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COUNTY SANITATION DISTRICT NO. 2 OF LOS ANGELES COUNTY, SOUTHERN CALIFORNIA ALLIANCE OF POTWs, and CALIFORNIA ASSOCIATION OF SANITATION AGENCIES

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BEFORE THE

CALIFORNIA STATE WATER RESOURCES CONTROL BOARD

In the Matter of the Petition of County Sanitation District No. 2 of Los Angeles County, *et al* for Review of Action and Failure to Act by the California Regional Water Quality Control Board, Los Angeles Region, in Adopting Order No. R4-2015-0070, NPDES Permit for the San Jose Creek Water Reclamation Plant.	**PETITION FOR REVIEW; PRELIMINARY POINTS AND AUTHORITIES IN SUPPORT OF PETITION FOR REVIEW; REQUEST FOR HEARING.** **[WATER CODE §§13320; 23 C.C.R. §2050 *et seq.*]**

In accordance with section 13320 of the Water Code, Petitioner County Sanitation District No. 2 of Los Angeles County (the "District") on behalf of the Joint Outfall System ("JOS") and its member districts,[1] Petitioner Southern California Alliance of POTWs ("SCAP"), Petitioner

[1] The JOS is an integrated network of wastewater collection, treatment, and disposal facilities in Los Angeles County, which is constructed, maintained, and operated as one unit, and is jointly and proportionally shared among the signatory parties to the amended Joint Outfall Agreement ("JOA") effective July 1, 1995. These parties include County Sanitation Districts Nos. 1, 2, 3, 5, 8, 15, 16,17, 18, 19, 21, 22, 23, 28, 29, and 34 of Los Angeles County, and South Bay Cities Sanitation District of Los Angeles County. *See* Permit at pp. 1,

California Association of Sanitation Agencies ("CASA"), and Petitioner National Association of Clean Water Agencies ("NACWA") (collectively "Petitioners") hereby petition the State Water Resources Control Board ("State Board") to review the action and failure to act by the California Regional Water Quality Control Board, Los Angeles Region ("Regional Board") in adopting the District's National Pollutant Discharge Elimination System ("NPDES") Permit, Order No. R4-2015-0070 ("Permit") for the San Jose Creek Water Reclamation Plant ("WRP") on April 9, 2015. A copy of the Permit is attached as **Exhibit A**.

A summary of the bases for this Petition and a preliminary statement of points and authorities are set forth in this Petition for Review in accordance with Title 23, California Code of Regulations ("C.C.R.") section 2050(a). The Petitioners reserve the right to file supplemental points and authorities in support of this Petition for Review once the administrative record becomes available.[2] The Petitioners also reserve the right to submit additional arguments and evidence responsive to the Regional Board's or other interested parties' responses to this Petition for Review, to be filed in accordance with 23 C.C.R. section 2050.6.

1. NAME, ADDRESS, PHONE NUMBER AND EMAIL OF THE PETITIONERS:

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F-5. Per the terms of the 1995 JOA, the District serves as the appointed agent for the JOS and files this petition on behalf of the JOS and its member districts.

[2] It is not possible to prepare a thorough memorandum or a memorandum that is entirely useful to the reviewer in the absence of the complete administrative record, which is not yet available.

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2. THE SPECIFIC ACTION OF THE REGIONAL BOARD WHICH THE STATE BOARD IS REQUESTED TO REVIEW:

The Petitioners seek review of the action and inaction of the Regional Board in connection with the adoption of the Permit. By adopting the Permit, the Regional Board failed to comply with the Porter-Cologne Water Quality Control Act (Cal. Water Code §§13000 *et seq.*) and its implementing regulations; failed to comply and/or acted inconsistently with the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California ("SIP"); acted inconsistently with the Water Quality Control Plan for the Los Angeles Region ("Basin Plan"); acted inconsistently with the mandates of the Clean Water Act ("CWA" 33 U.S.C. §§1251 *et seq.*) and its implementing regulations (40 Code of Federal Regulations ("C.F.R.") Parts 122, 123, 124, 130, 131, and 136); failed to comply with the Administrative Procedures Act ("APA"); acted inconsistently with precedential State Board orders, including three decisions directly related to the District's Long Beach/Los Coyotes and Whittier Narrows WRPs' NPDES permits on the issue of permit limits for chronic toxicity (Order Nos. 2003-0009,

2003-0012, and 2003-0013); failed to support the provisions of the Permit with proper findings, and included findings and requirements in the Permit that are not supported by the evidence.

3. THE DATE ON WHICH THE REGIONAL BOARD ACTED OR FAILED TO ACT:

The Regional Board adopted the Permit on April 9, 2015, and failed to make changes to the Permit requested by the Petitioners related to chronic toxicity.

4. STATEMENT OF THE REASONS THE ACTION OR INACTION WAS INAPPROPRIATE OR IMPROPER.

A. FACTUAL AND PROCEDURAL BACKGROUND:

1) Chronic Toxicity Permitting History

a) Background Information about the WRPs

The District owns and operates the San Jose Creek WRP, a tertiary treatment wastewater facility located at 1965 South Workman Mill Road, Whittier, California. The San Jose Creek WRP receives industrial, commercial, and residential wastewater from a population of nearly one million people in the Cities of Arcadia, Azusa, Baldwin Park, City of Industry, Covina, Diamond Bar, Duarte, El Monte, Glendora, Irwindale, La Puente, La Verne, Monrovia, Pasadena, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, Temple, Walnut and West Covina, as well as some unincorporated areas. Permit at p. F-5, para. II.A.1. Treatment at the San Jose Creek WRP consists of primary sedimentation, activated sludge biological treatment with nitrification and denitrification, secondary sedimentation with coagulation, inert media filtration, sequential chlorination, and de-chlorination. Permit at p. F-6, para. 4.

The San Jose Creek WRP discharges tertiary treated wastewater to the San Gabriel River and San Jose Creek, both within the San Gabriel River Watershed. Permit at p. F-5. The San Jose Creek WRP consists of East and West Water Reclamation Plants, which have two independently operated units. The San Jose Creek WRP has a combined design capacity of 100 million gallons per day (MGD), of which San Jose Creek East and West WRPs have individual design capacities of 62.5 MGD and 37.5 MGD respectively. Permit at p. F-5, n. 1. In 2014, the San Jose Creek WRP produced 56 MGD of recycled water. Of that, 45 MGD or approximately 50,000 acre feet

per year ("AFY") was beneficially reused, representing approximately 80% of the water produced.

The San Jose Creek WRP's two separate plants (East and West) are part of an integrated network of facilities, the JOS, which incorporates seven wastewater treatment plants, interconnected by a system of more than 1,200 miles of interceptors, Joint Outfall sewers, and trunk sewers. The upstream treatment plants (Whittier Narrows, Pomona, La Cañada, Long Beach, Los Coyotes, and San Jose Creek WRPs) are connected to the Joint Water Pollution Control Plant ("JWPCP") located in Carson. This system allows for the diversion of influent flows into or around each upstream plant if so desired.

To control industrial discharges, the JOS implements a rigorous pretreatment program. The District reviewed its discharge limitations in the industrial use permits issued to these facilities and found that changes to existing local limits were not necessary. The most recent local limits evaluation was submitted on August 22, 2012, finding that the existing limits were fully protective of the JOS system. Permit at F-6, para. 3.

In order to achieve compliance with the Basin Plan objectives for ammonia and toxicity, the District constructed a biological nutrient removal system with a nitrogen de-nitrification process (NDN) at the San Jose Creek WRP and other JOS facilities. The system was completed and has been in operation at the San Jose Creek WRP since June 2003. Permit at p. F-6. No exceedances of the 1.0 TUc monthly median trigger contained in the last NPDES permit for the San Jose Creek WRP were observed in the final effluent from June 1, 2009 to June 30, 2013. Permit at F-20.

b) The 2002 Permit Appeals

In, 2002, the Regional Board issued NPDES permits for the Whittier Narrows WRP and the Long Beach/Los Coyotes WRP ("2002 Permits"). The 2002 Permits included final numeric effluent limits for chronic toxicity set as a daily maximum and monthly median based on Chronic Toxicity Units ("TUc") in a critical life stage test. *See* State Board, Water Quality Order ("WQO") 2003-0009 at p. 11. For Whittier Narrows, the Regional Board found reasonable potential for chronic toxicity based on effluent data and the fact that one reach of the San Gabriel

River did not attain water quality standards for toxicity. *Id.* The Regional Board also found that the District could not consistently comply with the limits and, for this reason, included an interim chronic toxicity limit of 3 TUc as a daily maximum in an accompanying Time Schedule Order ("TSO") for Whittier Narrows. *Id.* Similar requirements were included in the permits and TSOs issued for the Long Beach/Los Coyotes WRPs.

On September 30, 2002, the District timely filed a Petition for Review with the State Board, contesting specific provisions contained in the 2002 Permits and accompanying TSOs, including the numeric effluent limitations for chronic toxicity. The State Board issued a draft order on the Petitions on June 10, 2003. On July 16, 2003, the State Board issued a final order on the Petitions for Review (WQO 2003-0009). With respect to the chronic toxicity provisions in the 2002 Whittier Narrows Permit and TSO, the State Board concluded on page 11:

> The District objects to the fact that the chronic toxicity limits are expressed numerically. The District raised the same challenge to chronic toxicity limits included in permits and TSOs issued to the District for its Long Beach and Los Coyotes Water Reclamation Plants. In Order WQO 2003-[0008], which the Board has adopted today, the State Board decided to review these permits and TSOs on its own motion. In particular the Board desires more time to carefully consider this important issue. For this reason, the Board will not decide whether the chronic toxicity limits in the Whittier Narrows permit and TSO are appropriate at this time. Rather, the Board will review these limits on its own motion when it considers the same issue for the Long Beach and Los Coyotes permits and TSOs.

In a subsequent ruling on these appeals, in WQO 2003-0013 adopted on September 16, 2003 for the 2002 Permit, the State Board concluded on pages 1-2 that:

> "[T]his issue is best addressed through a rulemaking in order to allow full public participation and deliberation. The Board intends to modify the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (2000) to specifically address the issue. In the meantime, in WQO 2003-0012, the Board modified the District's permits for its Long Beach and Los Coyotes Water Reclamation Plants to replace the numeric chronic toxicity limits with narrative limits. The Board also added reopener provisions stating that the Regional Board may reopen the permits to include limits for specific pollutants causing toxicity or numeric chronic toxicity limits under certain circumstances. The Whittier Narrows permit contains similar chronic toxicity provisions; therefore, the Board will make the same changes to the Whittier Narrows permit."

Those precedential Orders deleted the numeric chronic toxicity limits and replaced them with a narrative effluent limitation,[3] which read: "There shall be no chronic toxicity in the effluent discharge;" added a new reopener provision, and revised the Monitoring and Reporting Program to substitute "the trigger in Effluent Limitation A.12.c" for "the limitation," where the trigger was set as an "exceedance of the 1 TUc effluent monthly median." WQO 2003-0013 at pp. 2-3; *see also* WQO 2003-0012.[4]

The State Board has held that the "addition of an enforceable narrative effluent limitation for chronic toxicity, along with the existing TRE/TIE requirements and the reopener for a numeric effluent limitation for chronic toxicity, if necessary, will ensure that the requirements to perform a TRE/TIE and to implement it to eliminate toxicity are clear and enforceable. We also expect that where the TRE/TIE indicates a pollutant is causing the toxicity, the Regional Board will reopen the permit to include numeric effluent limitations for that constituent." WQO 2003-0012 at p. 10 *citing* letter from the United States Environmental Protection Agency ("USEPA"), dated June 25, 2003 (describing the requirements for narrative effluent limitations). This narrative limit approach is consistent with State Board precedent that was in place for over 12 years without objection from USEPA.

USEPA itself blessed this approach for other District permits in 2007, stating:

> "We are pleased that the proposed language, in part, contains the following elements to successful implementation of WET testing in NPDES permits: (1) effluent limits, if reasonable potential for WET is demonstrated; (2) protective numeric benchmarks for triggering immediate accelerated monitoring when elevated levels of toxicity are reported; and (3) toxicity reduction evaluation/toxicity identification conditions which direct the permittee to identify and correct the cause of toxicity when elevated levels of toxicity are repeatedly reported. This approach is consistent with regulations governing reasonable potential for toxicity objectives for WET at 40 C.F.R. 122.44(d)(1); Section 4

[3] In WQO 2003-0012 at p. 10, the State Board cited a letter from USEPA, dated June 25, 2003. This letter described the conditions under which USEPA would consider a narrative effluent limit valid, described in WQO 2003-0012 as follows:

> "US EPA has also stated that if a narrative effluent limitation is used, the permits must also contain (1) numeric benchmarks for triggering accelerated monitoring, (2) rigorous toxicity reduction evaluation (TRE)/toxicity investigation evaluation (TIE) conditions, and (3) a reopener to establish numeric effluent limitations for either chronic toxicity or the chemical(s) causing toxicity."

