to all Discharge Points in Order No. R4-2010-0165. “MC” (Malibu Creek) indicates that the effluent limitation is applicable to Discharge Points 001, 002, and 003 only. “LR” (Los Angeles River) indicates that the effluent limitation is applicable to Discharge Point 005 only.

Parameter	Units	Effluent Limitations in R4-2010-0165			Monitoring Data (From Nov 2010 – To Dec 2015)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
BOD ₅ 20°C	mg/L	10	--	20	8.8	--	9.4
Suspended Solids	mg/L	5.0	--	10	6.9	--	9.9
Oil and Grease	mg/L	5	--	10	<5	--	2.9
Settleable Solids	ml/L	0.1	--	0.2	<0.1	--	<0.1
Total Residual Chlorine	mg/L	--	--	0.1	<0.1	--	0.3
Total Dissolved Solids	mg/L	2000 (MC) 950 (LR)	--	--	920	--	920
MBAS	mg/L	0.5	--	--	0.1	--	0.1
Chloride	mg/L	500 (MC) 190 (LR)	--	--	195	--	195
Sulfate	mg/L	500 (MC) 300 (LR)	--	--	273	--	273
Boron	mg/L	2 (MC) 1.5 (LR)	--	--	0.5	--	0.5
Fluoride	mg/L	1.6 (LR)	--	--	0.93	--	0.93
Nitrate-N (as N)	mg/L	8 (LR)	--	--	9.3	--	9.3
Nitrite-N (as N)	mg/L	1 (LR)	--	--	0.56	--	0.56
Nitrate + Nitrite as N	mg/L	8	--	--	8.4	--	9.9
Total Ammonia	mg/L	3.1 (MC) 2.3 (LR)	--	8.1 (MC) 10.1 (LR)	2.1	--	2.1
Total Phosphorus (Summer – April 15 th to November 15 th)	mg/L	3	--	4 (LR)	3.8	--	5.1

Parameter	Units	Effluent Limitations in R4-2010-0165			Monitoring Data (From Nov 2010 – To Dec 2015)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Total Phosphorus (Winter – November 16 th to April 14 th)		3		4	3.8		5.1
Antimony	µg/L	--	--	--	0.35 (DNQ)	--	0.35 (DNQ)
Arsenic	µg/L	10 (LR)	--	--	3	--	3
Beryllium	µg/L	--	--	--	<0.033	--	<0.033
Cadmium (wet weather)	µg/L	1.1 (LR)	--	3.1 (LR)	0.4	--	0.4
Chromium III	µg/L	--	--	--	8	--	8
Chromium VI	µg/L	--	--	--	0.3	--	0.3
Copper (wet weather)	µg/L	11 (LR)	--	17 (LR)	16	--	16
Copper (dry weather)	µg/L	27 (LR)	--	41 (LR)	16	--	16
Lead (wet weather)	µg/L	23 (LR)	--	62 (LR)	1.2	--	1.2
Lead (dry weather)	µg/L	13 (LR)	--	35 (LR)	1.2	--	1.2
Mercury	µg/L	0.051	--	0.10	0.016 (DNQ)	--	0.016 (DNQ)
Nickel	µg/L	--	--	--	5	--	5
Selenium	µg/L	4.1 (LR)	--	8.2 (LR)	3	--	3
Silver	µg/L	--	--	--	<0.062	--	<0.062
Thallium	µg/L	--	--	--	<0.014	--	<0.014
Zinc (wet weather)	µg/L	120 (LR)	--	160 (LR)	90	--	90
Cyanide	µg/L	4.2	--	8.5	10	--	10
Asbestos	µg/L	--	--	--	--	--	--
2,3,7,8-TCDD (Dioxin)	pg/L	--	--	--	<0.19	--	<0.19
Acrolein	µg/L	--	--	--	<2.2	--	<2.2
Acrylonitrile	µg/L	--	--	--	<1.8	--	<1.8
Benzene	µg/L	--	--	--	<0.23	--	<0.23
Bromoform	µg/L	--	--	--	3.9	--	3.9
Carbon Tetrachloride	µg/L	--	--	--	< 0.33	--	< 0.33
Chlorobenzene	µg/L	--	--	--	<0.21	--	<0.21
Dibromochloro-methane	µg/L	--	--	--	27	--	27
Chloroethane	µg/L	--	--	--	<0.23	--	<0.23
2-chloroethyl vinyl ether	µg/L	--	--	--	<0.28	--	<0.28
Chloroform	µg/L	--	--	--	91	--	91

Parameter	Units	Effluent Limitations in R4-2010-0165			Monitoring Data (From Nov 2010 – To Dec 2015)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Dichlorobromo-methane	µg/L	46	--	77	87.3	--	87.3
1,1-dichloroethane	µg/L	--	--	--	<0.21	--	<0.21
1,2-dichloroethane	µg/L	--	--	--	<0.24	--	<0.24
1,1-dichloroethylene	µg/L	--	--	--	<0.39	--	<0.39
1,2-dichloropropane	µg/L	--	--	--	<0.18	--	<0.18
1,3-dichloropropylene	µg/L	--	--	--	<0.32	--	<0.32
Ethylbenzene	µg/L	--	--	--	<0.17	--	<0.17
Methyl bromide	µg/L	--	--	--	<0.47	--	<0.47
Methyl chloride	µg/L	--	--	--	<0.26	--	<0.26
Methylene chloride	µg/L	--	--	--	<0.25	--	<0.25
1,1,2-tetrachloroethane	µg/L	--	--	--	<0.18	--	<0.18
Tetrachloroethylene	µg/L	--	--	--	<0.27	--	<0.27
Toluene	µg/L	--	--	--	<0.22	--	<0.22
Trans 1,2-Dichloroethylene	µg/L	--	--	--	<0.23	--	<0.23
1,1,1-Trichloroethane	µg/L	--	--	--	<0.38	--	<0.38
1,1,2-Trichloroethane	µg/L	--	--	--	<0.25	--	<0.25
Trichloroethylene	µg/L	--	--	--	<0.37	--	<0.37
Vinyl Chloride	µg/L	--	--	--	<0.33	--	<0.33
2-chlorophenol	µg/L	--	--	--	<0.28	--	<0.28
2,4-dichlorophenol	µg/L	--	--	--	<0.26	--	<0.26
2,4-dimethylphenol	µg/L	--	--	--	<0.3	--	<0.3
4,6-dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)	µg/L	--	--	--	<1.7	--	<1.7
2,4-dinitrophenol	µg/L	--	--	--	<1.6	--	<1.6
2-nitrophenol	µg/L	--	--	--	<0.26	--	<0.26
4-nitrophenol	µg/L	--	--	--	< 0.45	--	<0.45
3-Methyl-4-Chlorophenol (aka P-chloro-m-cresol)	µg/L	--	--	--	<0.23	--	<0.23
Pentachlorophenol	µg/L	--	--	--	<0.19	--	<0.19
Phenol	µg/L	--	--	--	<0.16	--	<0.16
2,4,6-trichlorophenol	µg/L	--	--	--	<0.22	--	<0.22
Acenaphthene	µg/L	--	--	--	<0.38	--	<0.38

Parameter	Units	Effluent Limitations in R4-2010-0165			Monitoring Data (From Nov 2010 – To Dec 2015)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Acenaphthylene	µg/L	--	--	--	<0.4	--	<0.4
Anthracene	µg/L	--	--	--	<0.34	--	<0.34
Benzidine	µg/L	--	--	--	<3.7	--	<3.7
Benzo(a)Anthracene	µg/L	--	--	--	<0.19	--	<0.19
Benzo(a)Pyrene	µg/L	--	--	--	<0.13	--	<0.13
Benzo(b)Fluoranthene	µg/L	--	--	--	<0.14	--	<0.14
Benzo(ghi)Perylene	µg/L	--	--	--	<0.1	--	<0.1
Benzo(k)Fluoranthene	µg/L	--	--	--	<0.22	--	<0.22
Bis(2-Chloroethoxy)methane	µg/L	--	--	--	<0.25	--	<0.25
Bis(2-Chloroethyl)Ether	µg/L	--	--	--	<0.27	--	<0.27
Bis(2-Chloroisopropyl)Ether	µg/L	--	--	--	<0.38	--	<0.38
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9 (MC) 4 (LR)	--	15 (MC) 15 (LR)	61	--	61
4-Bromophenyl Phenyl Ether	µg/L	--	--	--	<0.36	--	<0.36
Butylbenzyl Phthalate	µg/L	--	--	--	<0.18	--	<0.18
2-Chloronaphthalene	µg/L	--	--	--	<0.45	--	<0.45
4-Chlorophenyl Phenyl Ether	µg/L	--	--	--	<0.41	--	<0.41
Chrysene	µg/L	--	--	--	<0.19	--	<0.19
Dibenzo(a,h)Anthracene	µg/L	--	--	--	<0.08	--	<0.08
1,2-Dichlorobenzene	µg/L	--	--	--	<0.57	--	<0.57
1,3-Dichlorobenzene	µg/L	--	--	--	<0.53	--	<0.53
1,4-Dichlorobenzene	µg/L	--	--	--	<0.55	--	<0.55
3,3'-Dichlorobenzidine	µg/L	--	--	--	<1.2	--	<1.2
Diethyl Phthalate	µg/L	--	--	--	<0.15	--	<0.15
Dimethyl Phthalate	µg/L	--	--	--	<0.18	--	<0.18
Di-n-Butyl Phthalate	µg/L	--	--	--	<0.24	--	<0.24
2,4-Dinitrotoluene	µg/L	--	--	--	<0.18	--	<0.18

Parameter	Units	Effluent Limitations in R4-2010-0165			Monitoring Data (From Nov 2010 – To Dec 2015)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
2,6-Dinitrotoluene	µg/L	--	--	--	<0.27	--	<0.27
Di-n-Octyl Phthalate	µg/L	--	--	--	<0.19	--	<0.19
1,2-Diphenylhydrazine	µg/L	--	--	--	<0.25	--	<0.25
Fluoranthene	µg/L	--	--	--	<0.22	--	<0.22
Fluorene	µg/L	--	--	--	<0.35	--	<0.35
Hexachlorobenzene	µg/L	--	--	--	<0.49	--	<0.49
Hexachlorobutadiene	µg/L	--	--	--	<0.47	--	<0.47
Hexachlorocyclopentadiene	µg/L	--	--	--	<1.5	--	<1.5
Hexachloroethane	µg/L	--	--	--	<0.52	--	<0.52
Indeno(1,2,3-cd)Pyrene	µg/L	--	--	--	<0.12	--	<0.12
Isophorone	µg/L	--	--	--	<0.21	--	<0.21
Naphthalene	µg/L	--	--	--	<0.49	--	<0.49
Nitrobenzene	µg/L	--	--	--	<0.36	--	<0.36
N-Nitrosodimethylamine	µg/L	--	--	--	<0.14	--	<0.14
N-Nitrosodipropylamine	µg/L	--	--	--	<0.26	--	<0.26
N-Nitrosodiphenylamine	µg/L	--	--	--	<0.19	--	<0.19
Phenanthrene	µg/L	--	--	--	<0.32	--	<0.32
Pyrene	µg/L	--	--	--	<0.25	--	<0.25
1,2,4-Trichlorobenzene	µg/L	--	--	--	<0.55	--	<0.55
Aldrin	µg/L	0.00014	--	0.0003	<0.0015	--	<0.0015
Alpha-BHC	µg/L	0.013	--	0.026	<0.0018	--	<0.0018
Beta-BHC	µg/L	--	--	--	<0.0031	--	<0.0031
Gamma-BHC (aka Lindane)	µg/L	--	--	--	<0.0021	--	<0.0021
delta-BHC	µg/L	--	--	--	<0.0025	--	<0.0025
Chlordane	µg/L	--	--	--	<0.08	--	<0.08
4,4'-DDT	µg/L	--	--	--	<0.003	--	<0.003
4,4'-DDE	µg/L	0.00059	--	0.0012	<0.0025	--	<0.0025
4,4'-DDD	µg/L	0.00084	--	0.0017	<0.003	--	<0.003
Diazinon	µg/L	--	--	--	< 0.096	--	<0.096
Dieldrin	µg/L	0.00014	--	0.0003	<0.0021	--	<0.0021
Alpha-Endosulfan	µg/L	--	--	--	<0.0017	--	<0.0017
Beta-Endosulfan	µg/L	--	--	--	<0.0019	--	<0.0019

Parameter	Units	Effluent Limitations in R4-2010-0165			Monitoring Data (From Nov 2010 – To Dec 2015)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Endosulfan Sulfate	µg/L	--	--	--	<0.008	--	<0.008
Endrin	µg/L	0.043	--	0.086	<0.0028	--	<0.0028
Endrin Aldehyde	µg/L	--	--	--	<0.003	--	<0.003
Heptachlor	µg/L	0.00021	--	0.0004	<0.0017	--	<0.0017
Heptachlor Epoxide	µg/L	--	--	--	<0.002	--	<0.002
PCB 1016	µg/L	--	--	--	<0.04	--	<0.04
PCB 1221	µg/L	--	--	--	<0.06	--	<0.06
PCB 1232	µg/L	--	--	--	<0.15	--	<0.15
PCB 1242	µg/L	--	--	--	<0.07	--	<0.07
PCB 1248	µg/L	--	--	--	<0.06	--	<0.06
PCB 1254	µg/L	--	--	--	<0.04	--	<0.04
PCB 1260	µg/L	--	--	--	<0.04	--	<0.04
Toxaphene	µg/L	--	--	--	<0.12	--	<0.12
Mirex	µg/L	--	--	--	<0.01	--	<0.01
Demeton	µg/L	--	--	--	<0.47	--	<0.47
Malathion	µg/L	--	--	--	< 0.73	--	<0.73
Methoxychlor	µg/L	--	--	--	<0.0054	--	<0.0054
Parathion	µg/L	--	--	--	<0.54	--	<0.54
1,4-Dioxane	µg/L	--	--	--	1.3	--	1.3
MTBE	µg/L	--	--	--	<0.14	--	<0.14
Perchlorate	µg/L	6 (LR)	--	--	1.2	--	1.2
Total Trihalomethanes	µg/L	80 (LR)	--	--	190	--	190
1,2,3-Trichloropropane	µg/L	--	--	--	0.138	--	0.138
2,4-D	µg/L	--	--	--	< 0.48	--	< 0.48
2,4,5-TP (Silvex)	µg/L	--	--	--	< 0.11	--	< 0.11
Alpha Radioactivity	pCi/mL	--	--	--	4.83	--	4.83
Beta Radioactivity	pCi/mL	--	--	--	21	--	21

D. Compliance Summary

On September 02, 2010, the Regional Water Board issued Time Schedule Order (TSO) No. R4-2010-0166 and Cease and Desist Order (CDO) No. R4-2010-0167 to address compliance issues with total trihalomethanes and dichlorobromomethane, respectively. During the 2010 NPDES permit term, the Permittee hired a consultant to investigate alternative disinfection technologies at the Tapia WRF to reduce the dichlorobromomethane and total trihalomethane concentrations in the treated effluent. The consultant investigated four alternative disinfection technologies including mixed oxidants, ultraviolet light, ozone, and chloramination. In a Technical Memorandum dated March 17, 2011, the consultant recommended that a hybrid option consisting of both modified chlorination and ultraviolet light be considered. The Permittee selected the recommended option and installed an ammonia injection system in 2013. Plans to complete the ultraviolet light system, however, have been postponed and will

be considered at a later date. Although the upgraded disinfection system has maintained the concentrations of total trihalomethanes and dichlorobromomethane below the water quality objectives relatively consistently, the Permittee exceeded the final effluent limitation for total trihalomethanes one time and the final effluent limitation for dichlorobromomethane three times since the system became operational in July of 2013. The system has since been optimized and there have been no exceedances of either pollutant since May of 2015.

On February 2, 2015, the Executive Officer (EO) of the Regional Water Board executed the Acceptance and Waiver as a Stipulated Order R4-2011-0157-M, assessing uncontested mandatory minimum penalty amount for violations of the dichlorobromomethane, turbidity, bis(2-ethylhexyl)phthalate, total suspended solids, total trihalomethanes, cyanide final effluent limitations.

On August 21, 2015, the EO executed the Acceptance and Waiver as a Stipulated Order R4-2015-0035, assessing uncontested mandatory minimum penalty amount for violations of the cyanide, bis(2-ethylhexyl)phthalate, and dichlorobromomethane final effluent limitations.

On January 22, 2016, the EO executed the Acceptance and Waiver as a Stipulated Order R4-2015-0233, assessing uncontested mandatory minimum penalty amount for violations of the bis(2-ethylhexyl)phthalate, chloride, dichlorobromomethane, and trihalomethane final effluent limitations.

On October 19, 2016, the EO executed the Acceptance and Waiver as a Stipulated Order R4-2016-0179, assessing uncontested mandatory minimum penalty amount for violations of the total phosphorus, cyanide, and bis(2-ethylhexyl)phthalate final effluent limitations.

On November 21, 2016, the EO executed a Settlement Agreement and Stipulation for Entry of Administrative Civil Liability Order R4-2016-0287 for an unauthorized discharge of partially treated sewage to Malibu Creek on May 28, 2015.

On December 21, 2016, the Regional Water Board issued an Offer to Participate in the Expedited Payment Program for two violations of the mercury final effluent limitation. The following table presents the list of violations incurred during the period from 2010 to 2016.

There were no exceedances of the 1 Tuc chronic toxicity final effluent limitation during the previous permit term.

Table F-3. Summary of Effluent Limitation Violations November 2010 through December 2016

Description	Effluent Limitation	Reported Value	Status	Violation Date
Dichlorobromomethane	Monthly Average: 46 ug/L Daily Maximum: 77 ug/L	47.93 ug/L	Violation	10/31/2010
		87.3 ug/L	Violation	11/06/2010
		68.55 ug/L	Violation	11/30/2010
		47.75 ug/L	Violation	11/30/2013
		51 ug/L	Violation	09/30/2014
		48 ug/L	Violation	05/31/2015
Bis (2-Ethylhexyl) Phthalate	Monthly Average: 4 ug/L Daily Maximum: 15 ug/L	19.0 ug/L	Violation	11/15/2011
		19 ug/L	Violation	11/15/2011
		7 ug/L.	Violation	05/31/2013
		19 ug/L	Violation	06/19/2013

Description	Effluent Limitation	Reported Value	Status	Violation Date
		19 ug/L	Violation	06/30/2013
		8 ug/L	Violation	08/31/2013
		20 ug/L	Violation	10/31/2013
		11 ug/L	Violation	01/31/2014
		16 ug/L	Violation	03/31/2014
		16 ug/L	Violation	03/26/2014
		16 ug/L	Violation	03/11/2014
		11 ug/L	Violation	04/30/2014
		12.8 ug/L	Violation	07/31/2014
		22 ug/L	Violation	07/31/2014
		61 ug/L	Violation	08/05/2014
		61 ug/L	Violation	08/31/2014
		10.1 ug/L	Violation	11/30/2014
		27 ug/L	Violation	05/20/2015
		27 ug/L	Violation	05/31/2015
		7.2 ug/L	Violation	06/30/2015
		27 ug/L	Violation	05/31/2015
		5.4 ug/L	Violation	09/30/2015
		17 ug/L	Violation	10/13/2015
		8.5 ug/L	Violation	10/31/2015
		8.6 ug/L	Violation	11/04/2015
		Turbidity and reported value was.	Daily Average: 2 NTU Daily Maximum: 5 NTU Instantaneous Maximum : 10 NTU	4 NTU
7 NTU	Violation			03/21/2011
3 NTU	Violation			03/25/2011
10 NTU	Violation			03/20/2011
10 NTU	Violation			03/21/2011
10 NTU	Violation			03/25/2011
10 NTU	Violation			03/31/2011
10 NTU	Violation			03/20/2011
10 NTU	Violation			03/21/2011
10 NTU	Violation			03/25/2011
				4 NTU
		3 NTU	Violation	05/30/2012
		3 NTU	Violation	05/24/2012

Description	Effluent Limitation	Reported Value	Status	Violation Date
		3 NTU	Violation	05/23/2012
		3 NTU	Violation	05/10/2013
Total Suspended Solids (TSS)	Monthly Average: 5.0 mg/L	6.9 mg/L	Violation	04/17/2012
		5.2 mg/L	Violation	05/31/2012
		5.8 mg/L	Violation	05/31/2013
Total Trihalomethanes (TTHM)	Monthly Average: 80 ug/L	162 ug/L	Violation	04/18/2012
		145 ug/L	Violation	05/31/2015
Cyanide	Monthly Average: 4.2 ug/L Monthly Average: 0.56 lb/day Daily Maximum: 8.5 ug/L	6.3 ug/L	Violation	04/30/2013
		5.6 ug/L	Violation	05/31/2013
		6.5 ug/L	Violation	07/31/2013
		5.7 mg/L	Violation	12/31/2013
		6.1 ug/L	Violation	01/31/2014
		6.4 ug/L	Violation	02/28/2014
		9.3 ug/L	Violation	02/04/2014
		8.3 ug/L	Violation	03/31/2014
		10 ug/L	Violation	03/11/2014
		8 ug/L	Violation	12/02/2014
		0.75 lb/day	Violation	12/31/2014
		0.77 lb/day	Violation	03/31/2014
		5.4 ug/L	Violation	09/30/2015
		5.4 ug/L	Violation	09/22/2015
		Total Residual Chlorine	Maximum Daily: 0.1 mg/L	0.2 mg/L
0.3 mg/L	Violation			09/22/2015
Unauthorized discharge of partially treated sewage occurred on 05/28/15. The unauthorized discharge is in violation of Section III.B of the Order No. R4-2010-0165-A01.			Violation	05/28/2015
Chloride	Monthly Average: 190 mg/L	195 mg/L	Violation	05/31/2015
Total Phosphorus	Monthly Average: 3 mg/L	4 mg/L	Violation	09/30/2015
		3.2 mg/L	Violation	05/31/2016
Mercury	Daily Maximum: 0.10 ug/L	0.13 ug/L	Violation	05/10/2016
	Monthly Average: 0.051 ug/L	0.13 ug/L	Violation	05/31/2016
pH	Instantaneous Minimum: 6.5 SU	6.4 SU	Violation	10/22/2016

E. Planned Changes

The Discharger plans to recycle the majority of the treated wastewater through indirect potable reuse using surface water augmentation. The Discharger is developing the Pure

Water Project. This project will convey excess recycled water produced at the Tapia WRF to a new off-site Advanced Water Treatment (AWT) facility that will treat the tertiary-treated recycled water from the Tapia WRF through microfiltration, reverse osmosis, and advanced oxidation. The purified water will be conveyed to Las Virgenes' existing potable water reservoir for indirect potable reuse through surface water augmentation. The brine from the AWT will be conveyed to the Calleguas Municipal Water District Salinity Management Pipeline in Ventura County. New facilities that will be constructed as part of this 13.5-year project include the AWT, an extension of the recycled water transmission system, a purified water pipeline to the Las Virgenes Reservoir, mixing facilities at the Las Virgenes Reservoir, and a brine disposal pipeline. In addition, the Discharger will complete a demonstration project to conduct testing and evaluate the design of the AWT.