[4] Despite this very clear language, the District's Permit for the San Jose Creek WRP states that "the Regional Water Board concludes that the Los Coyotes Order does not require inclusion of narrative rather than numeric effluent limitations for chronic toxicity." Permit at p. F-80.

of the SIP; EPA's national guidance for water quality-based permitting in the TSD; and regional EPA guidance for implementing WET in *Regions 9 and 10 Guidance for Implementing Whole Effluent Toxicity Testing Programs* (Denton and Narvaez, 1996)."

See USEPA Region IX Letter to Deborah Smith, Interim Executive Officer, Regional Board re: Long Beach WRP and Los Coyotes WRP (May 31, 2007) at pp. 3-4.

c) The 2009 Permit for San Jose Creek WRP

The last NPDES permit for the San Jose Creek WRP was issued in 2009 (Order No. R4-2009-0078). The 2009 permit for the San Jose Creek WRP at pages 21-22 contained the following language related to chronic toxicity:

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations

4. Other Effluent Limitations Applicable to Discharge Points 001, 001A, 001B, 002, and 003

h. Chronic Toxicity Trigger and Requirements:

a. The chronic toxicity of the effluent shall be expressed and reported in toxic units, where:

TUc = 100/NOEC

The No Observable Effect Concentration (NOEC) is expressed as the maximum percent effluent concentration that causes no observable effect on test organisms, as determined by the results of a critical life stage toxicity test.

b. There shall be no chronic toxicity in the effluent discharge.

c. If the chronic toxicity of the effluent exceeds the monthly trigger median of 1.0 TUc, the Discharger shall immediately implement accelerated chronic toxicity testing according to Attachment E – MRP [Monitoring and Reporting Program], Section V.B.3. If any three out of the initial test and the six accelerated tests results exceed 1.0 TUc, the Discharger shall initiate a TIE [Toxicity Identification Evaluation] and implement the Initial Investigation TRE [Toxicity Reduction Evaluation] Workplan, as specified in Attachment E – MRP, Section V.D.

d. The Discharger shall conduct chronic toxicity monitoring as specified in Attachment E – MRP.

The narrative chronic toxicity limit and language contained in the 2009 permit was not objected to by USEPA. In fact, as described above, USEPA had written a comment letter in 2007 on the draft Long Beach/Los Coyotes WRP permits, containing essentially identical toxicity provisions, stating that while USEPA did not "believe that numerical WQBELs for chronic toxicity are 'infeasible' to calculate, such that BMPs may be substituted… [a]t minimum, the

permits need to specify the WQBEL: 'There shall be no chronic toxicity in the effluent discharge.'" *See* USEPA Letter from Douglas E. Eberhardt, Chief of Clean Water Act ("CWA") Standards and Permits Office to Deborah Smith, Regional Board (May 31, 2007). The previous 2009 permit also included the finding that "[t]he Regional Water Board recognizes that toxicity may be episodic and identification of causes of and reduction of sources of toxicity may not be successful in all cases." Order No. R4-2009-0078 at p. E-24. Because the 2009 permit reflected the State Board's reasonable approach and precedent, the District did not appeal this 2009 permit to the State Board and no one else appealed this permit.

d) The 2014 Permits for the Pomona and Whittier Narrows WRPs

Permits in California for Publicly Owned Treatment Works ("POTWs") had been written the same way for 11 years, since 2003, including the effluent limitation: "There shall be no chronic toxicity in the effluent discharge." Notwithstanding the fact that NPDES permits had been written in California in this prescribed manner without any formal objection, the permits in the Los Angeles region began to change in 2014.

On July 31, 2014, the USEPA Region IX filed an initial objection letter on the pre-notice draft of the District's NPDES permits up for reissuance for the Pomona and Whittier Narrows WRPs. *See* USEPA Region IX, July 31, 2014 Letter from Jane Diamond, Director Water Division to Samuel Unger, Executive Officer, Regional Board ("Initial Objection Letter"). On September 4, 2014, USEPA issued a formal Objection letter, which stated that the Pomona and Whittier Narrows WRP Permits had to be issued with numeric and daily maximum effluent limitations for chronic toxicity or be subject to having the permit taken over by USEPA. The formal Objection also included many other "recommendations" related to toxicity. *See* USEPA Region IX, September 4, 2014 Letter from Jane Diamond, Director Water Division to Samuel Unger, Executive Officer, Regional Board ("Formal Objection Letter").

Instead of following State Board mandates, the Regional Board immediately modified the tentative permits for the Pomona and Whittier Narrows WRPs in response to USEPA's formal Objection. The final permit for the Pomona and Whittier Narrows WRPs included new numeric ("Pass"/"Fail") chronic toxicity limits and these permits were appealed to the State Board in

December of 2014 along with a request for a stay, which has not yet been responded to by the State Board. *See* OCC File No. A-2341. That Petition for Review included details of the reasons why USEPA's Objection to the Pomona and Whittier Narrows WRP Permits were misplaced and should not have resulted in permit revisions. The Petitioners incorporate those arguments by reference here.

e) The 2015 Permit for San Jose Creek WRP

The adopted Permit for San Jose Creek follows the new template set by the Whittier Narrows and Pomona WRP permits with some small modifications. *See e.g.* Provision IV.A.1.a., Table 4, of the Permit as "Pass" as a Median Monthly Effluent Limitation (MMEL) and "Pass or %Effect <50" as a Maximum Daily Effluent Limitation (MDEL). These terms were defined in the accompanying footnotes (e.g., Permit, p. 6, footnotes 3-6) and in Provision VII.J. (i.e., Compliance Determination, Chronic Toxicity) of the Permit and are said to be determined based on the Test of Significant Toxicity ("TST") approach as described in a 2010 EPA guidance document (National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010). The adopted Permit also contained new implementation provisions for the numeric toxicity limits, many of which the District found objectionable and contrary to law or guidance.

The District conducted prolonged negotiations with the Regional Board staff and tried to explain why changes should be made, but the District's requested modifications were not made. Most notably the Districts took issue with, among other things, numeric toxicity limits set as monthly median and daily maximum limits utilizing a very limited evaluation of concentration-response relationships used for validation of chronic toxicity testing, and continued compliance testing and potential additional violations being incurred during the confirmation and diagnosis of the cause of a toxicity exceedance. After a several hour-long public hearing, the Permit for the San Jose Creek WRP was ultimately adopted with only a few small changes made to the toxicity requirements,[5] which were not requested or approved by the District.

[5] *See* **Exhibit B**, Change Sheet for Item 15, Waste Discharge Requirement Renewal for San Jose Creek WRP (April 9, 2015).

B. LEGAL ARGUMENTS

1) The Chronic Toxicity Limits are Premature Until the State Board Adopts its Promised Statewide Toxicity Policy.

The Petitioners disagree with the inclusion of the final numeric effluent limits for chronic toxicity in the Permit. *See* Permit at pp. 6-12, Section IV.A., Table 4 (East and West Facility to San Gabriel River), Section IV.B., Table 5 (East Facility to San Jose Creek), Section IV.C., Table 6 (West to San Gabriel).[6] As discussed above, on September 16, 2003, the State Board adopted two precedential orders, WQO 2003-0012, in response to petitions filed by the District and Santa Monica Baykeeper for the Los Coyotes and Long Beach WRP NPDES permits [SWRCB/OCC File Nos. A-1496 and A-1496(a)], and WQO 2003-0013, in response to a petition filed by the District and Bill Robinson on the 2002 version of the Whittier Narrows WRP permit [SWRCB/OCC File Nos. A-1509 and A-1509(a)]. In these 2003 precedential orders, the State Board found that the use of final numeric whole effluent toxicity ("WET") limitations in permits for POTWs, particularly those that discharge to inland surface waters, is an issue of statewide importance that should be addressed in a statewide plan or policy.

In addition, the State Board instructed regional boards to replace any numeric chronic toxicity effluent limitations with the prescribed narrative chronic toxicity limitation until a statewide toxicity policy is adopted. The District's 2004 NPDES permit for the San Jose Creek WRP was modified to coincide with the requirements of WQO 2003-0013 and the District's subsequent NPDES permit for the San Jose Creek WRP (Order No. R4-2009-0078) was issued with the toxicity trigger requirements prescribed in WQO 2003-0012 and WQO 2003-0013.

These State Board Orders (WQO 2003-0012 and WQO 2003-0013) are precedential orders, required to be followed by all regional boards in the state until overturned or new

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[6] In addition to the effluent limitations, the Permit also contains a duplicative and unnecessary Receiving Water Limitation for chronic toxicity, which reads: Chronic Toxicity Narrative Receiving Water Quality Objective

a. There shall be no chronic toxicity in ambient waters as a result of the wastes discharged.
b. Receiving water and effluent toxicity testing shall be performed on the same day as close to concurrently as possible. (*See* Permit at p. 14, Section V.A.18.)

regulations overturned or revised the decision. Gov't Code §11425.60. These precedential decisions were later upheld and followed in other, subsequent and more recent State Board orders, including WQO 2008-08 (City of Davis) and WQO 2012-0001 (City of Lodi). The 2012-0001 Lodi order at page 22 recognized that "[t]he Board previously addressed this issue in a precedential decision" and "concluded that a numeric effluent limitation for chronic toxicity was not appropriate in the permit under review, but that the permit had to include a narrative effluent limitation for chronic toxicity." In the Lodi case, the State Board also determined that because the discharge had the reasonable potential to cause or contribute to an excursion above the Basin Plan's narrative toxicity objective, the Central Valley Water Board, on remand, was ordered to amend that permit "to add an appropriate narrative chronic toxicity limitation." *Id.; see also* State Board WQO 2008-0008 at pp. 5-7 (concluding that a numeric effluent limitation for chronic toxicity is not appropriate at this time).

Thus, no less than four (4) precedential State Board orders, including orders directly applicable to the District's WRPs, require that POTW permits contain a narrative chronic toxicity effluent limit. All of these precedential orders directly conflict with the requirements contained in the Permit that includes numeric chronic toxicity limits. The Petitioners merely asked the Regional Board to follow the State Board's binding precedent and include a narrative effluent limitation, consistent with the Basin Plan's narrative objective, along with a trigger for additional accelerated testing based on TUc.

That more reasonable and logical approach to determining and addressing consistent toxicity would also be consistent with the SIP, and with the Los Angeles Region's Basin Plan, which states, in pertinent part, the following related to chronic toxicity:

> "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in, human, plant, animal, or aquatic life. Compliance with this objective will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassays of appropriate duration or other appropriate methods as specified by the State or Regional Board." (Basin Plan at p. 3-16 (emphasis added).)

Since the State Board has specified in binding precedential orders how compliance with chronic toxicity requirements must be determined until such time that a new statewide policy is adopted, and the Regional Board has not modified the Basin Plan to specify another method, the

Regional Board is bound by the State Board's determination, set forth in WQO 2003-0013 and WQO 2003-0012, as well as by the language of the Basin Plan.[7] No changes in state or federal law warrant the modifications made in chronic toxicity requirements in the Permit. Thus, the Regional Board acted without authority to adopt the requirements contained in the Permit.

Because the State Board has not yet adopted its anticipated statewide policy for chronic toxicity, the inclusion of new numeric chronic toxicity effluent limitations lacks adequate authority, violates State Board precedent and the Basin Plan's Toxicity Objective, and represents an abuse of discretion. For these reasons, the Petitioners respectfully request that the chronic toxicity limits as imposed be removed from the Permit and replaced with the narrative chronic toxicity limit and triggers contained in the previous 2009 permit.

2) The Chronic Toxicity Requirements Improperly Require Use of Unpromulgated Test Methods.

a) The Test of Significant Toxicity (TST) is not part of a Properly Promulgated Part 136 Method.

The Permit makes it very clear that, for parameters where such methods exist, the monitoring must use only approved 40 C.F.R. Part 136 methods, properly promulgated by USEPA. *See e.g.,* Permit at p. D-4 ("Monitoring results must be conducted according to test procedures approved under 40 C.F.R. part 136…"); MRP Section I.B, p. E-3 ("Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136…"); p. E-9, n. 3; p. E-10, n. 7; p. E-11, n.12; p. E-15 at n.34; p. E-19, n.55; p. E-23, n. 77; p. E-27, para. V.A.3 ("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)"); p. E-33, n. 100; p. E-39 at para. X.B.4.; p. H-2 at para. A.4.a. (all emphasis added). The Permit also makes clear that where

[7] In fact, the State Board's requirement in WQO 2003-0013 to include an effluent limit requiring "no chronic toxicity in the effluent discharge" is actually ***more stringent*** than the Basin Plan's Toxicity objective, which only requires "no chronic toxicity in ambient waters outside mixing zones." (Basin Plan at pg. 3-17 (emphasis added).)

methods have *not* been incorporated into 40 C.F.R. Part 136, the analytical results should and will not be used for compliance determination purposes. *See accord* Permit at p. F-93, Section VI.B.2.a.

USEPA's promulgated methods include four (4) specified statistical methods to be used with hypothesis tests: 1) Dunnett's Procedure; 2) T-test with the Bonferroni Adjustment; 3) Steel's Many-One Rank Test; and 4) Wilcoxon Rank Sum Test with the Bonferroni Adjustment. *See accord* USEPA, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (Fourth Ed., Oct. 2002) ("2002 Methods") at pp. 44-45. Each of these statistical methods is used for hypothesis tests resulting in the endpoint estimates of NOEC or LOEC (Lowest Observable Effect Concentration). *Id.* at p. 43 (Figure 2 - Flowchart for statistical analysis of test data). The promulgated preferred alternative to the NOEC/LOEC is the point estimate approach.[8]

The TST's "Pass/Fail" or "Greater than 50% Effect" are not approved endpoints and the TST is not an approved statistical method. While the 2002 Methods and the Permit Fact Sheet recognize that "[t]he statistical methods recommended in this manual are not the only possible methods of statistical analysis,"[9] the Permit ignores other language stating that "[m]any other methods have been proposed and considered." USEPA chose the specific statistical methods and hypothesis tests in that manual, which were incorporated by reference into Part 136,[10] "because they are (1) applicable to most of the different toxicity test data sets for which they are recommended, (2) powerful statistical tests, (3) hopefully 'easily' understood by nonstatisticians, and (4) amenable to use without a computer, if necessary. 2002 Methods at p. 40, Section 9.4.1.2.

[8] USEPA has stated: **"For the NPDES Permit Program, the point estimation techniques are the preferred statistical methods in calculating end points for effluent toxicity tests."** 2002 Methods at p. 41 (emphasis in original).

[9] The Permit at page F-81 takes this one statement out of context and ignores the remaining explanatory statements.

[10] 40 C.F.R. §136.3(a), Table IA, footnote 27. *See* 67 Fed. Reg. 69955 (2002)("these methods, including the modifications in today's rule, are applicable for use in NPDES permits.").

Table 1A, "List of Approved Biological Methods for Wastewater and Sewage Sludge," in 40 C.F.R. Part 136 lists the approved methods for freshwater chronic toxicity. The parameters specifically promulgated for freshwater whole effluent chronic toxicity and contained in Table 1A are clearly stated as the NOEC and IC25 in units of percent effluent. (The exact wording is, "Toxicity, chronic, freshwater organisms, NOEC or IC25, percent effluent."). Use of a "Pass/Fail" endpoint obtained through any statistical analysis is not included in 40 CFR §136.3(a), Table 1A, and the TST statistical method is not listed in Table 1A.

USEPA Region IX and the Los Angeles Regional Water Board may prefer the TST, but the TST is not an approved Part 136 test method, endpoint, or statistical procedure. In fact, although USEPA recently proposed amendments to the Part 136 methods, including specific changes to the promulgated 2002 Methods, the TST was not included. *See* Federal Register Notice, http://www.gpo.gov/fdsys/pkg/FR-2015-02-19/pdf/2015-02841.pdf (February 19, 2015). Had USEPA truly believed that the TST was a superior method, the TST would have been included in the revised methods. Yet, it was not, and the TST is not a valid Part 136 method. As such, the TST cannot be used in NPDES permits based solely on USEPA guidance documents that have never been adopted as rules. To do otherwise would constitute an underground rulemaking, violating the Administrative Procedures Act and public participation requirements.

b) The 2002 Methods Anticipate Use and Analysis of a Multi-Concentration Test and Consideration of PMSD.

The 2002 Methods intend for the use of a multi-concentration test design for chronic toxicity, with consideration of the resulting concentration-response pattern in assessing the validity of the test, along with review of Percent Mean Significant Difference ("PMSD"). The Permit adopted by the Regional Board does not allow these important validation steps to be fully utilized.[11] These Permit restrictions conflict with the promulgated freshwater chronic toxicity test procedures in the 2002 Methods.

[11] *See* Permit, page 31, at Section VII.J, stating:

"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

The 40 C.F.R. Part 136 approved methods for freshwater chronic toxicity are listed in 40 C.F.R. section 136.3(a), Table 1A. These methods include Footnote 27, which mandates the use of *Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*, EPA-821-R-02-012, Third Edition, October 2002 (EPA's "2002 Methods"). The 2002 Methods make it very clear in several places that a multi-concentration test design with dose-response evaluation is required. Several examples are as follows (underlining added):

> "The tests recommended for use in determining discharge permit compliance in the NPDES program are multi-concentration, or definitive, tests which provide (1) a point estimate of effluent toxicity in terms of an IC25, IC50, or LC50, or (2) a no-observed-effect-concentration (NOEC) defined in terms of mortality, growth, reproduction, and/or teratogenicity and obtained by hypothesis testing" (Section 8.10.1)
>
> "The concentration-response relationship generated for each multi-concentration test must be reviewed to ensure that calculated test results are interpreted appropriately" (Section 10.2.6.2)
>
> "Tables 1, 3, and 4 (labeled as 3)[12] - SUMMARY OF TEST CONDITIONS AND TEST ACCEPTABILITY CRITERIA WITH EFFLUENTS AND RECEIVING WATERS (TEST METHODS 1000.0, 1002.0, AND 1003.0):
>
Test concentrations:	Effluents:	5 and a control (required minimum)
	Receiving Water:	100% receiving water (or minimum of 5) and a control (recommended)"

(U.S. EPA 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[pp. F-82 to F-83]). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the NOEC and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, 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 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, USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed." (emphasis added).

[12] 2002 Methods, EPA-821-R-02-013, Tables 1, 3, and 4 (labeled as 3) on pages 76, 165, and 211 (emphasis added).

The 2002 Methods also make it clear that consideration of PMSD is a required element of the procedure. The 2002 Methods specifically state:

> "When NPDES permits require sublethal hypothesis testing endpoints from Methods 1000.0, 1002.0, or 1003.0 (e.g., growth or reproduction NOECs and LOECs), within-test variability must be reviewed and variability criteria must be applied as described in this section (10.2.8.2)." (emphasis added)

For the purposes of evaluating within-test variability, the 2002 Methods consistently rely on use of the PMSD as a metric for conducting such an evaluation. A higher PMSD is equivalent to greater within-test variability while a lower PMSD is indicative of tests exhibiting lower within-test variability. Section 10.2.8.2 referred to in the method describes mandatory criteria using the PMSD for interpreting and validating sublethal hypothesis test results using the PMSD metric. *See* 2002 Methods at p. 51 (Section 10.2.8.2)("To measure test variability, calculate the percent minimum significant difference (PMSD) achieved in the test"). As quoted above, the promulgated method clearly indicates that application of these PMSD criteria must be conducted for any NPDES tests when sublethal hypothesis testing is conducted. The TST is a hypothesis test conducted on the sublethal endpoint and as such, must be subjected to application of the PMSD criteria described in the method. However, the Permit specifically prohibits the use of the PMSD criteria and runs contrary to the 2002 Method's required steps for quality assurance. *See* Permit at p. 31 ("The Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the NOEC and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results."). The requirement in the Permit to exclude evaluation of within-test variability is inconsistent and contradictory to specific requirements contained in the promulgated method.

Furthermore, in 2010 the USEPA released a guidance document, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, EPA 833-R-10-003, 2010 ("TST Guidance Document") introducing the TST protocol as an additional tool for analysis of chronic toxicity testing data. This guidance document made clear in numerous places that the intent of the guidance was to introduce a new approach to analyzing data collected

during a valid WET analysis, including a multiple concentration test design. Examples are provided below (emphasis added):

> "The TST approach does not result in changes to EPA's WET test methods promulgated at Title 40 of the Code of Federal Regulations Part 136." (page ii on the Disclaimer)
>
> "Once the WET test has been conducted (**using multiple effluent concentrations and other requirements as specified in the WET test methods**), the TST approach can be used to analyze valid WET test results to assess whether the effluent discharge is toxic." [Emphasis added] (page xi)
>
> "This document presents TST as a useful alternative data analysis approach for valid WET test data that may be used in addition to the approaches currently recommended in EPA's Technical Support Document (USEPA 1991) and EPA's WET test method manuals." (page 7)
>
> "The TST approach is an alternative statistical approach for analyzing and interpreting valid WET data; it is not an alternative approach to developing NPDES permit WET limitations. Using the TST approach does not result in any changes to EPA's WET test methods." (page 60)
>
> "Step 1: Conduct WET test following procedures in the appropriate EPA WET test method manual. This includes following all test requirements specified in the method (USEPA 1995 for chronic West Coast marine methods, USEPA 2002a for chronic freshwater WET methods, USEPA 2002b for chronic East Coast marine WET methods, and USEPA 2002c for acute freshwater and marine methods)." (Appendix B, page B-3)

This language makes clear that the TST was never meant to replace, *only to supplement*, WET testing done under the promulgated methods. Permit at p. F-81 (citing to TST guidance, the Fact Sheet recognizes that EPA recommended that "Permitting authorities should consider adding the TST approach," not replacing the 2002 Methods).

In addition, USEPA made changes to approved WET test methods as recently as 2012 in the *Promulgated Guidelines Establishing Test Procedures for the Analysis of Pollutants under the Clean Water Act: Analysis and Sampling Procedures:* Final Rule, 77 Fed. Reg. 29758-29846 (May 18, 2012), and proposed changes again in 2014 as cited above, but did *not* incorporate an option for a five concentration test design using the TST that limits application of a concentration-response evaluation and precludes application of PMSD criteria. If use of this alternative approach was USEPA's intent in 2010 when the TST Guidance Document was released, such a change could have been included initially or should have been made in 2012 when the methods

were updated by USEPA. *See id.*; *see also U.S. v. Riverside Bayview Homes* , 474 U.S. 121, 137 (U.S.S.C. 1985)(An action not to include modifications of which the entity was aware can be read as a presumption that the modifications were not intended to be included). Alternatively, USEPA could have proposed the limited use of concentration response and non-application of PMSD review in conjunction with the TST in its recent proposed rulemaking. USEPA failed to do so. Thus, the Regional Board has no authority to go beyond the requirements of the Part 136 methods to limit the evaluation of concentration-response relationship or ignore PMSDs, which are part of the approved 2002 Methods.[13]

b) USEPA's Alternative Test Procedure Approval was Unlawful and has been Withdrawn by USEPA.

On March 17, 2014, USEPA issued an Alternative Test Procedure ("ATP") letter approving statewide use of a two-concentration TST test approach without consideration of concentration-response relationships. *See* Letter from Eugenia McNaughton, US EPA Region 9 Quality Assurance Office Manager to Renee Spears, State Board Quality Assurance Officer, untitled, dated March 17, 2014 ("ATP Approval Letter"). In its ATP Approval Letter, USEPA ostensibly granted the State Board a "Limited Use Alternative Test Procedure" under Part 136 (40 C.F.R. §136.5(a)). However, it was not clear that the State could be a valid requestor since rules contemplate that the request must first be sent *to* the State. (*Id.* at subd. (b).) For this and other reasons,[14] the validity of the ATP approval was litigated in federal court and is currently under

[13] Although the Fact Sheet properly acknowledges that the concentration-response patterns "reduc[e] the number of misclassified test results" and "decreased discrepancies in data interpretation," the Permit incorrectly states that:

"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." Fact Sheet at p. F-82.

[14] The legality of the ATP approval was questionable as this ATP was not submitted by a discharger or a laboratory, but rather by the State Board, after receiving the two-concentration TST approach idea *from USEPA*. This act of self-dealing to avoid a full-blown public regulatory process thwarts the law and notions of good public policy. The ATP process was designed to "encourage organizations *external to EPA* to develop and submit for approval new analytical methods." *See Guide to Method Flexibility and Approval of EPA Water Methods*, USEPA Office of Water (Dec. 1996) at p. 77 (emphasis added).

Furthermore, USEPA acknowledged that no approved protocols exist for reviewing or approving a WET ATP. *Id.* at 93 ("EPA is developing a protocol for approval of new and modified (alternate) WET

submission awaiting final decision (*see SCAP and CVCWA v. USEPA,* Case No. 2:14-cv-01513 MCE-DAD, U.S. District Court, Eastern District). Prior to a final decision by the District Court judge, USEPA withdrew its ATP approval on February 11, 2015. Thus, even if there were an argument that the ATP allowed statistical analysis using the Instream Waste Concentration ("IWC") and a negative control in compliance determinations as has been required in the Permit, or allowed the use of the TST, that potential authorization ended on February 11, 2015. Thus, the Permit adopted on April 9, 2015 could not be based on either a two-concentration compliance model or the TST.[15]

For these reasons, and the others provided herein, the Petitioners respectfully request the Permit be amended to explicitly and clearly specify use of the 2002 Methods including a multi-concentration test design with full evaluation of the concentration-response prior to any compliance determination. *See accord* 2002 Methods at p. 45, Section 9.6.5.1 ("If in the calculation of an NOEC by hypothesis testing, two tested concentrations cause statistically

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methods."); USEPA website related to WET at: http://water.epa.gov/scitech/methods/cwa/atp/questions.cfm (last accessed 12/8/2014) ("Note: The EPA does not have a protocol for toxicity testing under EPA's Whole Effluent Toxicity (WET) program."); USEPA's Answer at Docket No. 17, ¶28 in *SCAP and CVCWA v. USEPA,* Case No. 2:14-cv-01513 MCE-DAD, U.S. District Court, Eastern District ("EPA admits that it has issued protocols regarding the information needed to evaluate ATP applications for potential approval and does not currently have a protocol for approving ATPs for WET testing.").