The Discharger is also required to maintain a minimum flow in the Malibu Creek of 2.5 cfs. In order to achieve the appropriate water quality for the supplemental river water, the Discharger is currently considering multiple options including additional treatment and dilution. This project is required by the *Malibu Creek Nutrients TMDL* Implementation Plan to be completed within 5 years.

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 U.S. EPA and chapter 5.5, division 7 of the CWC (commencing with section 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 2 subject to the WDRs in this Order.

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.

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

1. **Water Quality Control Plans.** 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, 2011, 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:

“EPA 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 EPA review under section 303(c)(3) of the CWA. 33 U.S.C. § 1313(c)(3).”

USEPA’s decision has no effect on the MUN designations of groundwater. Beneficial uses applicable to Malibu Creek and Los Angeles River are as follows:

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

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	Las Virgenes Creek Watershed Boundary Dataset (WBD) No.180701040103 (formerly Calwater Hydro Unit 404.22)	<u>Existing:</u> Water contact recreation (REC-1); noncontact water recreation (REC-2); warm freshwater habitat (WARM); wild life habitat (WILD); rare, threatened, or endangered species (RARE); and wetland habitat (WET) ¹ <u>Potential:</u> Municipal and domestic water supply (MUN) ² ; cold freshwater habitat (COLD); migration of aquatic organisms (MIGR) ³ ; and spawning, reproduction, and/or early development (SPWN)
001, 002, 003	Malibu Creek 180701040104 (formerly Calwater Hydro Unit 404.21) (Hydro Unit 404.21)	<u>Existing:</u> REC-1; REC-2; WARM; COLD; WILD; RARE; MIGR ³ ; SPWN; and WET ¹ <u>Potential:</u> MUN ²
001, 002, 003	Malibu Lagoon 180701040104 (formerly Calwater Hydro Unit 404.21) (Hydro Unit 404.21)	<u>Existing:</u> Navigation (NAV); REC-1; REC-2; estuarine habitat (EST); marine habitat (MAR); WILD; RARE ⁴ ; MIGR ³ ; SPWN; and WET
001, 002, 003	Malibu Beach (Surfrider Beach) 180701040404 (formerly Calwater Hydro Unit 404.21)	<u>Existing:</u>

- ¹ This wetland habitat may be associated with only a portion of the water body. Any regulatory action would require a detailed analysis of the area.
- ² The potential municipal and domestic supply (p* MUN) beneficial use for the waterbody is consistent with the State Water Resources Control Board Order 88-63 and Regional Water Board Resolution No. 89-003; however, the Regional Water Board has only conditionally designated the MUN beneficial use of the surface water and at this time cannot establish effluent limitations designed to protect the conditional designation.
- ³ Aquatic organisms utilize estuary and coastal wetland to a certain extent, for spawning and early development. This may include migration into areas that are heavily influenced by freshwater inputs.
- ⁴ One or more rare species utilize estuary and coastal wetlands for foraging and nesting.

Discharge Point	Receiving Water Name	Beneficial Use(s)
	(Hydro Unit 404.21)	NAV; REC-1; REC-2; commercial and sport fishing (COMM); MAR; WILD; MIGR ³ ; SPWN ⁵ ; and shellfish harvesting (SHELL) ⁶
005	Los Angeles River Reach 6 (Above Balboa Blvd.) WBD No. 180701050208 (formerly Calwater Hydro Unit 405.21)	<u>Existing:</u> groundwater recharge (GWR); REC-1 ⁷ ; REC-2; WARM; WILD; and WET ¹ <u>Potential:</u> MUN ² ; and industrial service supply (IND)
005	Los Angeles River Reach 5 (Sepulveda Dam to Balboa Blvd.) WBD No. 180701050208 (formerly Calwater Hydro Unit 405.21)	<u>Existing:</u> groundwater recharge (GWR); REC-1 ⁷ ; REC-2; WARM; WILD; and WET ¹ . <u>Potential:</u> MUN ² ; and industrial service supply (IND).
005	Los Angeles River Reach 4 (Riverside Drive to Sepulveda Dam) WBD No. 180701050208 (formerly Calwater Hydro Unit 405.21)	<u>Existing:</u> groundwater recharge (GWR); REC-1 ⁷ ; REC-2; WARM; WILD; and WET ¹ . <u>Potential:</u> MUN ² ; and industrial service supply (IND).
005	Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.) WBD No. 180701050402 (formerly Calwater Hydro Unit 405.21)	<u>Existing:</u> groundwater recharge (GWR); REC-1 ⁷ ; REC-2; WARM; WILD; and WET ¹ . <u>Potential:</u> MUN ² ; and industrial service supply (IND).
005	Los Angeles River Reach 2 (Carson St. to Figueroa St.) WBD No. 180701050402 and 180701050402 (formerly Calwater Hydro Unit 405.15)	<u>Existing:</u> GWR; REC-1 ⁷ ; REC-2; and WARM <u>Potential:</u> MUN ⁷ ; IND; and WILD.
005	Los Angeles River Reach 1 (Estuary to Carson St.) (formerly Calwater Hydro Unit 405.12)	<u>Existing:</u> GWR; REC-1 ⁷ ; REC-2; RARE; WARM; MAR; WILD; and RARE. <u>Potential:</u> MUN ² ; IND.; industrial process supply (PROC); MIGR; SPWN; and SHELL.
005	Los Angeles River Estuary WBD No. 180701050402 (formerly Calwater Hydro Unit 405.12)	<u>Existing:</u> IND; NAV; REC-1 ⁷ ; REC-2; COMM; EST; MAR; WILD; RARE ⁴ ; MIGR; SPWN; and WET. <u>Potential:</u> SHELL.

⁵ Most frequently used grunion spawning beaches and other beaches may be used as well.

⁶ Areas exhibiting large shellfish populations include Malibu, Point Dume, Point Fermin, White Point, and Zuma Beach.

⁷ The Los Angeles County Department of Public Works posted signs prohibiting access to the Los Angeles River. However, there is public contact in the downstream areas; hence, the quality of treated wastewater discharged to the Los Angeles River must be such that no health hazard is created.

Beneficial uses of the receiving ground waters are as follows:

Table F-5. Basin Plan Beneficial Uses – Ground Waters

Discharge Point	Basin Name	Beneficial Use(s)
001, 002, 003	Malibu Valley Camarillo Area DWR Basin No. 4-22	<u>Existing:</u> Municipal and domestic water supply (MUN) and agricultural supply (AGR). <u>Potential:</u> Industrial service supply (IND)
001, 002, 003	Malibu Valley Point Dume Area DWR Basin No. 4-22	<u>Existing:</u> MUN and AGR <u>Potential:</u> IND
001, 002, 003	Malibu Valley DWR Basin No. 4-22	<u>Existing:</u> AGR <u>Potential:</u> MUN and IND
001, 002, 003	Malibu Valley Topanga Canyon DWR Basin No. 4-22	<u>Existing:</u> AGR <u>Potential:</u> MUN and IND
005	San Fernando Valley Basin DWR Basin No. 4-12	<u>Existing:</u> MUN; IND; industrial process supply (PROC); and AGR
005	Coastal Plain of Los Angeles Central Basin DWR Basin No. 4-11.04	<u>Existing:</u> MUN; IND; PROC; and AGR
005	Coastal Plain of Los Angeles West Coast Basin (Remainder of Basin) DWR Basin No. 4-11.03	<u>Existing:</u> MUN, IND, PROC, and AGR

2. Requirements of this Order Implement the Basin Plan:

Ammonia WQO. The 1994 Basin Plan provided water quality objectives for ammonia to protect aquatic life, in Tables 3-1 through 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*. The ammonia Basin Plan amendment was approved by the State Water Board, the Office of Administrative Law, and USEPA on April 30, 2003, June 5, 2003, and June 19, 2003, respectively. On December 1, 2005, Resolution No. 2005-014, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Revise the 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, was adopted by the Regional Water Board. Resolution No. 2005-014 was approved by the State Water Board, the Office of Administrative Law (OAL), and USEPA on July 19, 2006, August 31, 2006, and April 5, 2007, respectively. Although the revised ammonia water quality objectives may be less stringent than those contained in the 1994 Basin Plan, they are still protective of aquatic life and are consistent with USEPA's 1999 ammonia criteria update.

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 for ammonia along with corresponding site-specific early life stage implementation provisions for 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.

Chloride WQO. The 1994 Basin Plan contained WQOs for chloride in Table 3-8. However, the chloride objectives for some waterbodies were revised on January 27, 1997, by the Regional Water Board, with the adoption of Resolution No. 97-02, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters*. Resolution No. 97-02 was approved by the State Board, OAL and USEPA on October 23, 1997, January 9, 1998, and February 5, 1998, respectively. The chloride WQO was revised from 150 mg/L to 190 mg/L, for the following segments of the Los Angeles River:

- a. Between Sepulveda Flood Control Basin and Figueroa Street (including Burbank Western Channel only), and
- b. Between Figueroa Street and the estuary (including Rio Hondo below Santa Ana Freeway only).

The final effluent limitations for chloride prescribed in the previous Order R4-2010-0165 for the Los Angeles River were based on the revised chloride WQOs described in Resolution No. 97-02; however, this resolution is not applicable to Tapia WRF's discharge because the discharge point is located upstream of the Sepulveda Flood Control Basin. In addition, the Basin Plan was amended with the adoption of Resolution R13-003 on May 02, 2013. This amendment included additional reaches along the Los Angeles River and revised the Water Quality Objectives for chloride for those reaches specified in Resolution No. 97-02. The reach applicable to the Tapia WRF specified in the amended Basin Plan is "Los Angeles River and tributaries upstream Sepulveda Flood Control Basin," which includes a WQO for chloride of 150 mg/L.

3. **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 were 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.
4. **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.

5. **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.
6. **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, Total Suspended Solids (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 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.

7. **Antidegradation Policy.** Federal regulation 40 CFR section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California"). Resolution 68-16 is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. Resolution 68-16 requires that existing water quality be maintained unless degradation is justified based on specific findings. The Regional Water Board Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 CFR section 131.12 and State Water Board Resolution 68-16.

8. **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.
9. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
10. **Water Rights.** When applicable, state law requires dischargers to file a petition with the State Water Board, Division of Water Rights and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of a watercourse. 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, 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. This is not an NPDES requirement.
11. **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.
12. **Water Recycling -** In accordance with statewide policies concerning water reclamation⁸, this Regional Water Board strongly encourages, wherever practical, water recycling, water conservation, and use of storm water and dry-weather urban runoff. In conjunction with the Pure Water Project to treat excess recycled water produced at the Tapia WRF, the Permittee shall submit a feasibility report evaluating the options to treat and utilize the excess recycled water in excess of the local demand and the minimum flow requirement to the Malibu Creek. Recycled water progress reports describing the updates to this recycling project shall be included in the annual report submittal, as described in the Monitoring and Reporting Program (MRP).
13. **Monitoring and Reporting.** 40 CFR part 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 MRP establishes monitoring and reporting requirements to implement federal and state requirements. This MRP is provided in Attachment E.
14. **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

⁸ 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).

certain reporting, handling, and use or disposal requirements. USEPA has not delegated the authority to regulate biosolids/sludge under 40 CFR part 503 to the state of California. Therefore, references to the federal requirements and implementation language for biosolids/sludge, which may have been included in the previous NPDES Order, are not included in this renewal Order. Major publicly owned treatment works should contact USEPA (Ms. Lauren Fondahl, or her successor) regarding the submittal of biosolids/sludge reports and any electronic submittal requirements.

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

The State Water Board proposed the California 2012 Integrated Report from a compilation of the adopted Regional Water Boards' Integrated Reports containing CWA section 303(d) List of Impaired Waters and section 305(b) Reports following recommendations from the Regional Water Boards and information solicited from the public and other interested persons. The Regional Water Boards' Integrated Reports were used to revise their 2010 303(d) List. On April 8, 2012, the State Water Board adopted the California 2012 Integrated Report. On June 26, 2015, the USEPA approved California's 2012 Integrated Report Section 303(d) List of Impaired Waters requiring Total Maximum Daily Loads (TMDLs) for the Los Angeles Region. The CWA section 303(d) list can be found at the following link:

http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml

The Los Angeles River and its tributaries are on California 2012 Integrated Report. The following pollutants were identified as impacting the receiving waters:

Malibu Creek, Malibu Beach, Malibu Lagoon, Malibu Lagoon Beach (Surfrider Beach), the Los Angeles River, the Los Angeles River Estuary, and its tributaries are in the California 2012 Integrated Report. The following are the identified pollutants impacting the receiving waters:

Malibu Creek – Calwatershed 40421000 (Hydro Unit No. 404.21 in Basin Plan)/ USGS HUC 18070104

Benthic macroinvertebrate bioassessments⁹, coliform bacteria¹⁰, fish barriers (fish passage)⁹, invasive species⁹, nutrients (algae)¹⁰, scum/foam-unnatural¹⁰, sedimentation/siltation⁹, selenium⁹, sulfates⁹, and trash¹⁰.

Malibu Beach - Calwatershed 40421000 (Hydro Unit No. 404.21 in Basin Plan)/ USGS HUC 18070104

DDT (Fish consumption advisory for DDT)⁹ and indicator bacteria¹⁰.

Malibu Lagoon - Calwatershed 40421000 (Hydro Unit No. 404.21 in Basin Plan)/ USGS HUC 18070104

Benthic community effects⁹, coliform bacteria¹⁰, eutrophic¹⁰, swimming restrictions¹⁰, viruses (enteric)¹⁰, and pH⁹.

Malibu Lagoon Beach (Surfrider Beach) - Calwatershed 40421000 (Hydro Unit No. 404.21 in Basin Plan)/ USGS HUC 18070104

Coliform bacteria¹⁰, DDT (fish consumption advisory for DDT)⁹, and PCBs (fish consumption advisory for PCBs)⁹.

⁹ A TMDL must be prepared for this pollutant.

¹⁰ A TMDL has been adopted by USEPA to address this pollutant.

Los Angeles River Reach 6 (Above Sepulveda Flood Control Basin)- Calwatershed 40521000 (Hydro Unit No. 405.21 in Basin Plan)/ USGS HUC 18070105

Coliform Bacteria⁹ and Selenium¹⁰

Los Angeles River Reach 5 (within Sepulveda Basin)- Calwatershed 40521000 (Hydro Unit No. 405.21 in Basin Plan)/ USGS HUC 18070105

Ammonia¹⁰, copper¹⁰, lead¹⁰, nutrients¹⁰, oil⁹, and trash¹⁰

Los Angeles River Reach 4 (Sepulveda Drive to Sepulveda Dam) – Calwatershed 40521000 (Hydro Unit No. 405.21 in Basin Plan)/ USGS HUC 18070105

Ammonia¹⁰, coliform bacteria⁹, copper¹⁰, lead¹⁰, nutrients (algae)¹⁰, and trash¹⁰.

Los Angeles River Reach 3 (Figueroa Street to Riverside Drive) – Calwatershed 40521000 (Hydro Unit No. 405.21 in Basin Plan)/ USGS HUC 18070104

Ammonia¹⁰, copper¹⁰, lead¹⁰, nutrients (algae)¹⁰, and trash¹⁰.

Los Angeles River Reach 2 (Carson to Figueroa Street) – Calwatershed 40515010 (Hydro Unit No. 405.15 in Basin Plan)/ USGS HUC 18070104

Ammonia¹⁰, coliform bacteria⁹, copper¹⁰, lead¹⁰, nutrients (algae)¹⁰, oil⁹, and trash¹⁰.

Los Angeles River Reach 1 (Estuary to Carson Street) – Calwatershed 40512000 (Hydro Unit No. 405.12 in Basin Plan)/ USGS HUC 18070104

Ammonia¹⁰, cadmium¹⁰, coliform bacteria⁹, copper (dissolved)¹⁰, cyanide⁹, diazinon⁹, lead¹⁰, nutrients (algae)¹⁰, trash¹⁰, zinc (dissolved)¹⁰, and pH¹⁰.

Los Angeles River Estuary (Queensway Bay) – Calwatershed 40512000 (Hydro Unit No. 405.12 in Basin Plan)/ USGS HUC 18070104

Chlordane (sediment)⁹, DDT (sediment; historical use of pesticides and lubricants)⁹, PCBs (sediment; historical use of pesticides and lubricants)⁹, sediment toxicity⁹, and trash¹⁰.

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 (MUN). To be consistent with the 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 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 of establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations or to prevent backsliding.
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 part 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. General NPDES Permit No. CAS000001 was revised on April 1, 2014, and became effective on July 1, 2015.

Storm water runoff from the Tapia WRF is regulated under General NPDES permit No. CAS000001. On April 9, 1992, the Permittee initially filed a Notice of Intent to comply with the requirements of the general permit. On June 30, 2015, the Permittee filed a Notice of Intent to comply with the requirements of the revised general permit associated with Industrial Activity, Order 2014-0057-DWQ. The Permittee developed and currently implements a Storm Water Pollution Prevention Plan (SWPPP), to comply with the State Water Board’s General NPDES permit No. CAS000001.

5. **Sanitary Sewer Overflows.** 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; Sanitary Sewer Overflow WDR) on May 2, 2006, to provide a consistent, statewide regulatory approach to address Sanitary Sewer Overflows. The Sanitary Sewer Overflow WDR requires public agencies that own or operate sanitary sewer systems to apply for coverage under the Sanitary Sewer Overflow WDR, develop and implement sewer system management plans, and report all Sanitary Sewer Overflows to

the State Water Board's online Sanitary Sewer Overflow database. Regardless of the coverage obtained under the Sanitary Sewer Overflow 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 part 122.41 (e)), report any non-compliance (40 CFR part 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR part 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 Sanitary Sewer Overflow WDR. The Regional Water Board recognizes that there may be some overlap between these NPDES permit provisions and Sanitary Sewer Overflow 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 Sanitary Sewer Overflow 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 Sanitary Sewer Overflow WDR, section D, provision 2(iii) and (iv), the provisions of this NPDES permit supersede the Sanitary Sewer Overflow 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.

The accompanying Order fosters the implementation of this approach by protecting beneficial uses in the watershed and requiring the Discharger 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 Discharger to undertake the responsibilities delineated under an approved watershed-wide monitoring plan in the implementation of the Watershed-wide Monitoring Program. On August 8, 2008, the Los Angeles River Regional Monitoring Program was approved by this Regional Water Board to implement the goal of the watershed-wide monitoring program; however a regional monitoring program has not been developed for the Malibu Creek Watershed. The discharger is required in the MRP to work with the Regional Water Board, USEPA, and stakeholders, to develop a regional monitoring program for the Malibu Creek Watershed.

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 violations of water quality standards.

a. Malibu Creek TMDLs

- i. Bacteria TMDL for Malibu Creek. The TMDL schedule, under the amended consent decree, *Heal the Bay, Santa Monica Bay Keeper, et al. v. Browner, et al.* (March 23, 1999), necessitated a bacteria TMDL to be established by March 22, 2003. On December 13, 2004, the Regional Water Board adopted, Resolution 2004-019R, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Incorporate the Malibu Creek and Lagoon Bacteria TMDL (Malibu Creek Bacteria TMDL)*. The TMDL was approved by the State Water Board, OAL, and USEPA on September 22, 2005, December 1, 2005, and January 10, 2006, respectively, and became effective on March 23, 2004. The Malibu Creek waste load allocations (WLAs) for Tapia WRF are zero (0) days of allowable exceedances for all three time periods and for the single sample limits and the rolling 30-day geometric mean. The three time periods include: 1) summer dry-weather (April 1 to October 31); 2) winter dry-weather (November 1 to March 31); and 3) wet-weather (defined as days of 0.1 inch of rain or more plus three days following rain event).