Finally, authorizing an ATP for WET was contrary to federal regulations. "Method Modifications" are explicitly *prohibited* for "Method-Defined Analytes" by 40 C.F.R. section 136.6(b)(3), which states (with emphasis added): "(3) Restrictions. An analyst may not modify an approved Clean Water Act analytical method for a method-defined analyte." USEPA has previously declared that WET is a Method-Defined Analyte. *See* 67 Fed. Reg. 69965 ("toxicity is inherently defined by the measurement system (a 'method-defined analyte') and toxicity cannot be independently measured apart from a toxicity test."); *see also* Brief of Respondents USEPA, *et al.*, in *Edison Electric Institute, et al., v. USEPA*, Case No. No. 96-1062 (D.C.Cir. 2004) at 44-45 and 78 *citing* Response to Comments at 219-20, J.A. XX; 67 Fed. Reg. 69,965. ("Because toxicity is defined and measured by its effect on living organisms, whole effluent toxicity is considered a method-defined analyte (i.e., it cannot be measured independently from a toxicity test). Thus, WET test results cannot be independently confirmed by comparing the results to a known concentration of toxicity."). Thus, an ATP could not lawfully allow an analyst to use modified methods for WET.

[15] The Permit states that the statistical analysis used compares "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"))." Permit at pp. 30-31 (emphasis added). Thus, the other concentrations and the concentration response are virtually ignored with this mandated t-test.

significant adverse effects, but an intermediate concentration did not cause statistically significant effects, the results should be used with extreme caution.")

c) A Non-Promulgated Approach Cannot Be Mandated over Promulgated Methods.

It is not clear how the District or any other Permittee can be *required* to use non-promulgated toxicity tests over the promulgated Part 136 methods that have been through extensive notice and comment rulemaking, and even subsequent litigation before those methods were upheld. Neither the Regional Board nor the USEPA has the authority to impose a non-promulgated test method *until* either a Permittee, like the District, requests to use that method as an ATP, *or* until that method has been formally promulgated by USEPA as an approved method under Part 136. Analytical results obtained by using a non-promulgated method cannot be used for NPDES compliance determination purposes until that method has been incorporated into 40 C.F.R. Part 136.[16] Similarly, the particular number of dilutions in a dilution series (e.g., two concentrations) cannot be mandated. 67 Fed. Reg. 69956 ("no one particular dilution series is required."). Thus, defining the concentrations that will be considered for compliance purposes under TST test design should not have been prescribed in the Permit.

The Permit also contradicts a June 18, 2010 USEPA Headquarters memo accompanying the TST Implementation Document, from James Hanlon, the Director of the USEPA Office of Wastewater Management, which stated: "The TST approach does not preclude the use of existing recommendations for assessing WET data provided in EPA's 1991 Water Quality-based Technical Support Document (TSD) which remain valid for use by EPA Regions and the States." Thus, review of only two concentrations (the IWC and control) using TST t-test approach should be used only for additional information, similar to the CEC monitoring (cited above) where samples are required using a non-promulgated method. However, the difference is that, for CECs, the extra data acquired using unpromulgated methods are *not* being used for compliance

[16] *See accord* Permit at pg. F-93, Section VI.B.2.a., in reference to Constituents of Emerging Concern ("CECs") ("Analysis under this section is for monitoring purposes only. Analytical results obtained for this study will not be used for compliance determination purposes, since the methods have not been incorporated into 40 CFR part 136.")

determination purposes whereas the chronic toxicity data under the TST approach reviewing just two concentrations (and not allowing adequate consideration of the concentration response or PMSD) for compliance determination.

USEPA has also clarified its position, and expressly stated that its ATP letter did not constitute a mandate. In its opposition brief filed in the litigation challenging the ATP letter, the USEPA argued that "EPA's March 2014 Letter was not a mandate and the State's decision not to use the alternate test would not be a basis for objection, much less a 'veto,' by EPA." In addition, USEPA's brief stated that:

> "EPA's approval of a limited use alternate test does not impose any obligation on the California Water Boards that issue NPDES permits, or on permit holders. By approving the limited use of this alternate test, the EPA did not 'mandate' the exclusive use of the two-concentration test, and it cannot require the California Water Boards to include this alternate test in NPDES permits issued by the State. The EPA simply approved the use in California of the two-concentration test as an alternate test to the five-concentration test. Ultimately, it is up to the California Water Boards that issue NPDES permits to decide which test(s) to require permit holders to use in reporting, not the EPA. After the EPA's March 2014 letter, the California Water Boards could still issue permits that require permit holders to use the five-concentration test, or that provide permit holders with a choice of which test to use."

See USEPA's Opposition to Plaintiffs' Ex Parte Application for Temporary Restraining Order and Order to Show Cause Re: Motion for Preliminary Injunction in case of SCAP and CVCWA v. United States EPA, Federal District Court for the Eastern District of California, Case No. 2:14-cv-01513 MCE-DAD (filed June 30, 2014)(citations excluded).

Since USEPA has stated that use of the TST approach, relying on Pass/Fail or Percent Effect from just two concentrations (the IWC and a control) is not required, and that permit holders can be provided with a *choice* of which test to use, the Petitioners request that the Permit be amended to make it clear that use of the TST approach for compliance determinations is *optional*. Instead, the Permit should allow use of the NOEC or the recommended Point Estimate (IC25) method set forth in the promulgated 2002 Methods in Part 136. *See supra* footnote 8.

d) USEPA Guidance Cannot Overrule Promulgated Regulations.

Page 9, footnote 12; page 11, footnote 17; page 31, Section VII.J and page F-83 of the Permit reference the 2002 Methods along with two USEPA guidance documents to attempt to

justify the inclusion of numeric effluent limitations and implementation provisions for toxicity based on the TST approach:

- *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010) [TST Guidance Document], and
- *EPA Regions 8, 9 and 10 Toxicity Training Tool* (January 2010) ("Training Tool"), http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tooljanuary-2010.

These documents cannot be used to justify the Permit's requirements because these guidance documents do not mandate use of the TST, or require the inclusion of any numeric effluent limitation for toxicity. Appendix D of the TST Guidance Document includes example permit language for either a trigger (as was prescribed by the State Board in the precedential orders discussed above)[17] ***or*** an effluent limitation. The Training Tool also discusses both permit triggers and effluent limitations for toxicity. In the Training Tool, as in the federal regulations, effluent limitations are only needed in cases where there is reasonable potential and even if there is reasonable potential, effluent limitations for toxicity are not needed if chemical specific effluent limitations are included for the pollutants identified as causing the toxicity (Section 2.5, page 31).[18] And, as discussed below in more detail, the law does not require numeric effluent limitations for chronic toxicity.

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[17] In addition, EPA guidance acknowledges the use of triggers for additional monitoring to confirm the presence of toxicity. "EPA recommends that regulatory authorities evaluate the merits of a step-wise approach to address toxicity. This approach can determine the magnitude and frequency of toxicity and appropriate follow-up actions for test results that indicate exceedances of a monitoring trigger or permit limit." USEPA, *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the NPDES System*, EPA 833-R-00-003 at p. 7-4 (June 2000); 65 Fed. Reg. 44528-9 (July 18, 2000) ("EPA recommends that NPDES permitting authorities implement the statistical approach as described in the TSD to evaluate effluent and to derived WET limits or monitoring triggers.")

[18] If State water quality standards contain only narrative water quality criteria for WET and the permit (or fact sheet) documents that chemical specific water quality-based effluent limitations ("WQBELs") are sufficient to attain and maintain the narrative water quality criteria, then WQBELs for WET are not necessary. 40 C.F.R. §122.44(d)(1)(v). Arguably, under the terms of the Toxicity objective, effluent limits are only authorized pursuant to the terms of the SIP, or for the causative toxicant. *See accord* Basin Plan at pg. 3-17; *see also City of Los Angeles et al v. USEPA, et al,* Central District Court, Case No. CV 00-08919 R(RZx)(Dec.18, 2001)(holding "EPA improperly failed to ensure that the LA-RWQCB adopted a translator procedure to translate its narrative criteria did not satisfy 33 U.S.C. §1313(c)(2)(B). In addition, in reviewing the LA-RWQCB's narrative criteria relating to toxic pollutants, EPA improperly failed to ensure that the LA-RWQCB set forth sufficient "information identifying the method by which the State intends to regulate the point source discharges of toxic pollutants on water quality limited segments based on such narrative criteria." 40 C.F.R. §131.11(a)(2).) On February 15, 2002, on remand from the federal court, USEPA issued

As a result, the Regional Board can point to nothing in either of the guidance documents cited that *mandates* the use of numeric effluent limitations for toxicity. Additionally, the TST Guidance Document is merely *guidance* that may be changed at any time as policies and directions change. Importantly, the Disclaimer in that guidance document specifically notes that the document is not "a permit or a regulation itself." The TST Guidance Document also clearly states that:

> "The document does not and cannot impose any legally binding requirements on EPA, states, NPDES permittees, or laboratories conducting or using WET testing for permittees (or for states in evaluating ambient water quality). EPA could revise this document without public notice to reflect changes in EPA policy and guidance."[19]

The other document cited is merely part of a training tool that is not even published guidance.

Although USEPA often tries to regulate by guidance, federal courts have frowned upon this practice as aptly described in *Appalachian Power Co. v. EPA*, 208 F.3d. 1015, 1020 (D.C. Cir. 2000). The district court in the *Appalachian Power* case found fault in USEPA's regulating by setting aside the guidance in its entirety. (*Id.* at p. 1028.) "If an agency acts as if a document issued at headquarters is controlling in the field, if it treats the document in the same manner as it treats a legislative rule, if it bases enforcement actions on the policies or interpretations formulated in the document, if it leads private parties or State permitting authorities to believe that it will declare permits invalid unless they comply with the terms of the document, then the agency's document is for all practical purposes 'binding.'" (*Id.* at p. 1021 [*citations omitted*].)

More recent cases have reached the same conclusion in other instances when USEPA tried to impose its will through interpretive rules, such as the TST Guidance Document. *See NRDC v. U.S. EPA*, 643 F.3d 311 (D.C.Cir. 2011) (invalidating USEPA guidance setting forth air quality

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a new approval document related to the Basin Plan's Toxicity objective finding that the adoption of the CTR made the need to use the Toxicity objective less necessary and, in instances where necessary, strongly relied upon the chronic toxicity control provisions in the SIP and the direction to the Basin Plan to "establish effluent limitations for specific toxicants which have been identified with the TIE procedures." Thus, in order to comply with the Basin Plan, the Regional Board must comply with the SIP and statewide orders interpreting those requirements, including WQO 2003-0012 and -0013. Just because the Permit on page F-25 states that the "Requirements of this Order implement the SIP" does not mean this statement is accurate.

[19] USEPA, National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document. EPA 833-R-10-004, June 2010.

attainment alternatives). A key case related to "requirements" contained in USEPA letters related to water quality permitting prohibitions related to blending and mixing zones. In this case, the court found that USEPA not only lacked the statutory authority to impose the guidance regulations on blending, but also violated the APA, 5 U.S.C. §500 et seq., by implementing the guidance on both issues without first proceeding through the notice and comment procedures for agency rulemaking. *Iowa League of Cities v. U.S. EPA*, 711 F.3d 844, 878 (8th Cir. 2013). The case law is clear that USEPA, and delegated States under the NPDES permit program, must regulate through rules and not through informal guidance. The Regional Board cannot legally regulate by guidance, particularly where that guidance is contrary to law and statewide precedential orders (*e.g.*, State Board WQO 2003-0013 and 2003-0012).

3) Not Allowing Full Concentration-Response Evaluation Reduces the Reliability of WET Tests.

WET tests measure how certain organisms respond to a particular water sample. As such, the measurements may be impacted by a number of extraneous factors including organism health, ionic changes in water chemistry, presence/absence of trace elements in the water, seasonality, light levels, temperature, analyst handling, and many others. While variability in WET tests cannot be eliminated entirely, the 40 C.F.R. Part 136 promulgated methods and various implementing USEPA guidance document procedures were intentionally developed and expressly incorporated into the Part 136 rule to address this variability and to quantify data and result reliability, as well as to settle several lawsuits over the challenged reliability and usefulness of these tests.[20]

In a legal challenge to the 2002 Methods, the court found that "[t]he ratified WET tests are not without their flaws" and cautioned that "[e]ven by EPA's calculations, WET tests will be

[20] USEPA's first WET test methods were promulgated in 1995. 60 Fed. Reg. 53,529 (Oct.16, 1995). As a result of a legal challenge, these WET tests were modified pursuant to a settlement that required USEPA to re-promulgate chronic WET test methods for use in monitoring compliance with NPDES permit limitations after a formal national rulemaking process, in accordance with 40 C.F.R. Part 136. *See* 67 Fed. Reg. 69,952 (Nov. 19, 2002) ("2002 Methods"). The 2002 Methods specifically included two test methods, a hypothesis test based on the NOEC and a point estimate test based on the 25% Inhibition Concentration ("IC25"). These 2002 Methods constitute USEPA's formally promulgated 40 C.F.R. Part 136 WET methods.

wrong some of the time, *Edison Electric v. EPA,* 391 F.3d 1267, 1272-1274 (D.C. Cir. 2004). However, the court upheld those methods because USEPA had provided adequate safeguards within those methods to protect against the concerns raised by the plaintiffs. One of these safeguards was the requirement to use a multiple-concentration test that includes a concentration-response evaluation.[21] "EPA also offered an additional safeguard by designing the tests to give permittees the benefit of the doubt, limiting false positive rates to at most 5%, while allowing false negative rates up to 20%." *Edison Electric,* 391 F. 3d at 1272. These safeguards have been removed from the Regional Board's approach used in the Permit that authorizes determining Pass/Fail endpoints from just two concentrations, comparing an effluent sample at the IWC (which is set at 100% effluent where there is no dilution credit (Permit at p. E-27, Section V.A.1.)) to a control blank using the TST statistical t-test with artificially limited review of multi-concentration information, and starts with the backwards presumption that that the sample is toxic at the IWC. *See* Permit, p. 31, Section VII.J; TST Guidance.

During a November 6, 2014 Regional Board adoption hearing on other District permits, Regional Board staff and USEPA testified that multiple concentration testing and concentration-response evaluations are only conducted to interpret the NOEC, and, therefore, the use of multi-concentration response procedures for the TST does not have statistical or technical merit. *See also* Permit at pp. F-82 to F-83. However, USEPA's own guidance, which addresses concentration-response evaluations, states that an "evaluation of the concentration-response

[21] *Edison Electric,* 391 F. 3d at 1273 *citing* 67 Fed. Reg. at 69,957-58 (holding that "exposing multiple batches of organisms to the effluent at various concentrations, as well as to a 'control' sample of pure water, and then aggregating the effects on each batch" followed by a statistical analysis "to ensure that any observed differences between the organisms exposed to a given effluent concentration and those exposed to the control blanks most likely are not attributable to randomness - that they are statistically significant" will be a "safeguard [that] addresses petitioners' concerns.") The importance of the five-concentration test to meet test acceptability criteria was also recognized in an October 22, 2013 Memo from Robert Wood, USEPA Headquarters, to Alexis Strauss, USEPA Region IX ("as stated in the promulgated CWA WET methods and re-iterated in the 'EPA's National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document,' these methods require a control plus five effluent concentrations under the methods' test acceptability criteria. As such, the promulgated methods do not allow for only two concentrations for use in NPDES permits.")(Emphasis added).

relationship generated for each sample is an important part of the data review process that should not be overlooked."[22]

The same reference further concludes that "reviewing concentration-response relationships should be viewed as a component of a broader quality assurance and data review and reporting process." *Id.* This process includes data review, evaluation of test acceptability, evaluation of reference toxicant testing results, organism health evaluations, and test variability evaluation. The importance and need to conduct multiple concentration tests, including conducting a concentration-response evaluation for chronic toxicity tests, even when using the TST statistical approach, was confirmed by USEPA Region IX in one of its recently issued NPDES permits. *See* General Permit No. CAG280000, Authorization to Discharge under the National Pollutant Discharge Elimination System for Oil and Gas Exploration, Development, and Production Facilities (December 20, 2013), available at the following website:

http://www.epa.gov/region9/water/npdes/pdf/ca/offshore/general-permit.pdf.

This USEPA-issued general permit for oil and gas exploration required the use of the TST statistical method to analyze *multi-concentration* WET test results. *Id.* at p. 15, Section II.B.2.d.2 ("This permit is subject to a determination of Pass or Fail from a multiple-effluent concentration chronic toxicity test at the IWC..."). Unlike the District's Permit, that general permit did not improperly limit the concentration response review. USEPA specifically required the use of a multi-concentration test design with consideration of the concentration-response. *Id.* Section II.B.2.d.6 on page 15 of this general permit stated the following:

> "6) Following Paragraph 10.2.6.2 of the freshwater EPA WET test methods manual, all chronic toxicity test results from the **multi-concentration tests required by this permit shall be reviewed and reported according to EPA guidance on the evaluation of concentration-response relationships** in Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136) (EPA/82I/B-00-004, 2000)." (Emphasis added)"

The Permit seems to ignore these requirements, and states that Regional Board review of concentration response will only be included "as appropriate" and that PMSD are "not used to

[22] USEPA, *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)*, EPA 821-B-00-004 (July 2000) at pg. 4-3.

interpret TST results." Permit at p. 31. Compliance seems to solely be judged on the TST statistical approach, defined as the determination of "the means of 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"). *Id.* The verbiage about "using a multi-concentration test design" appears to be just for show, to avoid the argument that this is really just a two-concentration TST, but the result is the same.

Elaboration on the restrictions to concentration-response evaluations was provided by Regional Board staff in the Response to Comments for the San Jose Creek WRP Tentative Permit, where it was stated, "Consideration of the concentration-response relationship is not necessary when analyzing WET test data using the TST approach, and would not be expected to reduce the error rate. Instead, evaluation of test acceptance criteria, test conditions, and reference toxicant testing are appropriate to identify anomalous data prior to analysis using the TST approach." Further elaboration was provided in Regional Board staff testimony at the adoption hearing on February 12, 2015 that stated, "Concentration-response curves are reviewed as a data interpretation step to verify multi-concentration test NOEC results, not the TST statistical analysis." (**Exhibit C** – Staff Presentation, last slide on page 9). The testimony also indicated that certain key elements of concentration-response evaluations, "Evaluate Within Test Variability" and "Evaluate Test Sensitivity" were "Not Appropriate." *Id.* No evidence or authority was provided or cited to support these allegations.

Petitioners believe California is the only state for which the TST t-test approach has been approved as an ATP (although, as previously mentioned, this approval was challenged and withdrawn). This ATP was issued in March 2014, although USEPA released the TST procedure in 2010. Therefore, in other States (and prior to March 2014 in California), a multi-concentration test design with full consideration of concentration-response and PMSD for hypothesis testing was a universal requirement. If use of a multi-concentration test design under these circumstances had no statistical or technical merit, then entities running chronic toxicity tests would have wasted time and money running the multi-concentration tests. If the TST using a t-test comparing just two concentrations without consideration of concentration-response produces the desired result (a

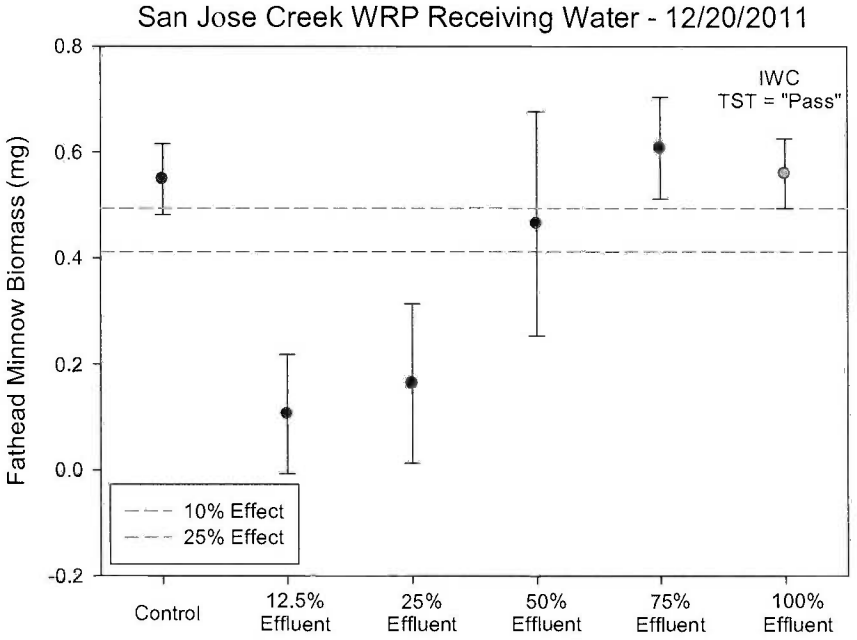
simple "Pass/Fail" answer), then USEPA should have gone through a formal method promulgation process to allow a two concentration TST approach to be used nationwide, rather than introducing an approach that required steps to be performed with "no statistical or technical merit." However, such a change was not proposed in USEPA's recent method modification rulemaking, as discussed previously. The Regional Board has not proposed this as a Basin Plan amendment to modify the Toxicity Objective either. Thus, prescribing these requirements equates to case-by-case rulemaking. One of the primary reasons that the State Board desired a statewide Toxicity Policy was to avoid this region-specific or case-specific approach.

Overall, conducting multiple concentration WET tests and evaluating the concentration-response relationship represents one of the more critical and significant method-defined procedures for addressing toxicity test variability and for validating data. The concept of a concentration-response relationship, also known as a dose-response relationship, has been described by toxicologists as "the most fundamental and pervasive one in toxicology."[23] This concept assumes that a causal relationship exists between the concentration of a pollutant(s) in a sample as measured through a surrogate toxicity test and the calculated organism response. In other words, the concept assumes that increasing organism response or effect is due to increasing pollutant/toxicant concentrations. Evaluation of the concentration-response relationship provides the empirical evidence that supports this assumption. Thus, evaluating concentration-response information is critical to associating any observed response to "toxicity."

If an effect is caused by "toxicity" as opposed to other stressors, higher concentrations of effluent should logically exhibit the same or greater effects and lower concentrations should exhibit the same or lower effects. The only way this can be evaluated is by conducting multiple concentration tests. Anomalies in this expected or assumed concentration-response curve reduces confidence in the test's ability to accurately estimate "toxicity" or, more specifically, the test's ability to estimate effects associated with pollutants or toxicants. In fact, the USEPA determined that application of a relatively simple concentration-response evaluation procedure to chronic

[23] Casarett, L.J. and J. Doull, Toxicology: the basic science of poisons, Macmillan Publishing Co., New York (1975); 2002 Methods at p. 50, Section 10.2.6.1..

toxicity tests run using the NOEC hypothesis test analysis reduced the false positive rate among non-toxic blank samples from over 14% to less than 5%.[24] Although more challenging to quantify, evaluation of the concentration-response relationship is also expected to significantly reduce the false negative error rate as well (as seen in the example below).



In the absence of multi-concentration testing and a dose-response evaluation, the results depicted above would have been identified as an unqualified "Pass" using the Permit's TST protocol because the control and the effluent at the IWC are nearly identical. However, pending the findings of additional data evaluations, this test that otherwise would have been declared "non-toxic" or "Pass," will likely be identified as "inconclusive" and repeated after conducting a concentration-response relationship evaluation.

Similarly, USEPA's own guidance, which addresses concentration-response evaluations,[25] consistently utilizes the PMSD as a metric to assess within test variability for assisting in the interpretation of test results as part of the concentration-response evaluation. In fact, the

[24] USEPA, *Guidelines Establishing Test Procedures for the Analysis of Pollutants; Whole Effluent Toxicity Test Methods; Final Rule*, 67 Federal Register 69,963 (November 19, 2002).

[25] USEPA, *Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136)*, EPA 821-B-00-004 (July 2000) at pg. 4-4, 4-10, 4-12, 4-13, 4-14, and 4-15, .

promulgated rules in 40 C.F.R. Part 136 included chronic toxicity testing protocols, which concluded that test review, including the full evaluation of the concentration-response relationship, is vital to ensure that all test results are reported accurately.[26] In addition to being necessary for accurate result interpretation, the USEPA 2002 Methods manual (EPA 821-R-02-013) also directly requires that multiple concentration testing be conducted for all NPDES effluent compliance determination tests. The method manual further requires that an evaluation of the concentration-response relationship be conducted and strongly recommends against the use of two concentration (control and IWC) test designs for NPDES testing. Furthermore, the USEPA's TST Guidance Document also recognizes that toxicity tests should be conducted following these same requirements, and furthermore specifically references conducting multiple concentration testing before application of the two-concentration TST statistical procedure. In other guidance, USEPA has explained that (emphasis added):

> "The agency is concerned that single concentration, pass/fail, toxicity tests do not provide sufficient concentration-response information on effluent toxicity to determine compliance. It is the Agency's policy that all effluent toxicity tests include a minimum of five effluent concentrations and a control."[27]

> "Use of pass/fail tests consisting of a single effluent concentration (e.g., the receiving water concentration or RWC) and a control is not recommended"[28]

Therefore, in order to maintain the full procedural safeguards guaranteed by the 2002 Methods and the *Edison* case, including use of the PMSD, the Petitioners request that the Permit be modified to accurately reflect required 40 C.F.R. Part 136 protocol and variability evaluation procedures, including the ability to conduct and utilize the results from multiple concentration tests, an appropriate concentration response relationship evaluation, and comparison to the PMSD. The Petitioners request that a similar provision be incorporated into the Permit to allow

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[26] USEPA, *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms*, Fourth Ed., EPA-821-R-02-013 (October 2002) at Section 10.2., p. 49.