On June 07, 2012, the Regional Water Board adopted Resolution No. R12-009, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Revise the Total Maximum Daily Load for Bacteria in the Malibu Creek Watershed*. This amendment revised the TMDL to adjust the reference system, allowable exceedance days, time periods for allowable exceedance days, and the corresponding WLAs and load allocations based on three reference studies coordinated by the Southern California Coastal Water Research Project (SCCWRP). The WLAs assigned to Tapia WRF are the bacteriological objectives contained in Chapter 3 of the Basin Plan during dry weather and wet weather, and include *E. coli* geometric mean limit of 126/100 mL and single sample limit of 235/100 mL. The TMDL was approved by the State Water Resources Control Board, OAL, and USEPA on March 19, 2013, November 08, 2013, and July 02, 2014, respectively.

- ii. Nutrients and Sedimentation TMDL for Malibu Creek. The United States Environmental Protection Agency established the *Malibu Creek Watershed Nutrients TMDL (2003 Malibu Creek Nutrients TMDL)* on March 21, 2003, to address impairments due to ammonia, nutrients, dissolved oxygen, algae, scum, and odor in Malibu Lagoon, Malibu Creek, and its tributaries, and four lakes in the watershed. On July 02, 2013, the USEPA established the *Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments (2013 Malibu Creek Nutrients TMDL)* to address impairments to Malibu Creek and Las Virgenes Creek related to impacted

benthic macroinvertebrates and sedimentation/siltation and impairments to Malibu Lagoon related to adverse benthic community effects.

Both TMDLs include a problem statement, numeric targets, source analysis, loading capacity, WLAs for point sources, load allocations for nonpoint sources, and a margin of safety, but do not include an implementation plan or schedule. The *2003 Malibu Creek Nutrients TMDL* sets numeric targets for nutrients, chlorophyll a, dissolved oxygen, ammonia, and algal cover; and assigns WLAs and LAs for total nitrogen (expressed as Nitrite-N + Nitrate-N) and total phosphorus to sources discharging to all water bodies within the Malibu Creek Watershed. The *2013 Malibu Creek Nutrients TMDL* sets numeric targets for nutrients, chlorophyll a, dissolved oxygen, algal cover, sedimentation, benthic community diversity, and benthic community bioscores, and assigns WLAs and LAs for total nitrogen (expressed as organic-N+ inorganic-N) and total phosphorous to sources discharging to water bodies in the eastern portion of the Malibu Creek Watershed below Malibou Lake. These water bodies include Malibu Creek, Cold Creek, Stokes Creek, Las Virgenes Creek, and four lakes (Malibou Lake, Lindero Lake, Westlake Lake, and Sherwood Lake). In addition, the *2013 Malibu Creek Nutrients TMDL* sets sediment WLAs and LAs based on a 38 percent reduction in sediment transport capacity of the Malibu Creek Watershed. Sediment LAs are assigned to discharges from the combined area upstream of Malibou Lake, discharges from protected land below Malibou Lake, and the Ventura County unincorporated area along Las Virgenes Creek.

The USEPA delegated the Regional Water Board with the responsibility of developing an implementation plan for incorporating the WLAs from the 2003 and 2013 Malibu Creek TMDLs into NPDES permits. On December 08, 2016, the Regional Water Board adopted Resolution No. R16-009, *Amendment to the Water Quality Control Plan - Los Angeles Region to Incorporate an Implementation Plan for the U.S. EPA-Established Malibu Creek Nutrients TMDL and the U.S. EPA-Established Malibu Creek and Lagoon Sedimentation and Nutrients TMDL to Address Benthic Community Impairments* (TMDL Implementation Plan Resolution R16-009). The Implementation Plan was approved by the State Water Board on February 22, 2017, ~~but is awaiting approval and~~ by OAL on May 16, 2017. The TMDL Implementation Plan requires that the nutrient WLAs for the Tapia WRF be incorporated into the NPDES permit and translated into effluent limitations expressed as concentration-based summer and winter seasonal averages. Compliance with the concentration-based seasonal averages are to be determined by calculating the sum of all nutrient concentration samples collected during the season divided by the number of samples collected during that season. The summer nutrient WLAs shall be achieved ~~five years from the effective date of the Implementation Plan by May 16, 2022~~, and the winter WLAs shall be achieved ~~thirteen and a half years from the effective date of Implementation Plan by November 16, 2030~~. The interim nutrient WLAs are established based on current performance equal to the maximum effluent concentration from the past three years and shall be updated during each permit renewal.

- iii. Trash TMDL. On May 1, 2008, the Regional Water Board adopted Resolution No. 2008-007, *Amendment to the Basin Plan for the Los Angeles Region to Incorporate a Trash Total Maximum Daily Load for the Malibu Creek Watershed* (Trash TMDL). The Trash TMDL was approved by the State Water

Board, OAL, and USEPA on March 17, 2009, June 16, 2009, and June 26, 2009, respectively, and became effective on July 7, 2009.

b. Los Angeles River TMDLs

- i. **Los Angeles River and Tributaries Metals TMDL** - On June 2, 2005, with Resolution No. R05-006, the Regional Water Board established a *Total Maximum Daily Load for Metals for the Los Angeles River and its Tributaries (LA River Metals TMDL)*. On October 20, 2005, the State Water Board approved the *LA River Metals TMDL* in Resolution No. 2005-0077. On December 9, 2005 and December 22, 2005, respectively, Office of Administrative Law (OAL) and USEPA approved the *LA River Metals TMDL*, and it became effective on January 11, 2006. The *Los Angeles River Metals TMDL* contains WLAs for copper, lead, cadmium, zinc, and selenium.

On September 6, 2007, the Regional Water Board re-adopted the TMDL by Resolution No. R07-014 in compliance with a writ of mandate issued by the Los Angeles County Superior Court in the matter of *Cities of Bellflower et al. v. State Water Resources Control Board et al.* (Los Angeles Superior Court No. BS101732). The writ directed the Regional Water Board to consider alternatives to the project before re-adopting the TMDL. The writ was limited to this issue, and the TMDL was affirmed in all other aspects. The re-adopted TMDL replaced the previous implementation deadlines that were tied to “the effective date of the TMDL” with specific dates. The re-adopted TMDL was subsequently approved by the State Water Board in Resolution No. 2008-0046 on June 17, 2008 and by OAL on October 14, 2008. USEPA approved the re-adopted Los Angeles River Metals TMDL on October 29, 2008, which is the effective date of the TMDL. On May 7, 2009, in compliance with the writ, the Regional Water Board voided and set aside Resolution No. R05-006.

On May 6, 2010, the Regional Water Board adopted Resolution No. R10-003, an amendment to the Basin Plan to revise the LA River Metals TMDL. The amendment revises the TMDL to adjust the numeric targets for copper in Reaches 1-4 of the Los Angeles River and the Burbank Western Channel and the corresponding WLAs for the Donald C. Tillman, Los Angeles-Glendale and Burbank WRPs based on a water effect ratio (WER). The copper allocations for other sources remain based on the default WER value of 1.0 and the remaining portion of the loading capacity for Reaches 1-4 of the river and the Burbank Western Channel, which is increased by adjusting the numeric targets with the WER, will remain unallocated. The revision includes language stating that regardless of the WER, the WRPs must perform at a level that can be attained by existing treatment technologies at the time of permit issuance, reissuance or modification. On April 19, 2011, the State Water Board adopted Resolution No. 2011-0021, approving the revised LA River Metals TMDL. On July 28, 2011, the LA River Metals TMDL was approved by OAL. On November 3, 2011, The LA River Metals TMDL was approved by USEPA and became effective on the same date.

On April 9, 2015, the Regional Water Board adopted Resolution No. R15-004, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Adopt Site Specific Objectives for Lead and Copper in the Los Angeles River Watershed and to Revise the Total Maximum Daily Load for Metals in the Los Angeles River (Revised LA River Metals TMDL)*. On November 17, 2015, the State Water Board adopted Resolution No. 2015-0069, *Approving an*

Amendment to the Water Quality Control Plan for the Los Angeles Region (Basin Plan) to Adopt Site-Specific Objectives for Lead and Copper in the Los Angeles River Watershed and to Revise the TMDL for Metals in the Los Angeles River and Tributaries. On July 11, 2016, OAL approved the TMDL through the adoption of Resolution No. R15-004. On December 12, 2016, USEPA approved the TMDL with the understanding "... that the Regional Board is applying both the anti-backsliding and anti-degradation provisions. The anti-backsliding provision ensures that effluent concentrations do not increase above levels that can be maintained by wastewater facilities at the time of permit reissuance. The antidegradation provision requires permittees to track trends in water quality, and where increases are predicted or observed, evaluate the cause and identify control measures to arrest increases. Therefore, the amendments will have no effect on the discharge effluent limits for facilities that are currently discharging copper or lead at concentrations that are below the existing CTR values. Resolution No. R15-004 became effective upon USEPA approval. However, the implementation of the lead WLA will not take effect until federal USEPA has de-promulgated the existing lead CTR water quality criteria.

- ii. **Los Angeles River Nitrogen Compounds and Related Effects TMDL** - On July 10, 2003, the Regional Water Board adopted Resolution No. 2003-009, *Amendment to the Basin Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River (LA River Nitrogen Compounds TMDL)*. On November 19, 2003, the State Water Board approved the *LA River Nitrogen Compounds TMDL*. However, on December 4, 2003, the Regional Water Board revised the *LA River Nitrogen Compounds TMDL* by adopting Resolution No. 2003-016, *Revision of Interim Effluent Limits for Ammonia in the Amendment to the Water Quality Control Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River*. Resolution No. 2003-016 only revised the portion of the *LA River Nitrogen Compounds TMDL* containing interim limits for total ammonia as nitrogen, for the Los Angeles-Glendale and Donald C. Tillman WRPs. All other portions of the TMDL remained unchanged. The *LA River Nitrogen Compounds TMDL* went into effect on March 23, 2004, when the Regional Water Board filed the Notice of Decision with the California Resources Agency.

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 Waterbodies in the Santa Clara, Los Angeles, and San Gabriel River Watersheds*. This amendment to the Basin Plan incorporates 30-day average site-specific objectives (SSO) for ammonia along with corresponding site-specific early life stage (ELS) implementation provisions for select waterbody reaches and tributaries in the Santa Clara, Los Angeles, and San Gabriel River watersheds. In accordance with Implementation Table, Task 8 of the *LA River Nitrogen Compounds TMDL*, "...If a site specific objective is adopted by the Regional Board, and approved by relevant approving agencies, this TMDL will need to be revised, readopted, and reapproved to reflect the revised water quality objectives."

On December 6, 2012, the Regional Water Board adopted Resolution No. R12-010, *Amendment to the Water Quality Control Plan for Plan for the Los Angeles Region to amend the Total Maximum Daily Load (TMDL) for Nitrogen*

Compounds and Related Effects in the Los Angeles River by incorporating site-specific ammonia objectives. This amendment incorporated the approved site-specific 30-day average objectives for ammonia per Resolution No. 2007-005 with the condition that implementation actions to achieve applicable site-specific objectives in these waterbodies must also result in compliance with downstream water quality objectives for ammonia and other nitrogen compounds. In addition, Attachment A to Resolution No. R12-010 states that regardless of the SSO and SSO-derived WLAs, for discharges regulated under this TMDL with concentrations below site-specific water quality objectives, effluent limitations shall ensure effluent concentrations do not exceed the level of water quality that can be reliably maintained by the facility's applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding requirements in Clean Water Act section 402(o) and anti-degradation requirements are met. On June 4, 2013, the State Water Board approved the resolution. On June 9, 2014, and August 7, 2014, respectively, OAL and USEPA approved Resolution R12-010, and it became effective on August 7, 2014.

- iii. **Los Angeles River Bacteria TMDL** – On July 8, 2010 the Regional Water Board adopted Resolution No. R10-007, *Amendment to the Water Quality Control Plan for the Los Angeles Region to Incorporate a Total Maximum Daily Load for Indicator Bacteria in the Los Angeles River Watershed (LA River Bacteria TMDL)*. For individual NPDES permits, the *LA River Bacteria TMDL* assigned WLAs of zero days of allowable exceedances of the single sample *E. coli* target for both wet and dry weather (235/100 ml) and no exceedances of the *E. coli* geometric mean target (126/100 ml). The *LA River Bacteria TMDL* also contains WLAs for the Donald C. Tillman, Los Angeles-Glendale, and Burbank WRPs, which are set equal to a 7-day median of 2.2 MPN/100 mL of *E. coli* and/or a daily max of 235 MPN/100mL to ensure zero days of allowable exceedances. No exceedances of the monthly geometric mean TMDL numeric target of 126/100 mL *E. coli* are permitted. *The LA River Bacteria TMDL* became effective on March 23, 2012.
- iv. **Los Angeles River Trash TMDL** - On May 1, 2008, the Regional Water Board adopted Resolution No. 2008-007, *Amendment to the Basin Plan for the Los Angeles Region to Incorporate a Trash Total Maximum Daily Load for the Malibu Creek Watershed (Trash TMDL)*. The Trash TMDL was approved by the State Water Board, OAL, and USEPA on March 17, 2009, June 16, 2009, and June 26, 2009, respectively, and became effective on July 7, 2009.

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 part 122.44(a) requires that permits include applicable TBELs and standards; and 40 CFR part 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 pollutant of concern for protection and evaluation of narrative Basin Plan Objectives.

A. Exemption to Discharge Prohibition for Malibu Creek

The background related to the discharge exceptions described in the Order is described below:

1. A provision in this Order prohibits discharges from Tapia WRF to Malibu Creek from April 15 to November 15 of each calendar year from all discharge points, except under certain conditions. These conditions include:
 - a. Treatment plant upset or other operational emergencies;
 - b. Storm events as determined by the Executive Officer; or
 - c. The existence of minimal streamflow conditions that require flow augmentation in Malibu Creek to sustain endangered species as determined by the Executive Officer.
2. The Discharger submitted a "Rain Impact Analysis" (February 1999) and updated analysis (May 2005) to determine the impact of rain events on Tapia WRF inflows and recycled water demand (i.e., how long it takes for recycled water demand to return to normal). The analysis also includes the spray field recovery time under both short-term rain events during the prohibition, and long-term winter rain events during unusually wet winters (average rainfall exceeding the 90th percentile of rainfall since 1993). These parameters are contingent on the magnitude and timing of rain event(s) and the evapotranspiration. The analysis showed that it takes approximately four days (with 0.43 inches of rain) for recycled water demand to return to pre-rain capacity. Following extremely wet winters, recycled water demand and spray field recovery times depend directly on the volume of rainfall received and plant water demand (evapotranspiration) following the cessation of winter storms. When plant water demand is less than the cumulative rainfall, soils are still saturated on April 15, impacting both recycled water demand and spray field absorption capacity. These impacts end when cumulative plant water demand exceeds cumulative rainfall, and varies from one to several weeks after April 15th depending on the severity of winter rain events.

If LVMWD cannot reuse all of the effluent during rain events, so the Discharger has the option and is encouraged to discharge to the Los Angeles River.

Based on the foregoing, this Order allows storm events during the prohibition as an exemption to the discharge prohibition when the storm intensity is over 0.4 inches at the Plant rain gauge. Subject to conditions in the Order and those in Attachment SW-1, the Discharger may discharge when the storm intensity is <0.4 inches at the Plant rain gauge.

3. In the past, The National Marine Fisheries Service (NMFS), U.S. Fish and Wildlife Service, and California Department of Fish and Game have expressed concern over the summer discharge prohibition because it may cause adverse modification of habitat for the Southern California Steelhead Trout and other potential impacts to aquatic life.

LVMWD contracted Entrix, Inc., to undertake a study on the minimum streamflow in Malibu Creek with respect to the steelhead trout habitat. The study entitled "*Minimum Flow Recommendations for Malibu Creek*" (Entrix, Inc., 1999), recommends that a minimum streamflow be maintained in Malibu Creek and discussed three levels of streamflow – 2.5, 3.5 and 4.5 cfs and the quantity of aquatic habitat associated with each. NMFS evaluated the three alternative flow levels and in a letter to the Regional

Water Board dated April 12, 2000, and discussed the advantages and disadvantages of the three levels of streamflow.

While NMFS contended that the lower streamflow alternatives, 2.5 and 3.5 cfs, would likely result in less stream habitat for steelhead trout than the 4.5 cfs alternative, they also pointed out that these lower flow alternatives might be beneficial by producing lower water velocities which would favor the formation of cool water refuge in pools. However, most importantly, each alternative is likely to eliminate late-summer, low-flow days.

During drought years Malibu Creek level was low enough to require flow augmentation for protection of endangered species (steelhead trout). During the term of Order No. R4-2010-0165, discharge to augment the creek flow occurred in 2011, 2013, 2014, 2015, and 2016. These discharges consisted of tertiary treated wastewater conveyed through a fire hydrant and released through the Discharge Point 001. This approach allowed flow rates to be easily adjusted to bring the creek flows back up to 2.5 cfs at RSW-MC013D (formerly known as R13). Once discharges to augment the creek flow began, monitoring of the creek flow at the lower sites of Malibu Creek and Malibu Lagoon was initiated and continued until water appeared at the Cross Creek Road Bridge (RSW-[MC013D/MC004D](#), formerly known as R-4).

This Order therefore allows discharge from Tapia WRF during the prohibition period to maintain a streamflow of 2.5 cfs at the Los Angeles County gauging station F-130-R. This flow is likely to eliminate late-summer, low flow days in the reach from Rindge Dam to Cross Creek Road in Malibu Creek the section of Malibu Creek occupied by steelhead trout, while minimizing flows into Malibu Lagoon. This Order also requires LVMWD to monitor the creek flow so that the 2.5 cfs flow can be maintained in this reach through augmentation from Tapia WRF.

B. Technology-Based Effluent Limitations (TBELs)

1. Scope and Authority

Technology-based effluent limits require a minimum level of treatment for industrial/municipal point sources based on currently available treatment technologies while allowing the Permittee to use any available control techniques to meet the effluent limits. The 1972 CWA required POTWs to meet performance requirements based on available wastewater treatment technology. Section 301 of the CWA established a required performance level--referred to as "secondary treatment" --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 which are specified in 40 CFR part 133. These technology- based regulations apply to all POTWs and identify the minimum level of effluent quality to be attained by secondary treatment in terms of BOD₅20°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 in terms of BOD₅20°C, TSS, and pH. However, all TBELs from the previous Order No. R4-2010-0165, are based on tertiary-treated wastewater treatment standards. These effluent limitations have been carried over from the previous Order to avoid backsliding. Further, mass-based effluent limitations are based on a design flow rate of 12 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-6. Summary of TBELs in Order R4-2017-XXXX

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
BOD ₅ 20°C	mg/L	10	--	20	--	--
	lbs/day ¹¹	1,000	--	2,000	--	--
TSS	mg/L	5.0	--	10	--	--
	lbs/day ⁸	500	--	1,000	--	--
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 the State Water Board precedential decision, State Water Board Order No. WQ 2004-0010 (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, more stringent than secondary treatment requirements that are necessary to meet applicable 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 from section IV.C.2.

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

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are

¹¹ The mass emission rates are based on the plant design flow rate of 12 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 discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

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

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 Malibu Creek and the Los Angeles 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. BOD₅20°C and TSS

BOD₅20°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:

- (1) The 30-day average shall not exceed 30 mg/L, and
- (2) The 7-day average shall not exceed 45 mg/L.

The Tapia WRF permit provides tertiary treatment requirements; therefore, the BOD₅20°C and TSS limits are more stringent than secondary treatment requirements based on Best Professional Judgment (BPJ). The Tapia WRF adds a polymer (Alum) to the secondary-treated wastewater to enhance precipitation of solids and subsequently filters the wastewater. These additional processes result in better solids removal than is achievable through secondary treatment only.

The monthly average, the 7-day average, and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. Those limits were all included in the previous permit (Order R4-2010-0165) and the Tapia WRF has been able to meet all three limits (monthly average, the 7-day average, and the daily maximum) for both BOD₅20°C and TSS.

In addition to including mass-based and concentration-based effluent limitations for BOD₅20°C and suspended solids, the Order also contains percent removal requirements for these two constituents. In accordance with 40 CFR parts 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 part 133.102(c), the effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the POTW demonstrates that (1) inorganic chemicals are not added to the waste stream as part of the treatment process; and (2) contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0. The effluent limitation for 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 limits 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 limits are empirically based on results obtained from the settleable solids 1-hour test, using an Imhoff cone.

It is impracticable to use a 7-day average limitation because short-term spikes of settleable solid levels that would be permissible under a 7-day average scheme would not be adequately protective of all beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the antibacksliding exceptions apply. The monthly average and daily maximum limits were both included in the previous permit and the Tapia WRF has been able to meet both limits.

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 antibacksliding exceptions apply. Both limits were included in the previous permit and the Tapia WRF 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 water quality objective, “Chlorine residual shall not

be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses.”