[27] *See* USEPA, *Whole Effluent Toxicity: Guidelines Establishing Test Procedures for the Analysis of Pollutants - Supplementary Information Document* (SID) at pg. 28 (Oct. 2, 1995).

[28] *Short-Term Methods for Estimating the Chronic Toxicity of Effluent and Receiving Water to Freshwater Organisms*, Fourth Ed., EPA-821-R-02-013 (October 2002) at Section 2.2.3, p. 5.

not only the use of a five-concentration test design, but an evaluation of the concentration-response relationship and the PMSD when making compliance determinations.

4) The Regional Board Improperly Included Daily Maximum Effluent Limitations for Chronic Toxicity.

Assuming for the sake of argument that any chronic toxicity limit other than that prescribed in WQO 2003-0013 or 2003-0012 is justified, federal law authorizes only monthly and weekly average effluent limitations for POTWs without a demonstration that these effluent limitations are "impracticable."[29] *See* 40 C.F.R. §122.45(d)(2)("For continuous discharges all permit effluent limitations, standards and prohibitions, including those necessary to achieve water quality standards, shall unless impracticable be stated as: (2) Average weekly and average monthly limitations for POTWs"). As described above, the Permit includes a Maximum Daily Effluent Limit ("MDEL") for chronic toxicity, which is more stringent than required by federal law and has not been adequately justified. Therefore, this limitation is contrary to law.[30]

A recent decision upheld the need to follow the regulations, holding that the guidance cited by the Regional Board[31] cannot be used to overrule the express terms of the regulations. *See California Sportfishing Protection Alliance (CSPA) v. Cal. Regional Water Quality Control Board, Central Valley Region,* Sacramento Superior Court, Case No. 34-2013-80001358-CU-WM-GDS, Ruling on Submitted Matter: Petition for Peremptory Writ of Mandate (Aug. 18, 2014). In that case, the court held: "To the extent that the applicable law does not represent a

[29] The term "impracticable" is not defined in federal law, but should be deemed equivalent to "infeasible" as included in the SIP at Appendix 1-3, which is defined as "not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." This term is generally defined by the Merriam Webster Dictionary as "not practicable: incapable of being performed or accomplished by the means employed or at command." Similarly, the Oxford Press Dictionary defines "impracticable" as "impossible in practice to do or carry out."

[30] California courts have already held that daily limits are not allowed for POTWs unless demonstrated with adequate supporting evidence that longer term average limits are impracticable. These decisions are binding on the Water Boards since not appealed. (*See City of Burbank v. State Water Resources Control Board,* 35 Cal. 4th 613, 623, n.6 (2005) (The Supreme Court held: "Unchallenged on appeal and thus not affected by our decision are the trial court's rulings that... (2) the administrative record failed to support the specific effluent limitations; (3) the permits improperly imposed daily maximum limits rather than weekly or monthly averages;...)(emphasis added).)

[31] The Permit on pp. F-73 references its reliance on guidance: "As stated by USEPA in its long standing guidance."

reasonable approach to establishing effluent limitations, the law may need to be changed. Until it is changed, however, ...Respondent [Regional] Board was obligated to do what the law required...") Thus, reliance on USEPA's Technical Support Document guidance was overturned, and the permit was remanded and is being revised accordingly.

The State Board has already determined that numeric limits are not practicable, feasible, or appropriate in the context of chronic toxicity (*e.g.*, are impracticable) and, therefore, numeric weekly and monthly (or even daily) limits are not required and that remains the rule until a new Toxicity Policy determines otherwise in a precedential order or formal rulemaking. *See* WQO 2003-0013, WQO 2003-0012, WQO 2008-0008 and WQO 2012-0001. The State Board requires a narrative effluent limitation to be imposed instead, stating that "there shall be no chronic toxicity in the effluent discharge." Thus, this limit complies with 40 C.F.R. Section 122.45(d).

In addition, a daily maximum limit for chronic toxicity is unnecessary to protect aquatic life because chronic toxicity, by definition, is neither "highly toxic" nor "short-term."[32] "Chronic toxicity is a measure of adverse sub-lethal effects in plants, animals, or invertebrates in a long-term test." Order No. R4-2009-0078 at p. E-20 (emphasis added). Chronic toxicity testing is meant to assess *long-term* impacts to biological communities of organisms in the ambient receiving waters, not the impact of a single day's discharge, or the maximum on a given day. *See* Permit at p. F-79 ("chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth.") (emphasis added); *see also* Permit at p. F-98, para. C.

Furthermore, use of a daily maximum chronic toxicity limit to protect against a short duration event capable of exceeding the Basin Plan's narrative water quality objective for Toxicity makes no sense when a single freshwater chronic test itself typically consists of three (3) or more discrete samples collected over an exposure period of four (4) to eight (8) days,

[32] While these terms may apply to *acute* toxicity, they do not describe chronic toxicity. The Permit determined that no reasonable potential existed for acute toxicity and the acute toxicity limit was removed. *See* Permit at p. F-83; *see also* State Board Order No. WQO 2003-0009 at p. 9 (allowing effluent limitations to be removed where recent monitoring data shows no reasonable potential with no backsliding concerns).

depending on the test organism.[33] *See* 67 Fed. Reg. 69953 (2002 Final WET Rule)("short term methods for estimating chronic toxicity use longer durations of exposure (*up to nine days*) to ascertain the adverse effects of an effluent or receiving water on survival, growth and/or reproduction of the organisms.") (emphasis added). Therefore, the use of a short term average or daily maximum limit for chronic WET is itself impracticable and a chronic toxicity limit (as is recognized for other long-term chronic objectives[34]) should be expressed only in narrative form of "There shall be no chronic toxicity in the effluent discharge," interpreted as a monthly average, or a median monthly if the monthly average is demonstrated to be impracticable. *See accord In the Matter of the Own Motion Review of City of Woodland*, Order WQO 2004-0010, 2004 WL 1444973, *10 (June 17, 2004) ("Implementing the limits as instantaneous maxima appears to be incorrect because the criteria guidance value, as previously stated, is intended to protect against chronic effects." The limits were to be applied as monthly averages instead); WQO 2003-0012; and USEPA Letter to Regional Board on Long Beach/Los Coyotes WRP Permit at p. 4 (May 31, 2007)("At minimum, the permits need to specify the WQBEL: 'There shall be no chronic toxicity in the effluent discharge.'").)

Contrary to USEPA regulations and State Board orders (which prescribe a narrative toxicity limit), the Permit includes an MDEL for chronic toxicity that would result in a corresponding permit violation as a result of a single sample exceedance. Single sample violations for chronic toxicity analyses are inappropriate due to the variability and uncertainty

[33] The Regional Board relied upon several guidance documents for its determination that an MDEL was appropriate, including the "EPA Regions 8, 9, and 10 Toxicity Training Tool" and the Technical Support Document. As discussed in detail in Section 4.B.2.d. above, guidance documents cannot overrule regulations. In addition, the Regional Board cannot rely upon USEPA's objection to Whittier Narrows permit as the validity of that objection is currently being litigated in the Ninth Circuit Court of Appeals (Case No. 14-74047).

[34] Chronic toxicity can be compared to other chronic water quality criteria, such as the Criteria Continuous Concentration ("CCC") under the California Toxics Rule and National Toxics Rule, which is defined as "the highest concentration of a pollutant to which aquatic life can be exposed for an extended period of time (4 days) without deleterious effects." 40 C.F. R. §131.38(b)(1), note d; 40 C.F.R. §131.36(b)(1), note d. These criteria are not imposed as daily maximum limits in NPDES permits.

inherent in testing biological organisms for non-lethal endpoints.[35] The Permit even acknowledges that confirmatory testing did not duplicate the results where an elevated endpoint was recorded for a single species on a specific day. Permit at p. F-82.

The preamble to the 2002 WET Rule says "EPA policy states that 'EPA does not recommend that the initial response to a single exceedance of a WET limit, causing no known harm, be a formal enforcement action with a civil penalty.'" 67 Fed. Reg. 69968 *citing* EPA memo entitled *National Policy Regarding Whole Effluent Toxicity Enforcement* (1995a) (emphasis added). The appropriate response to a chronic toxicity test indicating the presence of toxicity is *not* to declare a violation, but to investigate the cause, starting with follow-up testing to confirm the initial result. *See accord* 67 Fed. Reg. 69,968 (USEPA policy suggests additional testing is an appropriate initial response to a single WET exceedance); Basin Plan at 3-17 (recommending a TIE to identify cause of toxicity prior to imposing effluent limitation to implement the narrative Toxicity objective); SIP at pp. 30-31(requires TRE, and the failure to conduct required toxicity tests or a TRE results in establishment of chronic toxicity limits in the permit). The precedential State Board Orders (Nos. 2003-0012 and -0013) appropriately included this investigation process. The Permit should be revised back to the 2009 permit language for the San Jose Creek WRP, mirroring the requirements in the precedential orders.

Where effluent limitations are authorized, federal regulations provide that for discharges from POTWs, all permit effluent limits shall, unless impracticable, be stated as average weekly and average monthly discharge limitations. 40 C.F.R. §122.45(d)(2); *see also* State Board WQO 2002-12 at 20-21. Nevertheless, the Regional Board included daily maximum limitations for chronic toxicity in the Permit, without making the requisite determination of impracticability, or

[35] "Single measurements on effluent involve some uncertainties about the true concentration or toxicity related to the representativeness of the sample... Like all analytical measurements, WET measurements (NOEC, EC25, LC50) are inexact." USEPA, *Understanding and Accounting for Method Variability in Whole Effluent Toxicity Applications under the NPDES System*, EPA 833-R-00-003 at p. 6-2 (June 2000). Reliance upon a single test is also highly problematic and impracticable given that toxicity tests often inaccurately identify non-toxic samples as toxic. Further, the results from a single effluent test provide no indication of actual chronic aquatic toxicity in the ambient receiving waters outside a mixing zone, as proscribed by the Basin Plan's Toxicity objective.

without evidence to support its findings of impracticability (where made).[36] *See* Permit at Effluent Limitations and Discharge Requirements Section IV.A., Table 4, Section IV.B, Table 5, and Section IV.C, Table 6 (imposing daily maximum effluent limitations for chronic toxicity of "Pass or % Effect < 50"). Without a valid and supported impracticability analysis, daily maximum limits are unlawful. *See accord* Statement of Decision, *City of Los Angeles v. State Water Resources Control Board*, Los Angeles County Superior Court Case No. BS 060957 (April 4, 2001) and Statement of Decision, *City of Burbank v. State Water Resources Control Board*, Los Angeles County Superior Court Case No. BS 060960 (April 4, 2001).[37]

Therefore, the Regional Board's inclusion of daily maximum effluent limitations for chronic toxicity in the Permit violated 40 C.F.R. §122.45(d)(2), as there were either no findings of

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[36] Although the Permit contains a cursory and general finding of impracticability, these findings are not specific to toxicity and are unsupported by evidence in the record to demonstrate impracticability. For example, the Fact Sheet states that "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 AWL, 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." Permit at p. F-81. But daily or even weekly monitoring is not being required, so this concern is not addressed by including an MDEL. *Id.* at p. E-21 (requiring monthly monitoring for chronic toxicity). Orders not supported by the findings or findings not supported by the evidence constitute an abuse of discretion. *See* 40 C.F.R. §124.8(b)(4); *Topanga Association for a Scenic Community v. County of Los Angeles,* 11 Cal.3d 506, 515; *California Edison v. SWRCB*, 116 Cal. App. 751, 761 (4th Dt. 1981); *see also In the Matter of the Petition of City and County of San Francisco, et al.,* State Board Order No. WQ-95-4 at 10 (Sept. 21, 1995). The Regional Board must make findings based on evidence in the record and may not merely tick off statutory requirements and make claims without supporting evidence. *See City of Carmel-by-the-Sea v. Bd. of Supervisors*, 71 Cal.App.3d 84, 93 (1977) (holding that written findings of fact were insufficient as a matter of law because they were merely a recitation of the statutory language). In addition, the Regional Board may not rely on speculation in reaching a decision. Rather, it must be clear from the record that the Regional Board actually relied upon solid evidence to support its findings, and that this clearly identified and cited evidence supports the agency's findings and ultimate conclusion. Further, the Regional Board must adequately demonstrate a rational connection between the evidence, the choices made, and the purposes of the enabling statute. *See California Hotel & Motel Ass'n v. Industrial Welfare Comm.*, 25 Cal.3d 200, 212 (1979). The level of detail that must be included in the Regional Board's consideration must clearly demonstrate the "analytical route" contemplated under *Topanga*. *See Department of Corrections v. State Personnel Board,* 59 Cal.App.4th 131, 151 (1997). It is insufficient for the Regional Board to simply cite to unsubstantiated findings of impracticability without proof. Without evidence to support the findings, the daily limits are unlawful.