It is impracticable to use a 7-day average or a 30-day average limitation, because it is not as protective of beneficial uses as a daily maximum limitation. Chlorine is very toxic to aquatic life and short term exposure of chlorine may cause fish kills.

vi. **Total Dissolved Solids (TDS), Chloride, Sulfate, and Boron**

The limits for total dissolved solids, sulfate, chloride, and boron are based on Basin Plan Water Quality Objectives (WQOs) for the Malibu Creek and Los Angeles River watersheds. The WQOs for the Malibu Creek Watershed are as follows: TDS: 2000 mg/L, chloride: 500 mg/L, sulfate: 500 mg/L, Boron: 2.0 mg/L. This Order incorporates these WQOs as final effluent limitations. The WQOs for the Los Angeles River Watershed are as follows: TDS: 950 mg/L, chloride: 150 mg/L, sulfate: 300 mg/L, and none for boron since agricultural supply is not a beneficial use of the surface water. This Order incorporates these WQOs as final effluent limitations. The 2010 NPDES Order contained a chloride limit of 190 mg/L, citing as the basis, the Regional Water Board Resolution No. 97-02, *Amendment to the Water Quality Control Plan to incorporate a Policy for Addressing Levels of Chloride in Discharges of Wastewaters*. Resolution 97-02 was adopted by Regional Water Board on January 27, 1997; approved by the State Water Board in Resolution 97-94; and, approved by OAL on January 8, 1998; and served to revise the chloride water quality objective in select reaches of the Los Angeles River and other surface waters. The current Basin Plan now contains a 150 mg/L chloride WQO for Reach 6 of the LA River, which includes tributaries upstream of the Sepulveda Flood Control Basin. Since Eff 005 discharges to Reach 6 of the LA River, the 150 mg/L chloride WQO applies. It is practicable to express these limits as monthly averages, since they are not expected to cause acute effects on beneficial uses.

Limits based on the Basin Plan water quality objectives have been included in this Order because, based upon Best Professional Judgment, these constituents are always present in potable water which is the supply source of the wastewater entering the treatment plant. They may be present in concentrations which meet California drinking water standards but exceed the Basin Plan water quality objectives. Therefore, limitations are warranted to protect the beneficial uses of the receiving water.

vii. **Methylene Blue Activated Substances (MBAS)**

The existing permit effluent limitation of 0.5 mg/l for MBAS was developed based on the Basin Plan WQO, which incorporates Drinking Water Standards in Title 22, CCR, to protect the surface water MUN beneficial use. Given the nature of the facility which accepts domestic wastewater into the sewer system and treatment plant, and the characteristics of the wastes discharged, the discharge has the reasonable potential to exceed both the numeric MBAS WQO and the narrative WQO for the prohibition of floating material such as foams and scums. Therefore an effluent limitation is required.

Cobalt thiocyanate active substances (CTAS) are monitored in the same way as MBAS. The presence or absence of CTAS during sampling assists permit

writers and the Permittee in diagnosing the source of floating materials, such as foam or scum, which are prohibited by the Basin Plan when they cause nuisance or adversely affect beneficial uses. There is no limit or compliance requirement for CTAS.

viii. **Nitrogen Compounds/Nutrient Compounds**

Nitrate Nitrogen ($\text{NO}_3 - \text{N}$), Nitrite Nitrogen ($\text{NO}_2 - \text{N}$), Total Inorganic Nitrogen ($\text{NO}_2 + \text{NO}_3$ 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 limitations for biostimulatory substances are based on the Basin Plan water quality objective, “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 and are intended to be protective of the beneficial uses, pursuant to 40 CFR part 122.44(d). Total inorganic nitrogen will be the indicator parameter intended to control algae, pursuant to 40 CFR part 122.44(d)(1)(vi)(C).

Nutrients are included in the 303(d) List in the *California 2012 Integrated Report* for the Los Angeles River and for Malibu Creek. Since nutrients have WLAs in the *Los Angeles River Nutrient TMDL* and in the USEPA-promulgated TMDLs, TMDL-based effluent limitations for nutrients are required in order to implement the provisions of the TMDL and are intended to restore the water quality in that section of the receiving water.

- (b) **Concentration-based limit.** The proposed effluent limitations for Malibu Creek discharges for nitrate plus nitrite (8 mg/L), summer total nitrogen (1 mg/L), winter total nitrogen (4 mg/L), summer total phosphorus (0.1 mg/L), and winter total phosphorus (0.2 mg/L), are based on the Malibu Creek Nutrient TMDLs. The proposed effluent limitations for the LA River discharges for nitrate nitrogen (8.0 mg/L), nitrite nitrogen (1.0 mg/L), and nitrate plus nitrite nitrogen (8.0 mg/L), are based on the *LA River Nutrient TMDL WLA*. However, if the Los Angeles River is de-listed for nutrients, and the TMDL is revised accordingly, then the permit may be re-opened to include effluent limitations based on water quality objectives in the Basin Plan.

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

- (c) **Mass-based limit.** There are no mass emission rates for nitrogen compounds because the *Malibu Creek Nutrients TMDL* and the *LA River Nutrients TMDL* did not specify mass-based WLAs.

ix. **Total Ammonia**

Ammonia is a pollutant routinely found in the wastewater effluent of POTWs, in landfill-leachate, and 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. Groundwater recharge is a 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.

Malibu Creek Ammonia

The 1994 Basin Plan contained water quality objectives for ammonia to protect aquatic life, in Table 3-1 through Table 3-4. Those ammonia WQOs were revised on April 24, 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 bays, estuaries, and wetlands) with Beneficial Use Designations for Protection of Aquatic Life*. Resolution No. 2001-011 was approved by the State Water Board, OAL, and USEPA on April 30, 2003, June 05, 2003, and June 19, 2003, respectively, and is now in effect.

On December 01, 2005, the Regional Water Board adopted Resolution No. 2005-014, an amendment to the *Water Quality Control Plan 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*. The amendment contains ammonia objectives to protect the Early Life Stages (ELS) of fish in inland surface water supporting aquatic life. This resolution was approved by USEPA on April 05, 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.

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

(a) **One-Hour Average Objective**

The USEPA approval letter dated June 19, 2003, of the 2002 Ammonia Basin Plan Amendment, stated that the acute criteria are dependent on pH and whether sensitive coldwater fish are present. The Facility's immediate receiving waterbody has "COLD" and "MIGR" beneficial use designation. Therefore, the one-hour average objective is dependent on pH and fish species (salmonids present or absent) but not on temperature.

For waters designated COLD or MIGR, the one-hour average concentration of total ammonia as nitrogen (in mg N/L) shall not exceed the values in Table 3-1 (amended on April 25, 2002) of the Basin Plan or as described in the equation below:

$$\text{One-hour Average Concentration} = \frac{0.275}{1 + 10^{7.204 - \text{pH}}} + \frac{39}{1 + 10^{\text{pH} - 7.204}}$$

The 90th percentile of effluent pH is 7.3. Use of the 90th percentile pH to set effluent limitations is appropriate because of the shorter time scale of the one-hour average. It is conservative, because it is overprotective 90% of the time. Additionally, there is little variability in the effluent pH data. Using the pH value of 7.3 in the formula above, the resulting One-hour Average Objective is equal to 17.5 mg/L.

(b) 30-Day Average Objective

Early life stage of fish is presumptively present and must be protected at all times of the year unless the water body is listed in Table 3-5 of the Basin Plan (in Resolution No. 2005-014) or unless a site-specific study is conducted, which justifies applying the ELS absent condition or a seasonal ELS present condition. The Tapia WRF discharges into Malibu Creek, which is not listed in Table 3-5; therefore, this water body is designated as “ELS Present.” For freshwaters subject to the “Early Life Stage Present” condition, the thirty-day average concentration of total ammonia as nitrogen (in mg nitrogen/L) shall not exceed the values in Table 3-2 of the Basin Plan or as described in the equation below:

30-day Average Concentration =

$$C = \frac{0.0577}{1 + 10^{7.688 - \text{pH}}} + \frac{2.487}{1 + 10^{\text{pH} - 7.688}} * \text{MIN} (2.85, 1.45 * 10^{0.028 * (25 - T)})$$

Where T = temperature expressed in °C.

The 30-day average objective¹² is dependent on pH, temperature, and the presence or absence of early life stages of fish. The 50th percentile of effluent pH and temperature is 7.1 and 24.1°C, respectively. Use of the 50th percentile pH and temperature is appropriate to set the 30-day average objective, because the 30-day average represents more long-term conditions. Additionally, there is little variability in the effluent pH data, and the 30-day objective is primarily dependent upon pH. Using the

¹² This is the current Basin Plan definition of the 30-day average objective, according to the Ammonia Basin Plan Amendment, 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,”* adopted by the Los Angeles Regional Water Quality Control Board on April 25, 2002. It was amended by Resolution No. 2005-014, adopted by the Regional Board on December 1, 2005 and was approved by the USEPA on April 5, 2007. This new Resolution implements ELS Provision as described under “implementation”, subparagraph 3. In this Resolution, the Discharger’s receiving waterbody is designated as ELS present.

Discharger's monitoring data in the formula above, the resulting 30-Day Average Objective is equal to 3.1 mg/L.

(c) Translation of Ammonia Nitrogen Objectives into Effluent Limitations

In order to translate the water quality objectives for ammonia as described in the preceding discussions into effluent limitations, the Implementation Provisions of the 2002 Basin Plan Amendment, Section 5 – Translation of Objectives into Effluent Limits, was followed and was discussed below. This method is similar to the method contained in "Policy for Implementation of Toxics Standard for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000)". The method is also consistent with that outlined in the US EPA *Technical Support Document for Water Quality-based Toxics Control* (1991).

Step 1 – Identify applicable water quality criteria.

Effluent pH and temperature are used to calculate effluent ammonia limitations. This is appropriate when using the translation procedure, because the translation procedure uses variability in ammonia effluent concentrations to set the limitations from the objectives. Additionally, conditions in the effluent may be significantly different than conditions in the receiving water. Use of effluent data to set effluent ammonia limitations will ensure that ammonia water quality objectives are met in the effluent at all times, even in the case where effluent conditions are less favorable than receiving water conditions. Additional receiving water monitoring and compliance determinations will be required in addition to the effluent limitations, to ensure that ammonia water quality objectives are met in the receiving water at all times.

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

pH = 7.3 at 90th percentile

pH = 7.1 at 50th percentile

Temperature = 24.1°C at 50th percentile

The receiving water is classified as Waters Designated COLD and MIGR.

From Table 3-1 of the Basin Plan, when pH is equal to 7.3;

One-hour Average Objective = 17.5 mg/L

From Table 3-2 of the Basin Plan, when pH = 7.1 and temperature = 24.1°C;

30-day Average Objective = 3.1 mg/L

From Basin Plan amendment;

4-day Average Objective = 2.5 times the 30-day average objective.

4-day Average Objective = 2.5 X 3.1 = 7.6 mg/L

Ammonia Water Quality Objectives (WQO) Summary:

One-hour Average = 17.5 mg/L

Four-day Average = 7.6 mg/L

30-day Average = 3.1 mg/L

Step 2 – For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing zones are inappropriate for effluent dominated waters such as the inland surface waters within the Los Angeles Region, the following equation applies:

$$ECA = WQO$$

Step 3 – Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with the appropriate variability-dependent ECA multiplier in Table 3-6. The ECA multiplier is dependent on the CV (i.e., standard deviation/mean for ammonia) calculated using the final effluent ammonia dataset. The LTA is calculated as follows:

ECA multiplier when CV = 1.7

One-hour Average ECA Multiplier = 0.131

Four-day Average ECA Multiplier = 0.236

30-day Average ECA Multiplier = 0.517

Using the LTA equations:

$$LTA_{1\text{-hour}/99} = ECA_{1\text{-hour}} \times ECA \text{ multiplier}_{1\text{-hour}99} = 17.5 \times 0.131 = 2.3 \text{ mg/L}$$

$$LTA_{4\text{-day}/99} = ECA_{4\text{-day}} \times ECA \text{ multiplier}_{4\text{-day}99} = 7.6 \times 0.236 = 1.8 \text{ mg/L}$$

$$LTA_{30\text{-day}/99} = ECA_{30\text{-day}} \times ECA \text{ multiplier}_{30\text{-day}99} = 3.1 \times 0.517 = 1.6 \text{ mg/L}$$

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

$$LTA_{min} = 1.6 \text{ mg/L}$$

Step 5 – Calculate the maximum daily and the average monthly water quality-based final effluent limitations by multiplying LTA_{min} as selected in Step 4, with the appropriate LTA multiplier in Table 3-7.

Since the effluent monitoring frequency for ammonia was monthly in the previous permit cycle, $n = 30$. With $n = 30$ and $CV = 1.7$, the MDEL and AMEL are calculated as follows:

$$\text{MDEL multiplier} = 7.63$$

$$\text{AMEL multiplier} = 1.57$$

$$\text{MDEL} = LTA_{min} \times \text{MDEL multiplier}_{99} = 1.6 \times 7.63 = 12 \text{ mg/L}$$

$$\text{AMEL} = LTA_{min} \times \text{AMEL multiplier}_{95} = 1.6 \times 1.57 = 2.5 \text{ mg/L}$$

Table F-7. Translated Ammonia Effluent Limitations

Constituent	MDEL (mg/L)	AMEL (mg/L)
Ammonia Nitrogen	12	2.5

Although the calculated 12 mg/L MDEL is less stringent than the 8.1 mg/L MDEL in Order R4-2010-0165, the new calculated 2.5 mg/L AMEL is more stringent than the 3.1 mg/L AMEL contained in the 2010 Order. Since LVMWD will need to comply with a more stringent AMEL, the new MDEL does not constitute backsliding.

Los Angeles River Ammonia

On July 10, 2003, the Regional Water Board adopted Resolution No. 2003-009, *Amendment to the Basin Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River (LA River Nitrogen Compounds TMDL)*. On November 19, 2003, the State Water Board approved the Nitrogen Compounds TMDL. On December 4, 2003, the Regional Water Board revised the *LA River Nitrogen Compounds TMDL* by adopting Resolution No. 2003-016, *Revision of Interim Effluent Limits for Ammonia in the Amendment to the Water Quality Control Plan for the Los Angeles Region to Include a TMDL for Nitrogen Compounds and Related Effects in the Los Angeles River*. Resolution No. 2003-016 only revised the portion of the *Nitrogen Compounds TMDL* containing interim limits for total ammonia as nitrogen, for the Los Angeles-Glendale and Tillman WRPs. All other portions of the TMDL remained unchanged. The *Nitrogen Compounds TMDL* went into effect on March 23, 2004, when the Regional Water Board filed the Notice of Decision with the California Resources Agency. The average monthly and maximum daily final effluent limitations for ammonia of 2.3 mg/l and 10.1 mg/l are based on the WLAs assigned to tributaries of the Los Angeles River. In addition, the average monthly final effluent limitations for nitrate (8.0 mg/l), nitrite (1.0 mg/l), and nitrate plus nitrite (8.0 mg/l), are based on the WLAs assigned to tributaries of the Los Angeles River.

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 for ammonia along with corresponding site-specific early life stage implementation provisions for select waterbody reaches and tributaries in the Santa Clara, Los Angeles, and San Gabriel River watersheds. In accordance with Implementation Table, Task 8 of the *LA River Nitrogen Compounds TMDL*, "...If a site specific objective is adopted by the Regional Board, and approved by relevant approving agencies, this TMDL will need to be revised, readopted, and reapproved to reflect the revised water quality objectives."

On December 6, 2012, the Regional Water Board adopted Resolution No. R12-010, *Amendment to the Water Quality Control Plan for the Los Angeles Region to amend the Total Maximum Daily Load (TMDL) for Nitrogen Compounds and Related Effects in the Los Angeles River by Incorporating Site-specific Ammonia Objectives*. This amendment incorporated the approved site-specific 30-day average objectives for ammonia per Resolution No. 2007-005. On June 4, 2013, the State Water Board approved the Resolution. On June 9, 2014, and August 7, 2014, respectively, OAL and USEPA approved Resolution R12-010, and it became effective on August 7, 2014. The amendments to the LA River Nitrogen Compounds TMDL did not change the implementation of the WLAs for the Tapia WRF and other minor point sources that discharge to tributaries of the Los Angeles River, thus the final effluent limitations for ammonia as nitrogen from Order R4-2010-0165 were retained in this Order.

x. Phosphorus

Excess phosphorous is a cause for algal bloom and eutrophication, as well as decrease in dissolved oxygen. Both receiving waters are impaired for nutrients;

therefore, the Order includes final effluent limitations for phosphorus at all outfalls. The phosphorus final effluent limitations for Malibu Creek are based on the WLAs in the *Malibu Creek Nutrients TMDL*. The phosphorus final effluent limitations for the Los Angeles River are based on the Basin Plan narrative "Biostimulatory substances include excess nutrients (nitrogen, phosphorus) and other compounds that stimulate aquatic growth. In addition to being aesthetically unpleasant (causing taste, odor, or color problems), this excessive growth can also cause other water quality problems. 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". The 3 mg/L AMEL and the 4 mg/L MDEL phosphorus final effluent limitations, for Discharge 005 to a tributary of the Los Angeles River, were calculated using the 95th and 99th percentile of effluent data collected between November 2010 and December 2015, using MINITAB software. This limitation reflects performance data of the plant, and as such no additional treatment is needed to comply with the limitation. Thus, there is no "economic consideration" needed.

xi. **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. Thus, the permit contains the following:

(a) Effluent Limitations:

- (1) The 7 day median number of coliform organisms at some point in the treatment process must not exceed a MPN or CFU of 2.2 per 100 milliliters,
- (2) 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
- (3) 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 be met at the point of the treatment train immediately following disinfection, as a measure of the effectiveness of the disinfection process.

(b) Effluent Limitations (Bacteria TMDLs Resolution No. R12-009 and R10-007)

- (1) The *Malibu Creek Bacteria TMDL* contains WLAs for the Tapia WRF equal to the bacteriological objectives contained in Chapter 3 of the Basin Plan. The single sample target for *E. coli* is 235/100 mL and the geometric mean numeric target for *E. coli* is 126/100 mL.
- (2) The LA River Bacteria TMDL contains WLAs for tributaries of the Los Angeles River of zero (0) days of allowable exceedances of the single sample target for both dry and wet weather and no exceedances of the geometric mean target. The single sample target for *E. coli* is

235/100 mL and the geometric mean numeric target for *E. coli* is 126/100 mL.

(c) Receiving Water Limitation

(1) Geometric Mean Limits

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

(2) 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 effective on December 5, 2011.

xii. **Temperature**

The USEPA document, *Quality Criteria for Water 1986* [EPA 440/5-86-001, May 1, 1986], also referred to as the *Gold Book*, discusses temperature and its effects on beneficial uses, such as recreation and aquatic life.

- (a) 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).
- (b) 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.
- (c) 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 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.A.1.c. 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 quoted 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.

xiii. **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 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 and section 60301.320 of Title 22 CCR, Chapter 3, “Filtered Wastewater.”

xiv. **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. This Order includes final effluent limitations for radioactive substances based on the requirements in Title 22, Chapter 15, Article 5, Sections 64442 and 64443, of the CCR to protect the human health associated with the contact recreation (REC-1) beneficial use in the receiving waters.

xv. **Total Trihalomethanes**

The effluent limitations for total trihalomethanes are based on the Basin Plan WQOs incorporation of the Title 22 maximum contaminant levels by reference on page 3-24 for the protection of the MUN beneficial use of the groundwater. The MCL for total trihalomethanes (80 µg/L) is listed in Table 64431-A of Section 64431 of Title 22 of the CCR.

Total trihalomethanes is the sum of four individual trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

Although many of the Basin Plan's WQOs for the protection of the MUN beneficial use are based on the incorporation of Title 22 MCLs by reference, the MCLs for disinfection byproducts (Table 64533-A of Section 64533 of Title 22) were not referenced on pages 3-8 or 3-18 of the Basin Plan. Despite that omission, Regional Board staff used Best Professional Judgement to incorporate the MCL for total trihalomethanes into the Order to protect human health associated with the REC-1 beneficial use. Total trihalomethanes are byproducts of the disinfection process used at the Tapia WRF.

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 Technical Support Document (TSD) specifies the procedures to conduct reasonable potential analyses for non-priority pollutants.

3. **Determining the Need for WQBELS**

The Regional Water Board developed WQBELS for total nitrogen and total phosphorus established in a *Malibu Creek Nutrients TMDL* and the Regional Water Board also developed WQBELS for ammonia-nitrogen, nitrite-nitrogen, nitrate-nitrogen, nitrite plus nitrite as nitrogen, cadmium, copper, lead, zinc, and selenium, that have available WLAs established in a *Los Angeles River Nutrients TMDL and the LA River Metals TMDL*. The effluent limitations for these pollutants were established regardless of whether or not 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 standards. The Regional Water Board developed WQBELS for these pollutants pursuant to 40 CFR section 122.44(d)(1)(vii)(B), which does not require or contemplate a RPA. The NPDES regulations at 40 CFR 122.44(d)(1)(vii)(B) require that NPDES permits include effluent limitations developed consistent with the assumptions and requirements of any WLA that has been assigned to the discharge as part of an approved TMDL. Thus, consistent with the federal requirement and with the NPDES Permit Writers' Manual (EPA-833-K-10-001, September 2010), final effluent limitations have been included in this Order for total nitrogen, total phosphorus, ammonia-nitrogen, nitrate-nitrogen, nitrite-nitrogen, nitrate plus nitrite nitrogen, cadmium, copper, lead, zinc, and selenium for which a WLA has been assigned to the permitted facility through a TMDL.

For those priority pollutants that have no assigned WLAs under a TMDL, in accordance with Section 1.3 of the SIP, Regional Water Board staff conducted an RPA 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 staff identified the 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 November 2010 to December 2015.

Section 1.3 of the SIP provides the procedures for determining reasonable potential to exceed applicable water quality criteria and objectives. The SIP specifies three triggers to complete an RPA:

Trigger 1 – If the MEC is greater than or equal to the CTR water quality criteria or applicable objective (C), a limitation is needed.