[37] The State Board and Regional Board did not appeal the Superior Court's decisions in the *City of Los Angeles* and *City of Burbank* with respect to the inclusion of daily maximum effluent limitations for POTWs. Thus, the Superior Court's decision stands. *See City of Burbank,* 35 Cal.4th 613, 623, n.6. ("Unchallenged on appeal and thus not affected by our decision are the trial court's rulings that . . . the permits improperly imposed daily maximum limits rather than weekly or monthly averages…").

impracticability made by the Regional Board, or any findings made were not supported by evidence. The Regional Board also violated the State Board's precedential orders by not including the prescribed narrative effluent limitation. Thus, the Regional Board proceeded without, or in excess of, its jurisdiction and committed a prejudicial abuse of discretion by not proceeding in a manner required by federal and state law. For these reasons, and given the precedent set in WQO 2002-0012 and -0013, the State Board should remove all daily maximum effluent limitations for chronic toxicity from the Permit.

The Permit should be modified to return to the prescribed narrative limitation with numeric triggers, and the daily maximum effluent limitation for chronic toxicity should be removed because this limit is impracticable, unlawful, and inappropriate.[38]

5) Effluent Limitations Are Not Required To Be Numeric.

The inclusion of numeric limits does not necessarily mean that water quality standards will be achieved in the receiving waters given other inputs to those waters; numeric limits just generally make for an easier comparison to a numeric objective. In this case, there is a narrative objective where no chronic toxicity is allowed in the receiving waters or in the effluent discharge, so the comparison is just as simple.

a) Numeric WQBELs Are Not Required.

To the extent the Regional Board believes that numeric limits are required, case law and other binding precedent hold that the opposite is true. State and federal courts have resoundingly rejected any suggestion that effluent limitations are required to be numeric. *Citizen Coal Council v. USEPA*, 447 F.3d 879, 895-96 (6th Cir. 2006). The definition of "effluent limitation" in the CWA refers to "any restriction," and may include a "schedule of compliance" 33 U.S.C. §1362(11); 40 C.F.R. §122.2; *Natural Resources Defense Council v. USEPA,* 673 F.2d 400, 403 (D.C. Cir. 1982)(The CWA "defines 'effluent limitation' as 'any restriction' on the amounts of pollutants discharged, not just a numerical restriction."); *Waterkeeper Alliance, Inc. v. USEPA,*

[38] Alternatively, the State Board could transform the daily limits for chronic toxicity into a weekly average limitation in order to comply with 40 C.F.R. §122.45(d)(2) and the recent ruling in the 2014 *CSPA* case

399 F.3d 486, 502 (2d Cir. 2005)("site specific BMPs [best management practices] are effluent limitations under the CWA."). The term "schedule of compliance" means a "schedule of remedial measures," including an enforceable sequence of interim requirements leading to compliance with an effluent limitation or standard (33 U.S.C. §1362(17); 40 C.F.R §122.2.). *See accord* Statement of Decision Granting Writ of Mandate, *City of Tracy v. SWRCB,* Sacramento Superior Court Case No. 34-2009-80000392 (2010) at p. 41 (case is binding on the Water Boards since not appealed). Thus, an effluent limitation could consist entirely of remedial measures, such as triggers to additional monitoring, a TIE/TRE, and the addition of chemical-specific effluent limitations, as set forth in the current permit construct under WQO 2003-0012 and WQO 2008-0008.

In addition, in the *Communities for a Better Environment* case, the First Appellate District Court of Appeal specifically rejected the argument that the federal regulations mandate numeric WQBELs. Instead, the Court found that Congress intended a "flexible approach" including alternative effluent control strategies. *Communities for a Better Environment ("CBE") v State Water Resources Control Bd.* (2003) 109 Cal. App 4th 1089, 1105; *Communities for a Better Environment v State Water Resources Control Bd.* (2005) 132 Cal. App 4th 1313, 1318; *see also Divers' Environmental Conservation Organization v SWRCB* (2006) 145 Cal.App.4th 246, 262 (following *Communities for a Better Environment.*) Thus, numeric effluent limitations are not required or necessary to meet the requirements of the federal CWA. *CBE, supra*, 109 Cal.App.4th at p. 1093. Indeed, federal regulations expressly permit non-numeric effluent limitations - such as narrative limitations, source control and other best management practices. 40 C.F.R. §122.44(d)(1)(i) and (v)(discussing "Limitations" and "effluent limits for whole effluent toxicity" without using the word "numeric")[39]; 40 C.F.R. §122.44(k)(3); *see also* State Board WQO 2006-0012, p. 16 ("programs of prohibitions, source control measures, and BMPs constitute effluent limitations and can be written to achieve compliance with water quality standards.")

These decisions overrule any justification made by the Regional Board, or USEPA, for

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discussed above. However, that limit is also impracticable for the reasons herein so the reinsertion of the narrative effluent limitation is preferred.

requiring numeric effluent limitations for WET. As these cases proclaim, numeric effluent limitations are not required by any law or regulation. Moreover, numeric limits are particularly inappropriate for WET because of the inherent inaccuracies of biological testing and the likelihood of inaccurate test results that put the permittee in compliance jeopardy for false failures, creating a violation even when the effluent is not truly "toxic."

The ability to comply is a critical factor in determining the "feasibility" or "propriety" of numerical limitations. *City of Tracy v. SWRCB,* Statement of Decision at p. 42. The feasibility of calculating a limit is not.

Regarding the ability to comply with numeric effluent limitations, the inherent variability of biological testing and the likelihood of inaccurate test results needs to be carefully handled or compliance will not be feasible. Inaccurate ("False Failure") results put the District in compliance jeopardy when the effluent is not really "toxic."[40] Any numeric effluent toxicity limitations must be carefully crafted, to recognize this inherent variability and potential for false indications of toxicity. Development of any such limitations should be done on a statewide basis, as initially promised by the State Board in 2003, through an open process considering input from all stakeholders, not on a permit-by-permit basis as has happened in the Los Angeles Region. Without adequate consideration of false failures under the TST or false positives under other tests, the State Board should continue to consider numeric limitations for chronic toxicity to be infeasible.

The State Board's WQO 2003-0012 held the following, which was referred to by USEPA:

> While numeric effluent limitations are generally preferred, NPDES permits can legally contain "best management practices" in lieu of numeric limitations where the permitting authority determines that numeric effluent limitations are not "feasible."

[39] In fact, section 122.44(d) references "any requirements... necessary to (1) Achieve water quality standards...," and does not limit these requirements to "effluent limitations."

[40] This is one reason the State Board has repeatedly, in four precedential orders with the most recent in 2012, indicated its preference for establishing the procedures for setting chronic toxicity effluent limits for inland dischargers through a statewide process. Without adequate consideration of false indications of toxicity (*e.g.*, false positives or false failures), numeric limitations for toxicity should be considered infeasible.

WQO 2003-0012 at p. 9 and fn. 25, *citing* 40 C.F.R. § 122.44(k)[41]; *Communities for a Better Environment v. Tesoro* (2003) 109 Cal.App.4th 1089; *Natural Resources Defense Council v. Costle* (D.C. Cir. 1977) 568 F.2d 1369; WQO 91-03 (*Citizens for a Better Environment*). Under state law, "infeasible" is defined as "not capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors." Cal. Water Code §8307(c)(4); *see also* SIP at Appendix 1-3; 40 C.F.R. §450.11(b) ("Infeasible. Infeasible means not technologically possible, or not economically practicable and achievable in light of best industry practices.").

When making its determination as to whether "numeric effluent limitations are infeasible," the State Board stated: "The issue we will explore is whether the use of numeric effluent limitations for chronic toxicity is appropriate." See WQO 2003-0012 at 9, fn. 26, *citing Tesoro, supra*, slip opn., p. 18. The State Board has repeatedly found that the imposition of numeric limitations for chronic toxicity is not appropriate. *See* WQO 2003-0012, WQO 2008-0008, and WQO 2012-0001. In WQO 2008-0008 (City of Davis), adopted on September 2, 2008, the State Board concluded that a numeric effluent limitation for chronic toxicity was not appropriate in the permit under review, but that the permit had to include a *narrative* effluent limitation for chronic toxicity. This precedent should be upheld and followed here.

b) Numeric Limitations for Chronic Toxicity Remain Inappropriate.

Numeric effluent limits for chronic toxicity are not appropriate because of the inherent inaccuracies of biological testing and the likelihood of false test results that put the permittee in compliance jeopardy when the effluent is not really "toxic."

The legal validity of numeric chronic toxicity limits is also questionable. USEPA

[41] Section 122.44(k)(3) of the federal regulations, regarding infeasibility of numeric limits, is not the only exemption available. 40 C.F.R. §122.44(k)(3). Subdivision (k)(4) authorizes BMPs where "the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA." 40 C.F.R. §122.44(k)(4). Here, the trigger approach confirming toxicity and then, where toxicity is confirmed, performing a TIE and TRE could be construed or interpreted to be BMPs that are reasonably necessary to determine the underlying source of toxicity to remedy that issue. Having numeric limits that merely result in the imposition of penalties for a random and unconfirmed "violation" does not remedy any potential water quality issue, it just penalizes sampling results. Thus, the BMP trigger approach is authorized under federal rules. 40 C.F.R. §122.44(k)(4).

recognizes that "the precision of freshwater chronic toxicity tests is discussed in the representative methods sections in the methods manual (EPA/600/4-91/002). NOEC … is generally in the range of 30-60% [coefficient of variation]." *See* 60 Fed. Reg. 53533-4 (Oct. 16, 1995). This variation is similar to a range of non-detect to 2.2 TU_c for any particular clean (method blank) sample, or using a non-technical analogy, is similar to a radar detector registering a stopped car at any speed from zero to more than 60 miles per hour.

In addition, chronic toxicity tests and subsequent statistical analyses were developed to exhibit no more than a 5% rate of single test false positive failures (e.g., failing when there is no actual toxicity). A high rate of inaccuracy places the regulatory usefulness of numeric limits for chronic toxicity in question and raises constitutional due process issues in the context of strict liability for permit violations that may not be real. Even USEPA itself has determined that "the accuracy of toxicity tests cannot be determined." *See Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms*; EPA/600/4-91/002 at 139, 193, and 225 (July 1994). Even if there is only a 5% false failure level (as was statistically set for the TST but never verified through an actual study of known, non-toxic samples), a false indication of toxicity would constitute a violation subject to citizen suits and discretionary Regional Board enforcement.[42] No reason exists to put permittees in compliance jeopardy unnecessarily when there is no real confirmed toxicity, or where the existence of actual, lingering chronic toxicity is not confirmed.

In a legal challenge to the 2002 Methods, the court recognized the fallibility of the WET methods stating, "There is an important distinction between the validity of a test method and the validity of a particular result from the test when it is used to determine compliance with permit conditions. Even by EPA's calculations, WET tests will be wrong some of the time, which is why EPA warned against using a single test result to institute an action for a civil penalty." *See Edison Electric,* 391 F. 3d. at 1272, *citing* 67 Fed. Reg. at 69,968. Because of the unreliability and

[42] Such a violation would be subject to discretionary enforcement, but would not be subject to Mandatory Minimum Penalties or "MMPs" (Water Code section 13385(i)(1)(D)) because there are other toxic pollutant limits in the Permit.

inaccuracy of these biological test methods, numeric effluent limits for chronic toxicity are inappropriate and should not be imposed.

c) Numeric Limits Based on the TST and Relying on Just Two Concentrations are Highly Problematic.

Reanalysis of actual WET test data, from a wide variety of real-world samples, demonstrates that the TST statistical hypothesis test consistently "detects" the existence of toxicity significantly more frequently than the NOEC statistical hypothesis test for the freshwater test species (i.e., *Ceriodaphia* and fathead minnow) used in the San Jose Creek WRP permit. *See* State Board, *Effluent, Stormwater and Ambient Toxicity Test Drive Analysis of the Test of Significant Toxicity (TST)* ("State Board Test Drive") (Dec., 2011)(*see e.g.,* Chronic Freshwater results in Table E-1). The higher incidences of toxicity observed using the TST as compared to the NOEC for the *Ceriodaphnia* and fathead minnow chronic tests were clearly noted in a peer-reviewed publication that discussed the results of the State Board Test Drive,[43] which stated:

> "Although most of the test endpoints or methods examined had either a similar or a higher percentage of tests declared toxic using the NOEC approach when the mean effect at the IWC was less than the toxic RMD, the *Ceriodaphnia* reproduction and the *Pimephales* [fathead minnow] survival and biomass endpoints exhibited a somewhat opposite pattern (Table 1)."