Trigger 2 – If background water quality (B) > C and the pollutant is detected in the effluent, a limitation is needed.

Trigger 3 – If other related information such as CWA 303(d) listing for a pollutant, discharge type, compliance history, then best professional judgment is used to determine that a limit is needed.

NPDES Permit Writers' Manual (EPA-833-K-10-001), September 2010 also cited that even without a TMDL, a permitting authority could, at its own discretion, determine that WQBELs are needed for any pollutant associated with impairment of a waterbody. A permitting authority might also determine that WQBELs are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics.

Diazinon is not a priority pollutant. However, diazinon is listed on the USEPA's National Recommended Water Quality Criteria with freshwater aquatic life protection of: (1) 4-day average of 0.05 µg/L, and (2) 1-hr average of 0.08 µg/L. The Los Angeles River is also impaired for diazinon and is listed on the 303(d) list; therefore monitoring is required for diazinon.

Based on the RPA, the pollutants that demonstrate reasonable potential are cyanide, mercury, bis(2-ethylhexyl)phthalate, dichlorobromomethane, and total trihalomethanes. The following Table summarizes results from RPA.

Table F-8. Summary of Reasonable Potential Analysis for CTR Based Priority Pollutants

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	0.35	1 (MC) <0.5 (LR)	No	C>B, C>MEC
2	Arsenic	150	3.0	8 (MC) 2.8 (LR)	No	C>B, C>MEC
3	Beryllium	Narrative	<0.2	<0.033 (MC) <0.033 (LR)	No	C>B, C>MEC
4	Cadmium	5.3	0.4	1.2 (MC) 0.4 (LR)	Yes	TMDL WLA
5a	Chromium III	549.5	<0.22		No	C>B, C>MEC
5b	Chromium VI	11	0.3	0.8	No	C>B, C>MEC
6	Copper	26	16	101 (MC) 8 (LR)	Yes	TMDL WLA
7	Lead	12	1.2	4 (MC) 0.5 (LR)	Yes	TMDL WLA
8	Mercury	0.051	0.02	0.11 (MC) 0.07 (LR)	Yes	C<B, C>MEC
9	Nickel	93	5	40 (MC) 5.7 (LR)	Yes	C>B, C>MEC
10	Selenium	5	3	25 (MC) 0.9 (LR)	Yes	TMDL WLA
11	Silver	11	<1	0.48 (MC) 0.05 (LR)	No	C>B, C>MEC
12	Thallium	6.3	<0.2	<0.014 (MC) <0.014 (LR)	No	C>B, C>MEC
13	Zinc	253	90	110 (MC) 110 (LR)	Yes	TMDL WLA
14	Cyanide	5.2	10	<0.004 (MC) 4.1 (DNQ, LR)	Yes	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	ND	ND	No	C>B, C>MEC
17	Acrolein	780	<2.2	<2.2 (MC) <2.2 (LR)	No	C>B, C>MEC
18	Acrylonitrile	0.66	<1.8	<1.8 (MC) <1.8 (LR)	No	C>B, C>MEC
19	Benzene	71	<1	<0.23 (MC) <0.23 (LR)	No	C>B, C>MEC
20	Bromoform	360	3.9	2.8 (MC) 0.93 (DNQ, LR)	No	C>B, C>MEC
21	Carbon Tetrachloride	4.4	<0.33	<0.5 (MC) 0.7 (LR)	No	C>B, C>MEC
22	Chlorobenzene	21,000	<0.21	<0.21 (MC) <0.21 (LR)	No	C>B, C>MEC
23	Dibromochloro-methane	34	27	15.1 (MC) 6.6 (LR)	No	C>B, C>MEC
24	Chloroethane	No criteria	<0.2	<0.23 (MC) <0.23 (LR)	No	No criteria

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
25	2-chloroethyl vinyl ether	No criteria	<0.28	<0.28 (MC) <0.28 (LR)	No	No criteria
26	Chloroform	No Criteria	108	37 (MC) 27.6 (LR)	No	C>B, C<MEC but limit for total trihalomethanes
27	Dichlorobromo- methane	46	87.3	52 (MC) 24.3 (LR)	YES	C<B, C<MEC
28	1,1-dichloroethane	No criteria	<0.21	<0.21 (MC) <0.21 (LR)	No	No criteria
29	1,2-dichloroethane	99	<0.24	<0.24 (MC) <0.24 (LR)	No	C>B, C>MEC
30	1,1-dichloroethylene	3.2	<0.39	<0.39 (MC) <0.39 (LR)	No	C>B, C>MEC
31	1,2-dichloropropane	39	<0.18	<0.18 (MC) <0.18 (LR)	No	C>B, C>MEC
32	1,3-dichloropropylene	1,700	<0.32	<0.5 (MC) <0.54 (LR)	No	C>B, C>MEC
33	Ethylbenzene	29,000	<0.17	<0.17 (MC) <0.17 (MC)	No	C>B, C>MEC
34	Methyl bromide	4,000	<0.47	<0.47 (MC) <0.47 (LR)	No	C>B, C>MEC
35	Methyl chloride	No criteria	<0.26	<0.26 (MC) 0.26 (DNQ, LR)	No	No criteria
36	Methylene chloride	1,600	<0.25	<0.25 (MC) 4 (LR)	No	C>B, C>MEC
37	1,1,2,2- tetrachloroethane	11	<0.18	<0.18 (MC) <0.18 (LR)	No	C>B, C>MEC
38	Tetrachloroethylene	8.85	<0.27	<0.27 (MC) 1.1 (LR)	No	C>B, C>MEC
39	Toluene	200,000	<0.22	<0.22 (MC) <0.22 (LR)	No	C>B, C>MEC
40	Trans 1,2- Dichloroethylene	140,000	<0.23	<0.23 (MC) <0.23 (LR)	No	C>B, C>MEC
41	1,1,1-Trichloroethane	No criteria	<0.38	<0.38 (MC) <0.38 (LR)	No	C>B, C>MEC
42	1,1,2-Trichloroethane	42	<0.25	<0.25 (MC) <0.25 (LR)	No	C>B, C>MEC
43	Trichloroethylene	81	<0.37	<0.37 (MC) <0.37 (LR)	No	C>B, C>MEC
44	Vinyl Chloride	525	<0.33	<0.33 (MC) <0.33 (LR)	No	C>B, C>MEC
45	2-chlorophenol	400	<0.28	<0.28 (MC) <0.28 (LR)	No	C>B, C>MEC
46	2,4-dichlorophenol	790	<0.26	<0.26 (MC) <0.26 (LR)	No	C>B, C>MEC
47	2,4-dimethylphenol	2,300	<0.30	<0.30 (MC) <0.30 (LR)	No	C>B, C>MEC

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
48	4,6-dinitro-o-cresol (aka 2-methyl-4,6-Dinitrophenol)	765	<1.7	<1.7 (MC) <1.7 (LR)	No	C>B, C>MEC
49	2,4-dinitrophenol	14,000	<1.6	<1.6 (MC) <1.6 (LR)	No	C>B, C>MEC
50	2-nitrophenol	No criteria	<0.26	<0.26 (MC) <0.26 (LR)	No	No criteria
51	4-nitrophenol	No criteria	<0.45	<0.45 (MC) <0.45 (LR)	No	No criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-cresol)	No criteria	<0.23	<0.23 (MC) <0.23 (LR)	No	No criteria
53	Pentachlorophenol	8.2	<0.19	1.9 (MC) 0.73 (DNQ, LR)	No	C>B, C>MEC
54	Phenol	4,600,000	<0.16	<0.16 (MC) <0.16 (LR)	No	C>B, C>MEC
55	2,4,6-trichlorophenol	6.5	<0.22	<0.22 (MC) <0.22 (LR)	No	C>B, C>MEC
56	Acenaphthene	2,700	<0.38	<0.38 (MC) <0.38 (LR)	No	C>B, C>MEC
57	Acenaphthylene	No criteria	<0.4	<0.4 (MC) <0.4 (LR)	No	No criteria
58	Anthracene	110,000	<0.38	<0.34 (MC) <0.34 (LR)	No	C>B, C>MEC
59	Benzidine	0.00054	<3.7	<3.7 (MC) <3.7 (LR)	No	C>B, C>MEC
60	Benzo(a)Anthracene	0.049	<0.19	<0.19 (MC) <0.19 (LR)	No	C>B, C>MEC
61	Benzo(a)Pyrene	0.049	<0.13	<0.13 (MC) <0.13 (LR)	No	C>B, C>MEC
62	Benzo(b)Fluoranthene	0.049	<0.14	<0.14 (MC) <0.14 (LR)	No	C>B, C>MEC
63	Benzo(ghi)Perylene	No criteria	<0.1	<0.1 (MC) <0.1 (LR)	No	No criteria
64	Benzo(k)Fluoranthene	0.049	<0.22	<0.22 (MC) <0.22 (LR)	No	C>B, C>MEC
65	Bis(2-Chloroethoxy) methane	No criteria	<0.25	<0.25 (MC) <0.25 (LR)	No	No criteria
66	Bis(2-Chloroethyl)Ether	1.4	<0.27	<0.27 (MC) <0.27 (LR)	No	C>B, C>MEC
67	Bis(2-Chloroisopropyl) Ether	170,000	<0.38	<0.38 (MC) <0.38 (LR)	No	C>B, C>MEC
68	Bis(2-Ethylhexyl) Phthalate	5.9 (MC) 4 (LR)	61	40 (MC) 200 (LR)	Yes	Tier 1: MEC>C
69	4-Bromophenyl Phenyl Ether	No criteria	<0.36	<0.36 (MC) <0.36 (LR)	No	No criteria

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
70	Butylbenzyl Phthalate	5,200	<0.18	<0.18 (MC) 0.25 (DNQ, LR)	No	C>B, C>MEC
71	2-Chloronaphthalene	4,300	<0.45	<0.45 (MC) <0.45 (LR)	No	C>B, C>MEC
72	4-Chlorophenyl Phenyl Ether	No criteria	<0.41	<0.41 (MC) <0.41 (LR)	No	No criteria
73	Chrysene	0.049	<0.19	<0.19 (MC) <0.19 (LR)	No	C>B, C>MEC
74	Dibenzo(a,h) Anthracene	0.049	<0.08	0.59 (DNQ, MC) <0.08 (LR)	No	C>B, C>MEC
75	1,2-Dichlorobenzene	17,000	<0.5	<0.57 (MC) <0.57 (LR)	No	C>B, C>MEC
76	1,3-Dichlorobenzene	2,600	<0.5	<0.53 (MC) <0.53 (LR)	No	C>B, C>MEC
77	1,4-Dichlorobenzene	2,600	<0.5	<0.55 (MC) <0.55 (LR)	No	C>B, C>MEC
78	3,3'-Dichlorobenzidine	0.077	<1.2	<1.2 (MC) <1.2 (LR)	No	C>B, C>MEC
79	Diethyl Phthalate	120,000	<0.15	<0.15 (MC) <0.15 (LR)	No	C>B, C>MEC
80	Dimethyl Phthalate	2,900,000	<0.18	<0.18 (MC) <0.18 (LR)	No	C>B, C>MEC
81	Di-n-Butyl Phthalate	12,000	<0.24	<0.24 (MC) <0.24 (LR)	No	C>B, C>MEC
82	2,4-Dinitrotoluene	9.1	<0.18	<0.18 (MC) <0.18 (LR)	No	C>B, C>MEC
83	2,6-Dinitrotoluene	No criteria	<0.27	<0.27 (MC) <0.27 (LR)	No	No criteria
84	Di-n-Octyl Phthalate	No criteria	<0.19	<0.19 (MC) <0.19 (LR)	No	No criteria
85	1,2-Diphenylhydrazine	0.54	<0.25	<0.25 (MC) <0.25 (LR)	No	C>B, C>MEC
86	Fluoranthene	370	<0.22	<0.22 (MC) <0.22 (LR)	No	C>B, C>MEC
87	Fluorene	14,000	<0.35	<0.35 (MC) <0.35 (LR)	No	C>B, C>MEC
88	Hexachlorobenzene	50	<0.49	<0.49 (MC) <0.49 (LR)	No	C>B, C>MEC
89	Hexachlorobutadiene	50	<0.47	<0.47 (MC) <0.47 (LR)	No	C>B, C>MEC
90	Hexachlorocyclopentadiene	17,000	<1.5	<1.5 (MC) <1.5 (LR)	No	C>B, C>MEC
91	Hexachloroethane	8.9	<0.52	<0.52 (MC) <0.52 (LR)	No	C>B, C>MEC
92	Indeno(1,2,3-cd)Pyrene	0.049	<0.12	<0.12 (MC) <0.12 (LR)	No	C>B, C>MEC
93	Isophorone	600	<0.21	<0.21 (MC) <0.21 (LR)	No	C>B, C>MEC

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
94	Naphthalene	No criteria	<0.49	<0.49 (MC) <0.49 (LR)	No	No criteria
95	Nitrobenzene	1,900	<0.36	<0.36 (MC) <0.36 (LR)	No	C>B, C>MEC
96	N-Nitrosodimethylamine	8.1	<0.14	<0.14 (MC) <0.14 (LR)	No	C>B, C>MEC
97	N-Nitrosodi-n-Propylamine	1.4	<0.26	<0.26 (MC) <0.26 (LR)	No	C>B, C>MEC
98	N-Nitrosodiphenylamine	16	<0.19	<0.19 (MC) <0.19 (LR)	No	C>B, C>MEC
99	Phenanthrene	No criteria	<0.32	<0.32 (MC) <0.32 (LR)	No	No criteria
100	Pyrene	11,000	<0.25	<0.25 (MC) <0.25 (LR)	No	C>B, C>MEC
101	1,2,4-Trichlorobenzene	No criteria	<0.55	<0.55 (MC) <0.55 (LR)	No	No criteria
102	Aldrin	0.00014	<0.0015	<0.003 (MC) <0.003 (LR)	No	C>B, C>MEC
103	Alpha-BHC	0.013	<0.0018	<0.0036 (MC) <0.0036 (LR)	No	C>B, C>MEC
104	Beta-BHC	0.046	<0.0031	<0.0062 (MC) <0.0062 (LR)	No	C>B, C>MEC
105	Gamma-BHC (aka Lindane)	0.063	<0.0021	<0.0021 (MC) <0.0021 (LR)	No	C>B, C>MEC
106	delta-BHC	No criteria	<0.0025	<0.005 (MC) <0.005 (LR)	No	No criteria
107	Chlordane	0.00059	<0.08	<0.16 (MC) <0.16 (LR)	No	C>B, C>MEC
108	4,4'-DDT	0.00059	<0.0031	<0.0062 (MC) <0.0062 (LR)	No	C>B, C>MEC
109	4,4'-DDE	0.00059	<0.0025	<0.0025 (MC) <0.0025 (LR)	No	C>B, C>MEC
110	4,4'-DDD	0.00084	<0.0030	<0.006 (MC) <0.006 (LR)	No	C>B, C>MEC
111	Dieldrin	0.00014	<0.0021	<0.0042 (MC) <0.0042 (LR)	No	C>B, C>MEC
112	Alpha-Endosulfan	0.056	<0.0017	<0.0034 (MC) <0.0034 (LR)	No	C>B, C>MEC
113	Beta-Endosulfan	0.056	<0.0019	<0.0038 (MC) <0.0038 (LR)	No	C>B, C>MEC
114	Endosulfan Sulfate	240	<0.008	<0.016 (MC) <0.016 (LR)	No	C>B, C>MEC
115	Endrin	0.036	<0.0028	<0.0056 (MC) <0.0056 (LR)	No	C>B, C>MEC
116	Endrin Aldehyde	0.81	<0.003	<0.006 (MC) <0.006 (LR)	No	C>B, C>MEC
117	Heptachlor	0.00021	<0.0017	<0.0034 (MC) <0.0034 (LR)	No	C>B, C>MEC

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
118	Heptachlor Epoxide	0.00011	<0.0019	<0.0038 (MC) <0.0038 (LR)	No	C>B, C>MEC
119	PCB 1016	0.00017	<0.04	<0.1 (MC) <0.1 (LR)	No	C>B, C>MEC
120	PCB 1221	0.00017	<0.06	<0.12 (MC) <0.12 (LR)	No	C>B, C>MEC
121	PCB 1232	0.00017	<0.15	<0.3 (MC) <0.3 (LR)	No	C>B, C>MEC
122	PCB 1242	0.00017	<0.07	<0.14 (MC) <0.14 (LR)	No	C>B, C>MEC
123	PCB 1248	0.00017	<0.06	<0.012 (MC) <0.012 (LR)	No	C>B, C>MEC
124	PCB 1254	0.00017	<0.04	<0.08 (MC) <0.08 (LR)	No	C>B, C>MEC
125	PCB 1260	0.00017	<0.04	<0.08 (MC) <0.08 (LR)	No	C>B, C>MEC
126	Toxaphene	0.0002	<0.12	<0.24 (MC) <0.24 (LR)	No	C>B, C>MEC
	Diazinon	0.05	<0.096	<0.096 (MC) <0.096 (LR)	No	C>B, C>MEC

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. **Los Angeles River Metals TMDL Calculation Procedure.**

Discharge Point 005 discharges into the Arroyo Calabasas, a tributary to the Los Angeles River, Reach 6, as described by the *Revised LA River Metals TMDL, Resolution R15-004*. Los Angeles River tributaries have dry-weather WLAs for copper, lead, and selenium (30 µg/L, 170 µg/L, and 5 µg/L, respectively) with a default Water Effect Ration (WER) of 1.0. Los Angeles River tributaries also have wet-weather WLAs for cadmium, copper, lead, and zinc (3.1 µg/L, 17 µg/L, 94 µg/L, and 159 µg/L, respectively) with a default Water Effect Ration (WER) of 3.97 for copper and a WER of 1.0 for cadmium, lead and zinc. Wet-weather allocations are based on dry-weather in-stream numeric targets because the POTWs exert the greatest influence over in-stream water quality during dry weather, and collectively they contribute minimally to the total wet-weather loading. During dry-weather, the concentration-based and mass-based WLAs apply. In wet weather, the mass-based WLAs do not apply when the influent flows exceed the design capacity of the treatment plants.

According to the *LA River Metals TMDL* implementation section, permit writers may translate applicable WLAs into effluent limitations by applying the effluent limitation procedures in Section 1.4 of the SIP or other applicable engineering practices authorized under federal regulations.

- i. **Copper:** Tier 1 and Tier 2 of the SIP RPA procedures were not triggered for copper. However, Tier 3 of the SIP RPA procedures was triggered because the *LA River Metals TMDL* establishes WLAs for this pollutant. Therefore, a WQBEL derived using CTR/SIP has been prescribed for copper. In this permit, the TMDL-established dry weather WLAs for copper (30 µg/L), wet weather WLAs for copper (17 µg/L), the TMDL hardness of 400 mg/L, and a 0.6 coefficient of variation were used to calculate the WQBELs based on SIP/CTR procedures.

On April 09, 2015, the Regional Water Board adopted Resolution No. R15-004, an amendment to the Basin Plan to revise the *LA River Metals TMDL*. This amendment revises the TMDL to adjust the numeric targets for copper for minor NPDES permits, general non-storm water NPDES permits, and major NPDES permits other than the Donald C. Tillman WRP, the Los Angeles-Glendale WRP, and the Burbank WRP, based on a water effect ratio (WER) that was higher than the CTR default WER of 1.0. Similarly, the Tapia WRF Wet Weather WLA for copper was assigned a WER of 3.97, with certain conditions. The TMDL revision also states:

“Regardless of the WER, for discharges regulated under this TMDL with concentrations below the WER-adjusted allocations, effluent limitations shall ensure that effluent concentrations do not exceed the levels of water quality that can be reliably maintained by the facility’s applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding requirements in Clean Water Act section 402(o) and anti-degradation requirements are met. Permit compliance with anti-degradation and anti-backsliding requirements shall be documented in permit fact sheets.”

In order to comply with the TMDL wet weather WER-adjusted WLA requirement for copper above, staff evaluated the facility’s performance data associated with the removal of copper. During the last five years of treatment plant operation, the facility has been in full compliance with the copper dry weather AMEL (27 µg/L), dry weather MDEL (41 µg/L), wet weather AMEL (11 µg/L), and wet weather MDEL (17 µg/L), in Order R4-2010-0165 for Discharge Point 005. The MEC is equal to 16 µg/L detected on November 15, 2011. Between November 2010 and December 2015, the average concentration of copper in Tapia WRF’s final effluent was approximately 4.7 µg/L.

The calculated copper wet-weather MDEL for Tapia WRF reflective of plant performance shall be equal to MEC + Margin of Safety Factor (MOSF) of 30% of 16 µg/L. From the facility’s data, the MEC for copper is equal to 16 µg/L. The copper performance based MDEL shall be set equal to $16 + (30\% \text{ of } 16) = 20.8 \text{ µg/L}$, rounded to 21 µg/L. Consistent with the implementation section of Resolution R15-004, the dry-weather TMDL WLAs were translated into MDELs and AMELs using procedures in Section 1.4 of the SIP to arrive at a dry-weather 25 µg/L AMEL and a dry-weather 49 µg/L MDEL. When the same translation procedures are used for the wet weather WLAs, it yields an 8 µg/L AMEL and a 17 µg/L MDEL.

In contrast, the wet weather copper WLA has an associated 3.97 WER. If the assigned WER of 3.97 for copper were applied to the WLAs, the resulting wet-weather effluent limitations would be: AMEL = $3.97 \times 8 = 34 \mu\text{g/L}$, and MDEL = $3.97 \times 17 = 67 \mu\text{g/L}$. Since the Tapia WRF is operating with copper concentrations below the $34 \mu\text{g/L}$ and $67 \mu\text{g/L}$ WER-adjusted WLA levels, the copper wet weather limitations must be reflective of plant performance at the time of permit issuance or reissuance. Therefore, the copper wet weather MDEL will be set equal to $19 \mu\text{g/L}$ and the AMEL from the 2010 Order is being carried over. Although the WQBEL with the MOSF is higher than the AMEL and MDEL contained in the 2010 Order, it is less than the WER-adjusted WLA AMELs and MDELs.

Figure F-1 below presents the facility's copper performance data. The figure indicates that when the performance based WQBELs for the AMEL is set at $19 \mu\text{g/L}$, the facility can consistently comply with the copper final effluent limitations. The summary of copper final effluent limitations is presented in Table F-9. The quality of Tapia WRF's discharge directly influences the level of receiving water quality downstream of the discharge in Arroyo Calabasas Creek and in the northern portion of Reach 6 of the Los Angeles River.

Figure F-1. Copper Performance Data

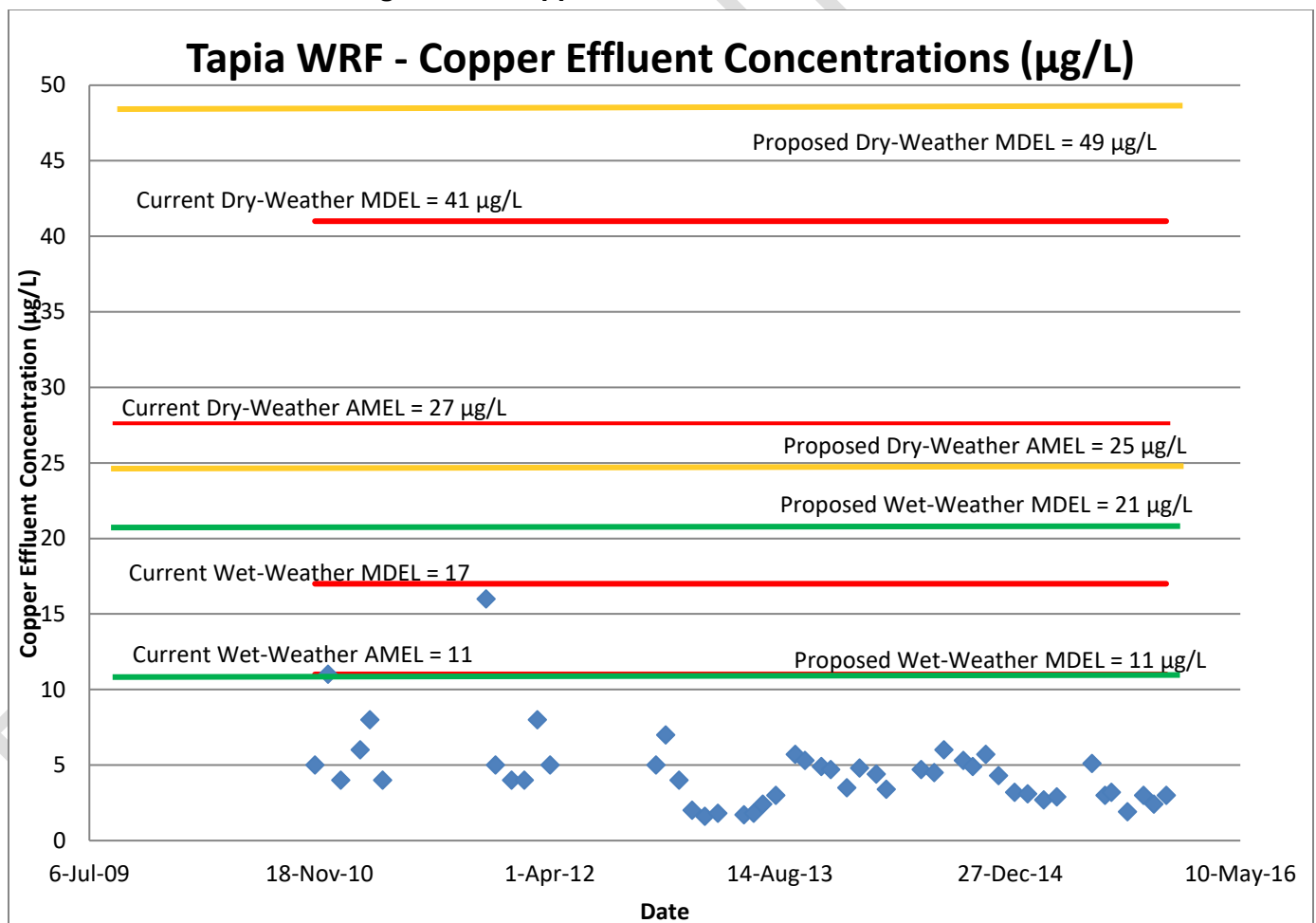


Table F-9. Summary of Copper Effluent Limitations for Discharge Point 005

Parameter	Units	Calculated using Copper WER*		WQBELs		Final for this Order	
		Average Monthly	Maximum Daily	Average Monthly	Daily Maximum	Average Monthly	Maximum Daily
Copper (wet weather)	µg/L	34	67	8	17	11	21
	lbs/day ¹³	3.4	6.7	0.8	1.7	1.1	2.1
Copper (dry weather)	µg/L	--	--	25	49	25	49
	lbs/day ¹³	--	--	2.5	4.9	2.5	4.9

* The Copper WER only applies to the Copper Wet-weather WLA.

- ii. **Lead:** Tier 1 and Tier 2 of the SIP RPA procedures were not triggered for lead. However, Tier 3 was triggered because the *LA River Metals TMDL* establishes WLAs for this pollutant. In this permit, the TMDL-established wet weather WLA for lead (62 µg/L in Resolution R10-003) and the dry weather WLA for lead (19 µg/L in Resolution R10-003), a default WER of 1, the USEPA default conversion factors, the TMDL hardness of 400 mg/L, and a 1.1 coefficient of variation were used to calculate the WQBELs based on SIP/CTR procedures. Consistent with the CTR preamble on page 31703, the revised wet weather WLA for lead (94 µg/L from Resolution R15-004) and the dry weather WLA for lead (170 µg/L from Resolution R15-004) cannot be implemented until after USEPA de-promulgates the CTR lead criteria. There are separate final effluent limitations for lead for wet and dry weather conditions and they shall apply all-year round.
- iii. **Cadmium:** Tier 1 and Tier 2 of the SIP RPA procedures were not triggered for cadmium. However, Tier 3 was triggered because the *LA River Metals TMDL* establishes WLAs for this pollutant. In this permit, the TMDL-established wet weather WLA for cadmium (3.1 µg/L), a default WER of 1, the USEPA default conversion factors, the TMDL hardness of 400 mg/L, and a 0.54 coefficient of variation were used to calculate the WQBELs based on SIP/CTR procedures. The final effluent limitations for cadmium apply to wet weather conditions only.
- iv. **Zinc:** Tier 1 and Tier 2 of the SIP RPA procedures were not triggered for zinc. However, Tier 3 was triggered because the *LA River Metals TMDL* establishes WLAs for this pollutant. In this permit, the TMDL-established wet weather WLA for zinc (159 µg/L), a default WER of 1, the USEPA default conversion factors, the TMDL hardness of 400 mg/L, and a 0.38 coefficient of variation were used to calculate the WQBELs based on SIP/CTR procedures. The final effluent limitations for zinc apply to wet weather conditions only.
- v. **Selenium:** Tier 1 and Tier 2 of the SIP RPA procedures were not triggered for selenium. However, Tier 3 was triggered because the *LA River Metals TMDL* establishes WLAs for this pollutant. In this permit, the TMDL-established dry weather WLA for selenium (5 µg/L), a default WER of 1, the USEPA default

¹³ The mass emission rates are based on the plant design flow rate of 12 mgd, and are calculated as follows: Flow (mgd) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day. The design capacity of the Tapia WRF was 16.1 mgd in the previous Order; however, the nutrient reduction facilities that were constructed in 2008/2009 that were designed to meet the nutrient limits in the 2005 Order were designed for an average daily flow of 12 mgd. During wet-weather storm events in which the flow exceeds the design capacity, the mass discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

conversion factors, the TMDL hardness of 400 mg/L, and a 0.56 coefficient of variation were used to calculate the WQBELs based on SIP/CTR procedures. The final effluent limitations for selenium apply to dry weather conditions only.

The metals effluent limitations prescribed in this Order are consistent with the SIP Procedures and TMDL WLAs.

- c. **SIP Calculation Procedure.** Section 1.4 of the SIP requires the step-by-step procedure to “adjust” or convert CTR numeric criteria into AMELs and MDELs, for toxics.

Step 3 of Section 1.4 of the SIP (page 8) lists the statistical equations that adjust CTR criteria for effluent variability.

Step 5 of Section 1.4 of the SIP (page 10) lists the statistical equations that adjust CTR criteria for averaging periods and exceedance frequencies of the criteria/objectives. This section also reads, “For this method only, maximum daily effluent limitations shall be used for POTWs in place of average weekly limitations.

Sample calculation for Dichlorobromomethane:

Step 1: Identify applicable water quality criteria.

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

Freshwater Aquatic Life Criteria:

CMC = Not Applicable (NA) $\mu\text{g/L}$ (CTR page 31713, column B1) and

CCC = NA $\mu\text{g/L}$ (CTR page 31713, column B2); and

Human Health Criteria for Organisms only = 46 $\mu\text{g/L}$ (CTR page 31713, column D2).

Step 2: Calculate effluent concentration allowance (ECA).

ECA = Criteria in CTR = 46 $\mu\text{g/L}$, since no dilution is allowed.

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

Calculate CV:

$CV = \text{Standard Deviation}/\text{Mean} = 11.7/37.9 = 0.31$

Find the ECA Multipliers from SIP Table 1 (page 9), or by calculating them using equations on page 8 of the SIP. When CV = 0.31, then:

ECA Multiplier acute = 0.527

ECA Multiplier chronic = 0.715

LTA acute = ECA acute x ECA Multiplier acute
= (NA) $\mu\text{g/L}$ x 0.527 = NA $\mu\text{g/L}$

LTA chronic = ECA chronic x ECA Multiplier chronic

= (NA) $\mu\text{g/L}$ x 0.715 = NA $\mu\text{g/L}$

Step 4: Select the lowest LTA.

In this case, the lowest LTA is not applicable.

Step 5: Calculate the AMEL & MDEL for AQUATIC LIFE.

Find the multipliers from SIP Table 2 (page 11). 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 0.31 in a previous step.

$$\text{AMEL Multiplier} = 1.26$$

$$\text{MDEL Multiplier} = 1.90$$

$$\begin{aligned} \text{AMEL aquatic life} &= \text{lowest LTA (from Step 4)} \times \text{AMEL Multiplier} \\ &= (\text{NA}) \mu\text{g/L} \times 1.26 = \text{NA} \mu\text{g/L} \end{aligned}$$

$$\begin{aligned} \text{MDEL aquatic life} &= \text{lowest LTA (from Step 4)} \times \text{MDEL Multiplier} \\ &= (\text{NA}) \mu\text{g/L} \times 1.90 = \text{NA} \mu\text{g/L} \end{aligned}$$

Step 6: Find the AMEL & MDEL for HUMAN HEALTH

Find factors from SIP Table 2 (page 11). Given $CV = 0.31$ and $n = 4$.

For AMEL human health limit, there is no factor.

The MDEL/AMEL human health factor = 1.50

$$\text{AMEL human health} = \text{ECA} = 46 \mu\text{g/L}$$

$$\begin{aligned} \text{MDEL human health} &= \text{ECA} \times \text{MDEL/AMEL factor} \\ &= 46 \mu\text{g/L} \times 1.50 = 69 \mu\text{g/L} \end{aligned}$$

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.

$$\text{Lowest AMEL} = 46 \mu\text{g/L (Based on human health protection)}$$

$$\text{Lowest MDEL} = 69 \mu\text{g/L (Based on human health protection)}$$

d. Impracticability Analysis

Federal NPDES regulations contained in 40 CFR part 122.45 states that all permit 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.

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 limit, but still be discharging toxic effluent on one, two, three, or up to four of these seven days and not be meeting 1-hour average acute criteria or 4-day average chronic criteria. For these reasons, USEPA recommends daily maximum and 30-day average limits for regulating toxics in all NPDES discharges. For the purposes of protecting the acute effects of discharges containing toxicants (CTR human health for the ingestion of fish), daily maximum limitations have been established in this NPDES permit when a pollutant 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 disruptors alter hormonal functions by several means. These substances can:

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

Generally, mass-based limits ensure that proper treatment, and not dilution, is employed to comply with the final effluent concentration limits. Concentration-based effluent limits, on the other hand, discourage 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 limits, a permittee would be able to increase its effluent concentration (i.e., reduce its level of treatment) during low-flow periods and still meet its mass-based limits. To account for this, this permit includes mass and concentration limits for some constituents.

Table F-10. Summary of WQBELs in Order R4-2017-XXXX

Parameter	Units	Effluent Limitations				
		Average Monthly	Seasonal Average	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
WQBELs Applicable to Discharge Point 001, 002, 003, and 005						
MBAS	mg/L	0.5	--	--	--	--
	lbs/day	50	--	--	--	--
Mercury	µg/L	0.051	--	0.10	--	--
	lbs/day ⁸	0.0051	--	0.01	--	--
Cyanide	µg/L	4.1	--	8.9	--	--
	lbs/day ⁸	0.41	--	0.89	--	--
Dichlorobromomethane	µg/L	46	--	69	--	--
	lbs/day ⁸	4.6	--	6.9	--	--
Chronic Toxicity	Pass or Fail, % Effect (TST)	Pass	--	Pass or % Effect <50	--	--

Parameter	Units	Effluent Limitations				
		Average Monthly	Seasonal Average	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
WQBELs Applicable to Discharge Point 001, 002, and 003						
Total Dissolved Solids	mg/L	2000	--	--	--	--
	lbs/day	200,000	--	--	--	--
Chloride	mg/L	500	--	--	--	--
	lbs/day	50,000	--	--	--	--
Sulfate	mg/L	500	--	--	--	--
	lbs/day	50,000	--	--	--	--
Boron	mg/L	2	--	--	--	--
	lbs/day	200	--	--	--	--
Total Ammonia as Nitrogen	mg/L	2.5	--	12	--	--
	lbs/day	250	--	1,200	--	--
Nitrite + Nitrate as Nitrogen	mg/L	8	--	--	--	--
	lbs/day	800	--	--	--	--
Nitrite as Nitrogen	mg/L	1	--	--	--	--
	lbs/day	100	--	--	--	--
Total Nitrogen (Summer: April 15 th – November 15 th)	mg/L	--	1.0	--	--	--
Total Nitrogen (Winter: November 16 th – April 14 th)	mg/L	--	4.0	--	--	--
Total Phosphorous (Summer: April 15 th – November 15 th)	mg/L	--	0.10	--	--	--
Total Phosphorous (Winter: November 16 th – April 14 th)	mg/L	--	0.20	--	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	5.9	--	15	--	--
	lbs/day ⁸	0.59	--	1.5	--	--
WQBELs Applicable to Discharge Point 005						
Total Dissolved Solids	mg/L	950	--	--	--	--
	lbs/day	95,000	--	--	--	--
Chloride	mg/L	150	--	--	--	--
	lbs/day	15,000	--	--	--	--
Sulfate	mg/L	300	--	--	--	--
	lbs/day	30,000	--	--	--	--
Total Ammonia as Nitrogen	mg/L	2.3	--	10.1	--	--
	lbs/day	230	--	1,000	--	--
Nitrite + Nitrate as Nitrogen	mg/L	8.0	--	--	--	--
	lbs/day	800	--	--	--	--
Nitrate as Nitrogen	mg/L	8.0	--	--	--	--
	lbs/day	800	--	--	--	--
Nitrite as Nitrogen	mg/L	1.0	--	--	--	--
	lbs/day	100	--	--	--	--
Total Phosphorous	mg/L	3	--	4	--	--

Parameter	Units	Effluent Limitations				
		Average Monthly	Seasonal Average	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
	lbs/day	300	--	400	--	--
Cadmium (wet-weather)	µg/L	2.6	--	4.8	--	--
	lbs/day ⁸	0.3	--	0.5	--	--
Copper (wet weather)	µg/L	11	--	21	--	--
	lbs/day ⁸	1.1	--	2.1	--	--
Copper (dry weather)	µg/L	25	--	49	--	--
	lbs/day ⁸	2.5	--	4.9	--	--
Lead (wet weather)	µg/L	24	--	62	--	--
	lbs/day ⁸	2.4	--	6.2	--	--
Lead (dry weather)	µg/L	13	--	35	--	--
	lbs/day ⁸	1.3	--	3.5	--	--
Zinc (wet-weather)	µg/L	139	--	232	--	--
	lbs/day ⁸	14	--	23	--	--
Selenium	µg/L	4	--	8	--	--
	lbs/day ⁸	0.4	--	0.8	--	--
Bis(2-Ethylhexyl)Phthalate	µg/L	4	--	--	--	--
	lbs/day ⁸	0.4	--	--	--	--
Total Trihalomethanes	µg/L	80	--	--	--	--
	lbs/day ⁸	8	--	--	--	--

5. Whole Effluent Toxicity (WET)

WET testing protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects until it gets to the higher level.

Because of the nature of industrial discharges into the POTW sewershed, it is possible that other toxic constituents could be present in the Tapia WRF effluent, or could have synergistic or additive effects. There were no acute or chronic toxicity testing exceedances during the previous permit term. Regional Water Board staff determined that, pursuant to the SIP, reasonable potential exists for chronic toxicity. As such, the permit contains effluent limitations for chronic toxicity.

The 2010 permit contained narrative effluent limitations for acute toxicity and chronic toxicity. But the 2017 permit only contains final effluent limitations for chronic toxicity, expressed as a monthly median and a daily maximum. Since chronic toxicity is a more stringent requirement than acute toxicity, removal of the numeric acute toxicity effluent limitation from the 2010 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.

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 Tapia WRF 2010 permit contained a narrative chronic toxicity limitation consistent with the direction received by 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 Test of Significant Toxicity (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 Board finds that numeric effluent limitations for chronic toxicity are necessary, feasible, and appropriate.

On July 7, 2014, the State Water Board stated its intention to release a revised version of the Chronic Toxicity Plan for public comment and that has not yet occurred. Because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the water quality objective, this Order contains numeric chronic toxicity effluent limitations. Compliance with the chronic toxicity requirements contained in this Order are to be determined in accordance to sections VII.J. 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.

For this permit, chronic toxicity in the discharge is evaluated using a monthly median 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 limitation is 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 entitled, “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 AWEL and an AMEL for POTWs. Following section 5.2.3 of the TSD, the use of an AWEL is not appropriate for WET. In lieu of an AWEL for POTWs, USEPA recommends establishing an MDEL for toxic pollutants and pollutants in water quality permitting, including WET. This is appropriate for two reasons. The basis for the average weekly requirement for POTWs derives from secondary treatment regulations

and is not related to the requirement to assure achievement of water quality standards (WQS). Moreover, an average weekly requirement comprising up to seven daily samples could average out daily peak toxic concentrations for WET and therefore, the discharge's potential for causing acute and chronic effects would be missed. It is impracticable to use an AWEL, because short-term spikes of toxicity levels that would be permissible under the 7-day average scheme would not be adequately protective of all beneficial uses. The MDEL is the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day. The AMEL is the highest allowable value for the average of daily discharges obtained over a calendar month. For WET, this is the average of individual WET test results for that calendar month. However, in cases where a chronic mixing zone is not authorized, USEPA Regions 9 and 10 continue to recommend that the AMEL for chronic WET should be expressed as a median monthly limit (MMEL).

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.

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 present¹⁴. 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, LC50s, IC25s) 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

¹⁴ See, Supplementary Information in support of the Final Rule establishing WET test methods at 67 Fed. Reg. 69952, 69963, November 19, 2002.

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.

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 Toxicity Identification Evaluations (TIEs) or Toxicity Reduction Evaluations (TRES) conducted for the facility; and the efforts of the Permittee to achieve compliance with effluent limitations for chronic toxicity.

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 part 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous

permit, with some exceptions where limitations may be relaxed. The final effluent limitations in this Order/Permit are at least as stringent as the effluent limitations in the previous Order/Permit, Order No. R4-2010-0165, with the exception of the limitations for cyanide (MDEL), total ammonia as nitrogen (001, 002 & 003), cadmium (AMEL & MDEL 005), copper (AMEL & MDEL 005), lead (AMEL & MDEL 005), and zinc (AMEL & MDEL 005). The discussion below is based upon whether the applicable water quality standard of the receiving water has or has not been attained.

a. Cyanide

The cyanide final effluent limitations, which apply to Discharge Points 001, 002, 003 and 005, resulted from calculations that were based upon recent effluent data, a new CV value, and SIP calculation procedures. The 8.9 µg/L MDEL for cyanide in the 2017 Order is less stringent than the 8.5 µg/L MDEL in the 2010 Order. However, the resulting 4.1 µg/L AMEL in the 2017 Order is more stringent than the 4.2 µg/L AMEL in the 2010 Order. As described in section II.D of this Fact Sheet, LVMWD had repeated exceedances of the cyanide final effluent limitations. Those exceedances did not seem to be linked to improper operation of the Tapia WRF. Therefore, the less stringent cyanide MDEL in the 2017 Order does not constitute backsliding because the criteria for exception under CWA section 402(o)(2)(E) has been met.

b. Ammonia as Nitrogen (Discharge Points 001, 002 & 003)

Section 303(d)(4)(B) of the CWA provides that a permittee may backslide from a water quality-based effluent limitation where water quality meets or exceeds applicable water quality standards if the revision is consistent with a State's approved antidegradation policy. The ammonia as nitrogen final effluent limitations, which apply to Discharge Points 001, 002 and 003, resulted from a new WQO, calculations that were based upon recent effluent data, a new CV value, the Basin Plan Site Specific Objective for ammonia contained in 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*, and the Basin Plan ammonia calculations procedures. Regional Water Board permitting staff evaluated the ammonia as nitrogen concentrations in the effluent and in the receiving water and determined that Malibu Creek, in the vicinity of the WRF discharge, is an attainment water because the water quality equals or exceeds the levels necessary to protect the designated beneficial uses. This is supported by the statistical analysis conducted by Regional Water Board staff which found that the average ammonia nitrogen final effluent concentration was 0.25 mg/L and the maximum effluent concentration was 2.1 mg/L (on October 13, 2015). The average receiving water ammonia nitrogen concentration over the last five years at station RSW-MC002D was 0.25 mg/L and the maximum was 1.7 mg/L (on October 13, 2015). This evaluation demonstrates that while the 12 mg/L MDEL for ammonia as nitrogen in the 2017 Order is less stringent than the 8.1 mg/L MDEL in the 2010 Order, it does not constitute backsliding because the receiving water criteria under CWA section 303(d)(4)(B) has been met. Furthermore, any conversion of ammonia into other nitrogen species that may occur in the receiving water is being addressed by the *2013 Malibu Creek Nutrients TMDL*, through the WLA for total nitrogen. Although ammonia toxicity was not a component of the *2013 Malibu Creek Nutrients TMDL*, quarterly toxicity ambient monitoring and ~~weekly~~ monthly ammonia water column testing required under the MRP will track ammonia surface water concentrations to

ensure compliance with the ammonia water quality objective and to prevent degradation.

c. Attainment Waters (cadmium, copper, lead, and zinc)

Under CWA section 303(d)(4)(B), for attainment waters, a limitation based on a TMDL may only be relaxed where the action is consistent with the state's antidegradation policy. Regional Water Board permitting staff evaluated the cadmium, copper, lead, and zinc concentrations in the effluent and in the receiving water (Station RSW-LA002D) and determined that the Los Angeles River, in the vicinity of the Tapia WRF 005 discharge, is an attainment water because the water quality equals or exceeds the levels necessary to protect the designated beneficial use. This is supported by the statistical analysis conducted by Regional Water Board staff which found that the average receiving water and maximum receiving water concentrations were 0.23 µg/L and 0.5 µg/L for cadmium; 4.2 µg/L and 8 µg/L for copper; 0.27 µg/L and 1.0 µg/L for lead; and, 13.5 µg/L and 110 µg/L for zinc. Therefore, the limits for cadmium, copper, lead, and zinc comply with CWA 303(d)(4)(B). Moreover, NPDES regulations at 40 CFR section 122.44(d)(1)(vii)(B) require that NPDES permits include effluent limitations developed consistent with the assumptions and requirements of any WLA that has been assigned to the discharge as part of an approved TMDL. Since the *LA River Metals TMDL* (Resolution R15-004) contains the following specific language:

“The WER for this constituent is 3.97. Regardless of the WER, for discharges regulated under this TMDL with concentrations below WER-adjusted allocations, effluent limitations shall ensure that effluent concentrations and mass discharges do not exceed the level of water quality that can be reliably maintained by the facility's applicable treatment technologies existing at the time of permit issuance, reissuance, or modification unless anti-backsliding requirements in Clean Water Act section 402(o) and anti-degradation requirements are met. Permit compliance with anti-degradation and anti-backsliding requirements shall be documented in permit fact sheets.”

This order includes final effluent limitations for copper that are reflective of the performance of the WRP at the time of permit issuance. The Revised *LA River Metals TMDL* Resolution states that the “reasonably foreseeable implementation actions for this resolution are the same as for the TMDL adopted and amended by Resolution Nos. R07-014 and R10-003.” Although the copper wet weather AMEL WQBEL that is reflective of plant performance for Discharge 005 in the 2017 Order is less stringent than the corresponding MDEL in the current 2010 Order, backsliding is not a concern because it is more stringent than the AMEL or MDEL that would have resulted if the WER-adjusted WLA limitations had been applied. Applying final effluent limitations that afford the full application of the water effects ratio, taking up all of the assimilative capacity in the receiving water, would be contrary to the intent of the *LA River Metals TMDL* (Resolution R10-003). The final copper WQBELs are consistent with the assumptions of the Revised *LA River Metals TMDL* and are in conformance with CWA Section 303(d)(4)(B).

In addition, this Order includes a reopener that allows for modification of the NPDES Order to recalculate the WQBEL for copper, to incorporate a revised margin of safety factor reflective of plant performance consistent with the applicable TMDLs, if the flow conditions or other extenuating circumstances cause a significant change in the water reclamation plant's treatment performance.

- d. Aldrin, alpha-BHC, 4,4'-DDE, 4,4'-DDD, dieldrin, endrin, heptachlor, boron (Discharge Point 005 only), fluoride (Discharge Point 005 only), arsenic (discharge point 005 only), and perchlorate (Discharge Point 005 only): Attainment waters

The final effluent limitations for aldrin, alpha-BHC, 4,4'-DDE, 4,4'-DDD, dieldrin, endrin, heptachlor, boron (Discharge Point 005 only), fluoride (Discharge Point 005 only), arsenic (discharge point 005 only), and perchlorate (Discharge Point 005 only), were removed because new monitoring data indicated that the final effluent did not have reasonable potential to cause or contribute to an exceedance of the applicable water quality objectives. None of these pollutants have been present in the final effluent at concentrations that exceed the applicable water quality objectives; therefore removal of the final effluent limitations for these pollutants does not authorize a change in the mass emission rates or relaxation in the treatment of the discharge and meets the backsliding exception under CWA section 402(o)1/303(d)(4). In addition, the LA River does not have agricultural beneficial use so there is no water quality objective for boron in the LA River in the Basin Plan.

2. Antidegradation Policies

40 CFR part 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 part 131.12. Similarly, CWA section 303(d)(4)(B) and 40 CFR part 131.12 require that all permitting actions be consistent with the federal antidegradation policy. Together, the state and federal antidegradation policies are designed to ensure that a water body will not be degraded as a result of 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 part 131.12 and State Water Board Resolution No. 68-16 because the discharge will not degrade existing high quality water. In accordance with CWA section 402(o)(3), the relaxed WQBELs for cyanide and ammonia as nitrogen in the 2017 Order are consistent with the State's anti-degradation policy. Effluent limitations for aldrin, alpha-BHC, 4,4'-DDE, 4,4'-DDD, dieldrin, endrin, heptachlor, boron (Discharge Point 005 only), fluoride (Discharge Point 005 only), arsenic (discharge point 005 only), and perchlorate (Discharge Point 005 only), are not included in this Order because monitoring data demonstrated that there is no reasonable potential for the discharge to cause or contribute to an exceedance of the applicable water quality standard for each pollutant. 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 high quality waters 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 that 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.

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. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR part 131.38. The scientific procedures for calculating the individual WQBELs 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 part 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-11. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Final Effluent Limitations Applicable to Discharge Point 001, 002, 003, and 005							
BOD ₅ 20°C	mg/L	10	--	20	--	--	Tertiary treatment technology
	lbs/day ¹⁵	1,000	--	2,000	--	--	
TSS	mg/L	5.0	--	10	--	--	Tertiary treatment technology
	lbs/day ¹⁵	500	--	1000	--	--	
Turbidity ¹⁶	NTU	2 ¹⁶	--	5 ¹⁶	--	10 ¹⁶	Tertiary treatment technology
pH	standard units	--	--	--	6.5	8.5	Basin Plan

¹⁵ The mass emission rates are based on the plant design flow rate of 12 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 discharge rate limitations shall not apply, and concentration limitations will provide the only applicable effluent limitations.

¹⁶ 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.

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Temperature	°F	--	--	86 ¹⁷	--	--	USEPA Gold Book and BPJ
Radioactivity ¹⁸							
Combined Radium-226 and Radium 228	pCi/L	5 ¹⁸	--	--	--	--	Title 22
Gross Alpha particle activity (excluding radon and uranium)	pCi/L	15 ¹⁸	--	--	--	--	Title 22
Uranium	pCi/L	20 ¹⁸	--	--	--	--	Title 22
Gross Beta/photon emitters	millirem/year	4 ¹⁸	--	--	--	--	Title 22
Strontium-90	pCi/L	8 ¹⁸	--	--	--	--	Title 22
Tritium	pCi/L	20,000 ¹⁸	--	--	--	--	Title 22
Total coliform ¹⁹	MPN or CFU/100 mL	23 ¹⁹	2.2 ¹⁹	240 ¹⁹	--	--	Tertiary treatment technology
<i>E. coli</i>	MPN or CFU/100 mL	126 ²⁰	--	235 ²⁰	--	--	TMDL
Removal Efficiency for BOD and TSS	%	85	--	--	--	--	40 CFR part 133
Oil and Grease	mg/L	5	--	10	--	--	Basin Plan narrative and BPJ
	lbs/day ¹⁵	500	--	1,000	--	--	
Settleable Solids	ml/L	0.1	--	0.2	--	--	Basin Plan narrative and BPJ

¹⁷ The temperature of wastes discharged shall not exceed 86°F except as a result of external ambient temperature.

¹⁸ The radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, chapter 15, article 5, sections 64442 and 64443, of the California Code of Regulations (CCR), or subsequent revisions.

¹⁹ 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 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.

²⁰ The *Malibu Creek Bacteria TMDL* and the *LA River Bacteria TMDL* both contain Waste Load Allocations (WLAs) for the Tapia WRF. WLAs are expressed as allowable exceedance days. The WLA for the Tapia WRF is set to zero days of exceedances of the bacteriological objectives. The bacteriological objectives include a geometric mean limit of 126/100 ml, and a single sample limit not to exceed 235/100 ml, for *E. coli*.

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Total Residual Chlorine	mg/L	--	--	0.1	--	--	Basin Plan
	lbs/day ¹⁵	--	--	10	--	--	
MBAS	mg/L	0.5	--	--	--	--	Basin Plan
	lbs/day ¹⁵	50	--	--	--	--	
Cyanide	µg/L	4.1	--	8.9	--	--	SIP/CTR
	lbs/day ¹⁵	0.41	--	0.89	--	--	
Dichlorobromomethane	µg/L	46	--	69	--	--	SIP/CTR
	lbs/day ¹⁵	4.6	--	6.9	--	--	
Mercury	µg/L	0.051	--	0.10	--	--	SIP/CTR
	lbs/day ¹⁵	0.0051	--	0.01	--	--	
Chronic Toxicity	Pass or Fail, % Effect (TST)	Pass	--	Pass or % Effect <50	--	--	Basin Plan
Final Effluent Limitations Applicable to Discharge Point 001, 002, and 003							
Total Dissolved Solids	mg/L	2,000	--	--	--	--	Basin Plan
	lbs/day ¹⁵	200,000	--	--	--	--	
Chloride	mg/L	500	--	--	--	--	Basin Plan
	lbs/day ¹⁵	50,000	--	--	--	--	
Sulfate	mg/L	500	--	--	--	--	Basin Plan
	lbs/day ¹⁵	50,000	--	--	--	--	
Boron	mg/L	2	--	--	--	--	Basin Plan
	lbs/day ¹⁵	200	--	--	--	--	
Total Ammonia as Nitrogen	mg/L	2.5	--	--	--	--	Basin Plan
	lbs/day ¹⁵	250	--	--	--	--	
Nitrite + Nitrate as Nitrogen	mg/L	8	--	--	--	--	TMDL/ Basin Plan
	lbs/day ¹⁵	800	--	--	--	--	
Nitrite as Nitrogen	mg/L	1	--	--	--	--	Basin Plan
	lbs/day ¹⁵	100	--	--	--	--	
Total Nitrogen (Summer: April 15 th – November 15 th)	mg/L	--	1.0	--	--	--	TMDL
Total Nitrogen (Winter: November 16 th – April 14 th)	mg/L	--	4.0	--	--	--	TMDL
Total Phosphorous (Summer: April 15 th – November 15 th)	mg/L	--	0.10	--	--	--	TMDL
Total Phosphorous (Winter: November 16 th – April 14 th)	mg/L	--	0.20	--	--	--	TMDL
	µg/L	5.9	--	15	--	--	SIP/CTR

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Bis(2-Ethylhexyl) Phthalate	lbs/day ¹⁵	0.59	--	1.5	--	--	
Final Effluent Limitations Applicable to Discharge Point 005							
Total Dissolved Solids	mg/L	950	--	--	--	--	Basin Plan
	lbs/day ¹⁵	95,000	--	--	--	--	
Chloride	mg/L	150	--	--	--	--	Basin Plan
	lbs/day ¹⁵	15,000	--	--	--	--	
Sulfate	mg/L	300	--	--	--	--	Basin Plan
	lbs/day ¹⁵	30,000	--	--	--	--	
Total Ammonia as Nitrogen	mg/L	2.3	--	10.1	--	--	TMDL
	lbs/day ¹⁵	230	--	1000	--	--	
Nitrite + Nitrate as Nitrogen	mg/L	8.0	--	--	--	--	TMDL
	lbs/day ¹⁵	800	--	--	--	--	
Nitrate as Nitrogen	mg/L	8.0	--	--	--	--	TMDL
	lbs/day ¹⁵	800	--	--	--	--	
Nitrite as Nitrogen	mg/L	1.0	--	--	--	--	TMDL
	lbs/day ¹⁵	100	--	--	--	--	
Total Phosphorous	mg/L	3	--	4	--	--	TMDL
	lbs/day ¹⁵	300	--	400	--	--	
Cadmium (wet-weather)	µg/L	2.6	--	4.8	--	--	TMDL
	lbs/day ¹⁵	0.3	--	0.5	--	--	
Copper (wet weather)	µg/L	11	--	21	--	--	TMDL
	lbs/day ¹⁵	1.1	--	2.1	--	--	
Copper (dry weather)	µg/L	25	--	49	--	--	TMDL
	lbs/day ¹⁵	2.5	--	4.9	--	--	
Lead (wet weather)	µg/L	24	--	62	--	--	TMDL
	lbs/day ¹⁵	2.4	--	6.2	--	--	
Lead (dry weather)	µg/L	13	--	35	--	--	TMDL
	lbs/day ¹⁵	1.3	--	3.5	--	--	
Zinc (wet-weather)	µg/L	139	--	232	--	--	TMDL
	lbs/day ¹⁵	14	--	23	--	--	
Selenium	µg/L	4	--	8	--	--	TMDL
	lbs/day ¹⁵	0.4	--	0.8	--	--	
Bis(2-Ethylhexyl) Phthalate	µg/L	4	--	--	--	--	Basin Plan
	lbs/day ¹⁵	0.4	--	--	--	--	
Total trihalomethanes	µg/L	80	--	--	--	--	Basin Plan
	lbs/day ¹⁵	8	--	--	--	--	

E. Interim Effluent Limitations

Compliance schedules and the interim limitations are included in Section VI.A.4 of this

NPDES Order for total nitrogen and total phosphorus for discharges to the Malibu Creek, authorized under the TMDL Implementation Plans which ~~have has~~ been adopted by the Regional Water Board, approved by the State Water Board, and ~~are awaiting approval~~ approved by the Office of Administrative Law. ~~It is anticipated that the TMDL will undergo the full approval process by the end of May 2017. However, interim limitations and compliance schedules may be provided in a separate Time Schedule Order if the permit effective date precedes the effective date (date of OAL approval) of Resolution No. R16-009.~~ The Permittee may be subject to enforcement action for failure to complete the tasks by the given milestone dates, as specified in Table 7 of this Order.

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications

The production, distribution, and reuse of recycled water for direct, non-potable applications is currently regulated under Water Recycling Requirements contained in Order No. 87-86, which was readopted in Order No. 97-072.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

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

B. Groundwater

Limitations in this Order must protect not only surface receiving water beneficial uses, but also, the beneficial uses of underlying groundwater where there is a recharge beneficial use of the surface water. In addition to a discharge to surface water, there is discharge that can impact groundwater. Sections of Malibu Creek and the Los Angeles River, near the Tapia WRF discharge points, are designated as groundwater recharge (GWR) beneficial use. Surface water from Malibu Creek and the Los Angeles River percolates into the groundwater basins listed in Table F-6. Since groundwater from these basins is used to provide drinking water to the community, the groundwater aquifers must be protected.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 CFR part 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 CFR part 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.

Parts 122.41(a)(1) and (b) through (n) of 40 CFR establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Part 123.25(a)(12) of 40 CFR allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 CFR part 123.25, this Order omits federal conditions that address enforcement authority specified in 40 CFR part 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

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. **Antidegradation Analysis and Engineering Report for Proposed Plant Expansion.** In the event of any 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. Prior to any plant expansion, this provision requires the Permittee to submit the Antidegradation Analysis and Engineering Report for the proposed Plant Expansion to the Regional Water Board for approval.
- b. **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.
- c. **Treatment Plant Capacity.** The treatment plant capacity study required by section VI.C.2.d 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

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

This provision is based on the requirements of 40 CFR part 122.41(e) and the previous Order.

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

- a. **Biosolids Requirements.** To implement CWA section 405(d), on February 19, 1993, USEPA promulgated 40 CFR part 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, handling, and disposal requirements. It is the responsibility of the 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, to whose jurisdiction the Facility's biosolids will be transported and applied.

- 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. **Collection System.** The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on May 2, 2006. The State Water Board amended the Monitoring and Reporting Program for the General Order through Order WQ 2013-0058-EXEC on August 6, 2013. The General Order requires public agencies that own or operate sanitary sewer systems with sewer lines one mile of pipe or greater to enroll for coverage and comply with the General Order. The General Order requires agencies to develop sanitary sewer management plans and report all sanitary sewer overflows, among other requirements and prohibitions.

The General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows that are more extensive, and therefore, more stringent than the requirements under federal standard provisions. The Discharger and public agencies that are discharging wastewater into the facility's collection system were required to obtain enrollment for regulation under the General Order by December 1, 2006.

6. Other Special Provisions (Not Applicable)

7. Compliance Schedules

In general, an NPDES permit must include final effluent limitations that are consistent with CWA section 301 and with 40 CFR part 122.44(d). There are exceptions to this general rule. The State Water Board's *Resolution 2008-0025 - Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits* (Compliance Schedule Policy) allows compliance schedules for new, revised, or newly interpreted WQOs or criteria, or in accordance with a TMDL. All compliance schedules must be as short as possible, and may not exceed ten years from the effective date of the adoption, revision, or new interpretation of the applicable WQO or criterion, unless a TMDL allows a longer schedule. Any compliance schedule must be as short as possible. Where a compliance schedule for a final effluent limitation exceeds one year, the Order must include interim numeric effluent limitations for that constituent or parameter, interim requirements and dates toward achieving compliance, and compliance reporting within 14 days after each interim date. The Order may also include interim requirements to control the pollutant, such as pollutant minimization and source control measures.

The Discharger evaluated Tapia WRF's ability to comply with the USEPA-promulgated *Malibu Creek Nutrients TMDL WLAs* and provided information to support its conclusion that the facility will not be able to consistently meet the total nitrogen and total phosphorus final effluent limitations in this Order. The current configuration and treatment processes at the Tapia WRF are unable to meet the proposed final effluent limitations for total nitrogen and total phosphorus based on the TMDL WLA, therefore the Permittee proposes to construct new facilities including an advanced water treatment facility with microfiltration and reverse osmosis, new pipelines for recycled water

conveyance and brine disposal, mixing facilities at the Las Virgenes Reservoir, and a demonstration project. The compliance schedule is included in Section VI.A.4 of the Order. The permittee must comply with the proposed milestones in the timetable specified in Table 7 of the Order. The Permittee may be subject to enforcement action for failure to complete such tasks.

The compliance schedule is as short as possible and although it exceeds 10 years, the *Malibu Creek Nutrients TMDL* Implementation Plan permits a compliance schedule of 13.5 years as permitted under the Compliance Schedule Policy. Furthermore, the permit's effluent limitations for total nitrogen and total phosphorus are consistent with the WLAs specified in the *Malibu Creek Nutrients TMDL* that are established through a Basin Plan Amendment.

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 CFR sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP, Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this facility.

A. Influent Monitoring

Influent monitoring is required:

1. To determine compliance with the permit conditions for BOD₅20°C and suspended solids removal rates.
2. To assess treatment plant performance.
3. To assess the effectiveness of the Pretreatment Program.
4. 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 parts 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-12. Effluent Monitoring Frequency Comparison

Parameter	Monitoring Frequency (2010 Permit)	Monitoring Frequency (2017 Permit)
Total waste flow	Continuous	No change
Turbidity	Continuous	No change
Total residual chlorine	Continuous/Daily	No change
Total coliform	Daily	No change
Fecal Coliform	Daily	No change
<i>E.coli</i>	Weekly	No change
Temperature	Monthly	Weekly Monthly
pH	Weekly	No change
Settleable solids	Weekly	No change
Total suspended solids	Weekly	No change
BOD ₅ 20°C	Weekly	No change
Oil and grease	Monthly	Weekly
Dissolved Oxygen	Monthly	No change
Total Dissolved Solids	Monthly	No change
Chloride	Monthly	No change
Sulfate	Monthly	No change
Fluoride	Monthly	Quarterly
Boron	Monthly	Quarterly
Ammonia nitrogen	Monthly	No change
Nitrate nitrogen	Monthly	No change
Nitrite nitrogen	Monthly	No change
Nitrate + nitrite (as nitrogen)	Monthly	No change
Organic Nitrogen	Monthly	No change
Total Kjeldahl Nitrogen (TKN)	Monthly	No change
Total Nitrogen	Monthly	No change
Total Phosphorus	Monthly	No change
Orthophosphate as phosphorus	Monthly	No change
Surfactants (MBAS)	Monthly	No change
Surfactants (CTAS)	Monthly	No change
Total Hardness (as CaCO ₃)	Monthly	No change
Chronic toxicity	Monthly	No change
Cadmium	Monthly	No change
Copper	Monthly	No change
Lead	Monthly	No change
Zinc	Monthly	No change
Selenium	Monthly	No change
Cyanide	Monthly	No change
Iron	Semiannually	No change
Barium	Semiannually	No change
Bis(2-ethylhexyl)phthalate	Monthly	No change
Diazinon	Semiannually	No change
Antimony	Semiannually	Quarterly
Arsenic	Monthly	Quarterly
Total Chromium	Semiannually	Quarterly

Parameter	Monitoring Frequency (2010 Permit)	Monitoring Frequency (2017 Permit)
Chromium III	Semiannually	Quarterly
Chromium VI	Semiannually	Quarterly
Mercury	Monthly	Quarterly
Nickel	Semiannually	Quarterly
Perchlorate	Monthly	Semiannually
1,4-dioxane	Semiannually	No change
1,2,3-Trichloropropane	Semiannually	No change
Methyl-tert-butyl-ether (MTBE)	Semiannually	No change
2,4,5-TP (Silvex)	Semiannually	No change
2,4-D	Semiannually	No change
Pesticides	Semiannually	No change
Total trihalomethanes	Monthly	No change
Dichlorobromomethane	Monthly	No change
PCBs as aroclors	--	Annually
PCBs as congeners	--	Annually
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, strontium-90 and uranium)	Annually	No change
Aldrin	Monthly	Semiannually
Alpha BHC	Monthly	Semiannually
4,4'-DDE	Monthly	Semiannually
4,4'-DDD	Monthly	Semiannually
Dieldrin	Monthly	Semiannually
Endrin	Monthly	Semiannually
Heptachlor	Monthly	Semiannually
Tetrachloroethylene	Quarterly	Semiannually
2,3,7,8-TCDD (Dioxin)	Semiannually	Semiannually
Remaining USEPA priority pollutant not listed on this Table	Semiannually	No change

C. Whole Effluent Toxicity Testing Requirements

WET protects the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. Chronic toxicity is a more stringent requirement than acute toxicity. A chemical at a low concentration can have chronic effects but no acute effects until it gets to the higher level. For this permit, chronic toxicity in the discharge is evaluated using USEPA’s 2010 Test of Significant Toxicity (TST) hypothesis testing approach, and is expressed as “Pass” or “Fail” for the median monthly summary results and “Pass” or “Fail” and “Percent Effect” for each individual chronic toxicity result. The chronic toxicity effluent limitations protect the narrative Basin Plan Water Quality Objective for chronic toxicity. The rationale for WET has been discussed extensively in section IV.C.5 of this Fact Sheet.

D. Receiving Water Monitoring

1. Surface Water

- a. Receiving water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water. Requirements are based on the Basin Plan. Flow monitoring is required at the Los

Angeles River Wardlow station when discharging from Discharge Point 005 to determine the dry- and wet-weather condition of the Los Angeles River.

- b. The proposed receiving water monitoring program will improve coordination and efficiency of receiving water monitoring for existing discharges in the Malibu Creek and Los Angeles River watersheds by streamlining monitoring efforts and reducing redundancies throughout the watershed. This will provide more useful water quality data on both a watershed and site-specific basis.

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 Malibu Creek and Los Angeles River Watersheds are to:

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

2. Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program

Under the authority of section 308 of the CWA (33 U.S.C. § 1318), USEPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by USEPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from its own laboratories or its contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall ensure that the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to USEPA's DMR-QA Coordinator and Quality Assurance Manager.

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 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 Malibu Creek and Los Angeles River watersheds are 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 Malibu Creek and Los Angeles River watersheds 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 additional costs 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.

- 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. Most of the effluent to be discharged under this Order will be reused for beneficial purposes.

IX. PUBLIC PARTICIPATION

The Regional Water Board has considered the issuance of WDRs that will serve as an NPDES permit for Tapia WRF. 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 of Interested Persons

The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following: (1) posted at the entrance on the gate at the Tapia WRF, 731 Malibu Canyon Road, Calabasas, CA, 91302, and (2) at the Las Virgenes Municipal Water District Headquarters Building outside the Board Room, 4232 Las Virgenes Road, Calabasas, CA, 91302.

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 were due either in person or by mail to the Executive Office at the Regional Water Board at losangeles@waterboards.ca.gov.

To be fully responded to by staff and considered by the Regional Water Board, the written comments were due at the Regional Water Board office by 5:00 p.m. on **May 08, 2017**.

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 01, 2017
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 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 Report of Waste Discharge, 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.

ATTACHMENT G – TOXICITY REDUCTION EVALUATION (TRE) WORK PLAN

INFORMATION AND DATA ACQUISITION

- 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
 - 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 Las Virgenes Municipal Water District (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 (WDRs), those contained in the WDRs will prevail.

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 part 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 part 403.8(f)(2); and
 - d. Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 CFR part 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 Permittee is not in compliance with any conditions or requirements of this permit, then the Permittee shall also include the reasons for noncompliance and state how and when the Permittee 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 Permittee is not required to

sample and analyze for asbestos. Sludge sampling and analysis are covered in the sludge section of this permit. The Permittee shall also provide any influent or effluent monitoring data for nonpriority pollutants which the Permittee 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 Permittee knows or suspects were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the nondomestic user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent pass through or interference;
- c. An updated list of the Permittee's significant industrial users (SIUs) including their names and addresses, and a list of deletions, additions and SIU name changes keyed to the previously submitted list. The Permittee shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations;
- d. The Permittee 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 part 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 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 part 403.8(f)(2)(viii).
- B. LOCAL LIMITS EVALUATION**
- 1. In accordance with 40 CFR part 122.44(j)(2)(ii), the POTW shall provide a written technical evaluation of the need to revise local limits under 40 CFR part 403.5(c)(1) within 180 days of issuance or reissuance of the Tapia Water Reclamation Facility 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 part 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 Pretreatment Report must be sent to USEPA electronically to the following address: R9Pretreatment@epa.gov

ATTACHMENT I – BIOSOLIDS USE AND DISPOSAL REQUIREMENTS

- A.** All biosolids generated by the Discharger shall be reused or disposed of in compliance with the applicable portions of:
1. 40 C.F.R. Part 503: for biosolids that are land applied, placed in surface disposal sites (dedicated land disposal sites or monofills), or incinerated; 40 C.F.R. 503 Subpart B (land application) applies to biosolids placed on the land for the purpose of providing nutrients or conditioning the soil for crops or vegetation. 40 C.F.R. 503 Subpart C (surface disposal) applies to biosolids placed on the land for the purpose of disposal.
 2. 40 C.F.R. Part 258: for biosolids disposed of in Municipal Solid Waste landfills.
 3. 40 C.F.R. Part 257: for all biosolids disposal practices not covered under 40 C.F.R. Parts 258 or 503.
- B.** The Discharger is responsible for assuring that all biosolids from its facility are used or disposed of in accordance with 40 C.F.R. Part 503, whether the Discharger reuses or disposes of the biosolids itself or transfers them to another party for further treatment, reuse, or disposal. The Discharger is responsible for informing subsequent preparers, appliers, or disposers of the requirements they must meet under 40 C.F.R. Part 503.
- C.** Duty to mitigate: The Discharger shall take all reasonable steps to prevent or minimize any biosolids use or disposal which may adversely impact human health or the environment.
- D.** No biosolids shall be allowed to enter wetland or other waters of the United States.
- E.** Biosolids treatment, storage, and use or disposal shall not contaminate groundwater.
- F.** Biosolids treatment, storage, and use or disposal shall not create a nuisance such as objectionable odors or flies.
- G.** The Discharger shall assure that haulers who transport biosolids off-site for further treatment, storage, reuse, or disposal take all necessary measures to keep the biosolids contained.
- H.** If biosolids are stored for over two years from the time they are generated, the Discharger must ensure compliance with all the requirements for surface disposal under 40 C.F.R. Part 503 Subpart C, or must submit a written request to EPA with the information in Part 503.20(b), requesting permission for longer temporary storage. Sewage sludge containing more than 50 mg/kg PCB's shall be disposed of in accordance with 40 C.F.R. Part 761.
- I.** Any off-site biosolids treatment, storage, use or disposal site operated by the Discharger within Region 4 (Los Angeles Region of RWQCB) that is not subject to its own Waste Discharge Requirements shall have facilities adequate to divert surface runoff from the adjacent area, to protect the site boundaries from erosion, and to prevent any conditions that would cause drainage from the materials in the disposal site to escape from the site. Adequate protection is defined as protected from at least a 100-year storm and from the highest tidal stage that may occur.
- J.** Inspection and Entry: The Regional Board, USEPA or an authorized representative thereof, upon the presentation of credentials, shall be allowed by the Discharger, directly or through contractual arrangements with their biosolids management contractors, to:
1. enter upon all premises where biosolids are produced by the Discharger and all premises where Discharger biosolids are further treated, stored, used, or disposed, either by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal;

2. have access to and copy any records that must be kept under the conditions of this permit or of 40 C.F.R. Part 503, by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal; and
3. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations used in the production of biosolids and further treatment, storage, use, or disposal by the Discharger or by another party to whom the Discharger transfers the biosolids for further treatment, storage, use, or disposal.

K. Monitoring shall be conducted as follows:

1. Biosolids shall be tested for the metals required in Part 503.16 (for land application) or Part 503.26 (for surface disposal), using the methods in "Test Methods for Evaluating Solids Waste, Physical/Chemical Methods" (SW-846), as required in Part 503.8(b)(4), at the following minimum frequencies:

<u>Volume (dry metric tons/year)</u>	<u>Frequency</u>
0 – 290	once per year
290 – 1500	once per quarter
1500 – 15000	once per 60 days
> 15000	once per month

For accumulated, previously untested biosolids, the Discharger shall develop a representative sampling plan, which addresses the number and location of sampling points, and collect representative samples.

Test results shall be expressed in mg pollutant per kg biosolids on a 100% dry weight basis.

Biosolids to be land applied shall be tested for Organic-N, ammonium-N, and nitrate-N at the frequencies required above.

2. Prior to land application, the Discharger shall demonstrate that the biosolids meet Class A or Class B pathogen reduction levels by one of the methods listed in Part 503.32. Prior to disposal in a surface disposal site, the Discharger shall demonstrate that the biosolids meet Class B levels or shall ensure that the site is covered at the end of each operating day.
3. For biosolids that are land applied or placed in a surface disposal site, the Discharger shall track and keep records of the operational parameters used to achieve Vector Attraction Reduction requirements in Part 503.33 (b).
4. Class 1 facilities (facilities with pretreatment programs or others designated as Class 1 by the Regional Administrator) and Federal facilities with > 5 mgd influent flow shall sample biosolids for pollutants listed under Section 307(a) of the Clean Water Act (as required in the pretreatment section of the permit for POTWs with pretreatment programs.) Class 1 facilities and Federal facilities with > 5 mgd influent flow shall test dioxins/dibenzofurans using a detection limit of < 1 pg/g during their next sampling period if they have not done so within the past 5 years and once per 5 years thereafter.
5. The biosolids shall be tested annually, or more frequently if necessary, to determine hazardousness in accordance with California Law.
6. If biosolids are placed in a surface disposal site (dedicated land disposal site or monofill), a qualified groundwater scientist shall develop a groundwater monitoring program for the site, or shall certify that the placement of biosolids on the site will not contaminate an aquifer.

7. Biosolids placed in a municipal landfill shall be tested semi-annually by the Paint Filter Test (SW-846, Method 9095) to demonstrate that there are no free liquids.
- L.** The Discharger either directly or through contractual arrangements with their biosolids management contractors shall comply with the following 40 C.F.R. 503 notification requirements:
1. A reuse/disposal plan shall be submitted to EPA Region IX Coordinator and, in the absence of other state or regional reporting requirements, to the state permitting agency, prior to the use or disposal of any biosolids from this facility to a new or previously unreported site. The plan shall be submitted by the land applier of the biosolids and shall include a description and a topographic map of the proposed site(s) for reuse or disposal, names and addresses of the applier(s) and site owner(s), and a list of any state or local permits which must be obtained. For land application sites, the plan shall include a description of the crops or vegetation to be grown, proposed nitrogen loadings to be used for the crops, and a groundwater monitoring plan if one exists.
 2. If the Discharger biosolids do not meet Part 503.13 Table 3 metals concentration limits, the Discharger must require their land applier to contact the state permitting authority to determine whether bulk biosolids subject to the cumulative pollutant loading rates in Part 503.12(b)(2) have been applied to the site since July 20, 1993, and, if so, the cumulative amount of pollutants applied to date, and background concentration, if known. The Discharger shall then notify EPA Region IX Coordinator of this information.
 3. For biosolids that are land applied, the Discharger shall notify the applier in writing of the nitrogen content of the biosolids, and the applier's requirements under Part 503, including the requirements that the applier certify that the requirement to obtain information in Subpart A, and that the management practices, site restrictions, and any applicable vector attraction reduction requirements Subpart D have been met. The Discharger shall require the applier to certify at the end of 38 months following application of Class B biosolids that those harvesting restrictions in effect for up to 38 months have been met.
 4. If bulk biosolids are shipped to another State or to Indian Lands, the Discharger must send written notice prior to the initial application of bulk biosolids to the permitting authorities in the receiving State or Indian Land (the EPA Regional Office for the area and the State/Indian authorities).
 5. Notification of Part 503 non-compliance: The Discharger shall require appliers of their biosolids to notify EPA Region IX and their state permitting agency of any non-compliance within 24 hours if the non-compliance may seriously endanger health or the environment. For other instances of non-compliance, the Discharger shall require appliers of their biosolids to notify EPA Region IX and their state permitting agency of the non-compliance in writing within 10 working days of becoming aware of the non-compliance.
- M.** The Discharger shall submit an annual biosolids report to EPA Region IX Biosolids Coordinator and the Los Angeles Regional Water Quality Control Board by February 19 of each year for the period covering the previous calendar year. The report shall include:
1. The amount of biosolids generated that year, in dry metric tons, and the amount

- accumulated from previous years.
2. Results of all pollutant monitoring required in the Monitoring Section above.
 3. Descriptions of pathogen reduction methods, and vector attraction reduction methods, as required in Parts 503.17 and 503.27.
 4. Results of any groundwater monitoring or certification by groundwater scientist that the placement of biosolids in a surface disposal site will not contaminate an aquifer.
 5. Names and addresses of land appliers and surface disposal site operators, and volumes applied (dry metric tons).
 6. Names and addresses of persons who received biosolids for storage, further treatment, disposal in a municipal waste landfill, or for other reuse/disposal methods not covered in 14.c, above, and volumes delivered to each.
- N.** The Discharger shall require all parties contracted to manage their biosolids to submit an annual biosolids report to EPA Region IX Biosolids Coordinator by February 19 of each year for the period covering the previous calendar year. The report shall include:
1. Names and addresses of land appliers and surface disposal site operators, name, location (latitude/longitude), and size (hectares) of site(s), volumes applied/disposed (dry metric tons) and for land application, biosolids loading rates (metric tons per hectare), nitrogen loading rates (kg/ha), dates of applications, crops grown, dates of seeding and harvesting and certifications that the requirement to obtain information in Part 503.12(e)(2), management practices in Part 503.14 and site restrictions in Part 503.32(b)(5) have been met.

ATTACHMENT J – REPORTING REQUIREMENTS FOR RAIN EVENT OF LESS THAN 0.4 INCHES IN 24 HOURS

During the prohibition period (April 15th to November 15th), the Discharger may discharge to Malibu Creek under three exceptions including during significant rain events (equal or greater than 0.4 inch). The Discharger shall make every reasonable effort to avoid discharging to the maximum extent practicable during the prohibition period. For any rainfall event less than 0.4 inch in 24 hours, the Discharger shall submit written notification, including a discussion of which discharge prohibition exception applies, prior to discharging to Malibu Creek.

The Discharger shall notify the Regional Water Board staff in advance (*with* at least 48 hours lead-time) of the proposed discharge during rainfall events <0.4 inch in 24 hours. The Discharger shall use all reasonably available data, including weather forecast prognosis, to make the notification during the typical work week, but not later than at the end of business on Thursday. A timely request will allow the Regional Water Board staff to perform its evaluation within a reasonable time; this approach will assure that weekend situations will also be covered.

The value of <0.4 inch of rain is only a trigger that starts the process of evaluating whether or not discharge is permitted during the summer prohibition. The <0.4 inches value is **NOT** an automatic trigger allowing the release during storm events, within the prohibition period.

The Discharger shall consider the following factors when providing notification of a potential discharge event when there is <0.4 inches of rain during the summer prohibition. In addition, concomitantly with submittal of the notification, which may be done expeditiously through email, the Discharger shall submit documentation outlining their rationale for their request and supporting data (other additional factors may be considered by the Regional Water Board staff):

- 1) Cumulative rainfall amounts (in inches) for the season up to the date of the request (typically, total seasonal rainfall, on average, is about 15 inches);
- 2) Cumulative rainfall amounts (in inches) for the last three months prior to the request. In addition, other data in support of the request, such as other relevant rainfall values/averages or information on dry periods between rain events may be submitted;
- 3) Recycled water demand (in mgd) for seven days prior to the request;
- 4) Tapia inflows (in mgd) for seven days prior to the date of the request;
- 5) Background flow (in cfs) measured in Malibu Creek at the entrance to Malibu Lagoon, receiving water station RSW-MC013D (the value shall be obtained as close as possible to the time of request). Historical data shows that a flow of 10 cfs (measured at receiving water station RSW-MC013D, the county gauge station) will not breach the sandbar at the mouth of the lagoon under typical conditions. The data will specify if the Discharger was contributing flow to the creek or not at the time of flow measurement at the entrance of the lagoon. In case, the Discharger contributed flows to the creek, the value of that flow shall also be reported;
- 6) Status of the sandbar at the mouth of the lagoon as close as possible to the time of request;
- 7) Flow (in cfs) measured at Malibu Creek below its confluence with Cold Creek, RSW-MC013D, obtained as close as possible to the time of request;

- 8) Estimated rainfall predicted for the storm event for the request. (The Discharger shall submit a measured rainfall and duration value after the event to the Regional Water Board so that the documentation submitted contains the actual measured data. The documentation shall include an analysis of the frequency of the rain event, e.g., a six-month, a two-year, a 25-year storm event, etc. based on the historical data available. The record shall specify the rain gage(s) used);
- 9) Plant evapotranspiration (ETo) values and soil moisture content in the spraying fields (installed at Rancho Las Virgenes Faith) and at an additional representative site (at Tapia) showing the existing conditions in a natural setting exposed to rainfall only, for seven days prior to the request;
- 10) Air temperature values (in °F) for the seven days preceding the request;

The Discharger may submit additional relevant data explaining the reason why it was included in the submittal. All data submitted shall specify the date and time when the measurement or estimate was performed. The Discharger may use hydrologic models, such as the Hydrologic Simulation Program - FORTRAN (HSPF) for flow predictions, in case measured data are not readily available. The Discharger shall submit within a reasonable time, documentation with actual measured data, if available, to replace the predicted or estimated values, specifying the dataset to be replaced. At the completion of discharge, the Discharger shall submit a follow-up notification to the Regional Water Board including the time and length of discharge, the average flow rate, and confirmation that all of the conditions specified above were met. The documentation requested under this attachment is subject to the signatory requirements contained in Attachment D, Standard Provisions.

References

Randal D. Orton, Ph.D., D. Env. *A Review of the Hydrologic Record and Regulatory History of Malibu Creek*, June 2005

Charles Caspary's. *Follow-up to Meeting at Regional Board April 13, 2005* Letter to Jonathan Bishop

Randal D. Orton, Ph.D., D. Env. *Rain Impact Analysis* February 17, 2000 Letter to Rosario Aston *Final Malibu Lagoon Restoration and Enhancement Plan*, California State Coastal Conservancy & California State Department of Parks and Recreation, June 2005.

Ackerman, Drew, Kenneth C. Schiff, and Stephen B. Weisberg, *Evaluation HSPF in an Arid, Urbanized Watershed*. Journal of the American Water Resources Association (JAWRA) 41(2):477486. April 2005.

Total Seasonal Rainfall (Precipitation) - *Los Angeles Almanac* - www.laalmanac.com/weather