However, one should not assume that greater statistical *sensitivity* equates with improved *accuracy* in WET testing. Reanalysis of data from USEPA's inter-laboratory WET variability study indicates that the TST statistical hypothesis test also "detects" toxicity in clean blank samples at a rate up to three times higher than the NOEC statistical test. USEPA. *Final Report: Interlaboratory Variability Study of EPA Short-term Chronic and Acute Whole Effluent Toxicity Test Methods*, Vol. 1; EPA-821-B-01-004 (Sept., 2001). Blank samples are comprised solely of laboratory dilution water that is known to be non-toxic before the test begins. Such inaccuracies demonstrate that the TST does not provide performance "acceptably equivalent" to that of the standard methods that were promulgated in 40 C.F.R. Part 136 in the 2002 Methods.

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[43] Diamond J., Denton D., Roberts J., and Zheng L. 2013. Evaluation of the Test of Significant Toxicity for Determining the Toxicity of Effluents and Ambient Water Samples. *Environ Toxicol Chem.* Vol. 32, No. 5, pp. 1101–1108.

It has been suggested by USEPA and Tetra Tech that a more thorough review of USEPA's blank study data revealed several previously undetected quality assurance and quality control issues that at least partially explains the presumed high false positive error rate associated with the TST. *See* Tetra Tech presentation at the August 22, 2011 State Board TST Workshop, slides 22 through 28, which can be found on the following website: http://www.swrcb.ca.gov/water_issues/programs/state_implementation_policy/docs/testdrive_presentation.pdf.

However, the restrictions being imposed by essentially requiring use of a two-concentration TST approach without full consideration of concentration response will also restrict the ability of toxicologists to identify and address similar issues when interpreting compliance test results. Neither the USEPA's inter-laboratory WET variability study nor the State Board Test Drive evaluated the impact associated with incorporation of the two-concentration design, with no concentration-response or PMSD evaluation, on the false positive error rate. The State Board Test Drive simply compared the results of NOEC and TST analyses on a large number of multiple concentration effluent tests incorporating a concentration-response evaluation and two-concentration receiving water tests. However, no evaluations comparing the multiple concentration TST approach (with the concentration-response evaluation) to the two-concentration TST approach have been conducted. In contrast, the USEPA did conduct an evaluation of the multiple concentration NOEC method with and without incorporation of a concentration-response evaluation and determined that incorporation of the concentration-response evaluation was responsible for reducing the false positive error rate from 14% to less than 5%. 67 Federal Register 69,964 (November 19, 2002).

To elaborate, an EPA inter-laboratory variability study showed a substantially higher single test false positive error rate (showing "toxicity" in a non-toxic laboratory blank sample) for certain endpoints including the freshwater test species used to determine compliance in the Permit. For the *Ceriodaphnia dubia* chronic toxicity reproduction endpoint, four of the 27 non-toxic blank samples tested using the NOEC and/or EC/IC25 without consideration of concentration-response showed "toxicity," resulting in a false positive error of 14.8%. However,

after application of USEPA's concentration-response evaluation, three of the four samples originally reported as "toxic" were corrected and determined to be "non-toxic". Therefore, application of the concentration-response evaluation in this study decreased the false positive error from 14.8% to 3.8%. Similarly, in the same study, 3 out of 24 non-toxic blank samples tested using the fathead minnow chronic toxicity test without consideration of concentration-response were reported as "toxic," resulting in a false positive error rate of 12.5%. However, after application of USEPA's concentration-response evaluation, two of the three samples originally reported as "toxic" were corrected and determined to be "non-toxic." Therefore, application of the concentration-response evaluation in this study decreased the false positive error in the fathead minnow chronic test from 12.5% to 4.17%. Therefore, a similar improvement in the error rate in the TST statistical test would be expected with incorporation of a multiple concentration test design that included a similar concentration-response evaluation.

While some contend that the State Board Test Drive adequately demonstrated that the false positive error rate for the TST statistical test is comparable to the NOEC statistical test, such a conclusion is unfounded and unsubstantiated. The State Board Test Drive was not able to estimate the false positive error rate of either the NOEC or the TST because the analysis was not conducted on known non-toxic blank samples. Tests used in the State Board Test Drive evaluation were performed on effluents, receiving waters, and ambient waters whose actual or true "toxicity" was unknown. Some of the tests that exhibited relatively high effects may have actually been "non-toxic" while others that exhibited relatively small effects may have been truly "toxic." Additionally, as discussed above, this analysis failed to examine the impact of eliminating or limiting the concentration-response evaluation on false positive error rates.

In the absence of any actual studies on the error rate of the two-concentration TST approach, based on inference from the study referenced above, the single test false positive error rate for the two-concentration TST approach is estimated to be 14%. The false positive error rate of a five concentration test, evaluated by the TST, with limited concentration response analysis and no PMSD evaluation, is unknown, but there is no confidence on the Petitioners' part that the error rate is acceptable.

Because of the general unreliability and inaccuracy of these biological test methods, and the amplifying effects on the false positive error rate imposed by the two-concentration TST approach, strictly construed numeric ("Pass/Fail" or "% Effect") effluent limits for toxicity are inappropriate, infeasible to comply with, and should not have been imposed.

In conclusion, for all the reasons cited in herein, the effluent limits for chronic toxicity in Tables 4, 5, and 6 of the Permit should be removed and changed back to the narrative effluent limitation contained in the 2009 permit with a numeric trigger for additional investigations (e.g., TRE). As stated above, the inclusion of numeric chronic toxicity effluent limitations violates the current binding precedent from WQO 2003-0012 and WQO 2003-0013, applicable to the San Jose Creek WRP. Furthermore, since the two-concentration TST, or even a similar five concentration TST approach, is not an approved Part 136 methodology (or a valid ATP), this method should not be utilized for compliance purposes unless promulgated as a formal rule by USEPA.

d) Numeric Limits for Chronic Toxicity are Not Necessary to Protect Water Quality.

The CWA generally only requires a permit to contain WQBELs in certain instances. 40 C.F.R. §122.44(d)(1). The requirements for the inclusion of WQBELs for toxicity are set forth in the federal regulations, as follows:

> "Except as provided in this sub-paragraph, when the permitting authority determines, using the procedures in paragraph (d)(1)(ii) of this section, toxicity testing data, or other information, that a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative criterion within an applicable State water quality standard, the permit must contain effluent limits for whole effluent toxicity. Limits on whole effluent toxicity are not necessary where the permitting authority demonstrates in the fact sheet or statement of basis of the NPDES permit, using the procedures in paragraph (d)(1)(ii) of this section, that chemical-specific limits for the effluent are sufficient to attain and maintain applicable numeric and narrative State water quality standards."

40 C.F.R. §122.44(d)(1)(v)(emphasis added).

Both this federal regulation and the Basin Plan acknowledge that toxicity limits are *not required* where chemical-specific limits for the pollutants most likely to be the cause of toxicity are included in the permit. 40 C.F.R. §122.44(d)(1)(v); Basin Plan at 3-17 (Toxicity Objective

states "Effluent limits for specific toxicants can be established by the Regional Board to control toxicity identified under Toxicity Identification Evaluations (TIEs)."). For this Permit, the most likely pollutants to cause toxicity are all assigned effluent limitations within the Permit such that WET limits are not required under 40 C.F.R. section 122.44(d)(1)(v). Ammonia was identified as the constituent responsible for nearly all of the historical incidences of toxicity at the San Jose Creek WRP. Numeric ammonia limits were incorporated into this NPDES permit for the East and West plants at this facility and treatment upgrades included to remove ammonia from the effluent were fully implemented approximately ten years ago. Permit at F-6. As a result, numeric effluent limitations for toxicity are not necessary to protect water quality and water quality based effluent limits (WQBELs) are not required under 40 CFR 122.44(d)(1)(i) or (v).

For the San Jose Creek WRP, no exceedances of the 1.0 TUc monthly median accelerated testing trigger specified in the 2009 permit were observed in the 157 chronic toxicity tests conducted on the final effluent from 2009 through 2013. *See* Permit at p. F-20 ("No exceedances of the 1.0 TUc monthly median trigger were observed in the final effluent from June 1, 2009 to June 30, 2103."), p. F-79 (No exceedances of the 1.0 TUc monthly median accelerated testing trigger were reported in the effluent from either plant"). In this same timeframe, there were sporadic exceedances of 1.0 TUc in single tests observed for a single species on a specific day, but these events were rare, and less than once per year at each of the plants (East WRP and West WRP). *Id.* at p. F-82 and F-83.[44]

In response to the rare instances when an individual test exhibited a TUc of greater than 1.0, subsequent testing to assess the monthly median indicated that the final effluent was nontoxic (TUc less than or equal to 1.0). Therefore, follow-up testing did not duplicate the exceedance and

[44] These single test exceedances were used by the Regional Board to determine that "reasonable potential" existed and WQBELs were required under 40 C.F.R. §122.44. *See* Permit at pp. F-56 ("Tier 1 RPA is present for chronic toxicity because the individual effluent chronic toxicity data exceeded the 1 TUc trigger") and F-79 to F-80 (These dates do not exactly correspond to those on pages F-20 to F-21). However, without adequate guidance from the State Board on how to determine reasonable potential in the SIP, the determination that reasonable potential existed was arbitrary, capricious, contrary to USEPA guidance, and should not have been used to justify the imposition of numeric effluent limitations for chronic toxicity where there had been no exceedances of the numeric monthly median trigger in the last permit term.

no persistent toxicity was observed. Further, the number of single sample exceedances at the San Jose Creek WRPs is consistent with, or less than, the values one would expect to see in a known non-toxic effluent at the defined level of 5% false positives.[45] Identifying the pollutant responsible for rare, sporadic exceedances is rarely, if ever, successful as the toxicity, even if real, may prove to be ephemeral and, in some incidences, the initial observation of toxicity may have actually been caused by a test error. Therefore, the use of numeric toxicity limits to control for rare and sporadic incidences of chronic toxicity are not feasible for POTWs since proactive measures to address such incidences prior to observation are not possible nor are numeric toxicity limits necessary to protect beneficial uses. For these reasons, numeric triggers for accelerated testing, and TRE requirements continue to represent the most effective means to identify and ultimately control toxicity and to provide full protection of water quality.

6) The Regional Board Failed to Consider the Required Factors Set Forth in Water Code Section 13241 in Violation of Water Code Section 13263(a).

The Regional Board's inclusion of numeric and daily limits in the Permit went beyond the requirements of federal law and, thus, constitute state law requirements. When the Regional Board goes beyond federal law requirements, it must take into consideration the beneficial uses to be protected, the water quality objectives *reasonably* required for that purpose, other waste discharges, the need to prevent nuisance, and the provisions of Water Code Section 13241. *See City of Burbank v. State Board,* 35 Cal.4th 613, 627-629 (2005); Water Code §13263(a). In

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[45] Out of 157 samples, one could statistically expect nearly 8 samples to be greater than 1.0 TUc merely from false positives. (157 x .05 = 7.85) Thus, these exceedances should not be presumed to be caused by toxicity, and should not have been used to determine that reasonable potential for chronic toxicity existed. *See* Permit at p. 9, n. 12 ("A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective."). The Basin Plan's Toxicity Objective has not been formally translated into 1.0 TUc as a not-to-exceed value and should not be used as such. Yet the Permit does so both for reasonable potential and also for Receiving Water Limitations compliance monitoring. *See id.; see also* Permit at p. E-34, n. 102 ("The maximum daily single result is a threshold value for a determination of meeting the narrative receiving water objective....")(emphasis added). Such an informal translation of the Basin Plan objective is unlawful. *See City of Los Angeles et al v. USEPA, et al,* Central District Court, Case No. CV 00-08919 R(RZx)(Dec.18, 2001)(holding "EPA improperly failed to ensure that the LA-RWQCB adopted a translator procedure to translate its narrative criteria")).

developing the chronic toxicity effluent limitations contained in the Permit, the Regional Board did not specifically take into consideration the water quality objectives reasonably required for the protection of the existing and probable future beneficial uses and other waste discharges preventing the attainment of the purported beneficial uses listed in the Permit. Instead, the Regional Board performed a generic review for all "provisions/requirements in this Order [ ] included to implement state law only." Permit at p. F-98. By failing to consider each of the mandated factors as applied to the chronic toxicity requirements, the Regional Board violated Water Code section 13263(a). The Regional Board was also required to "consider the provisions of Section 13241." *See* Water Code §13263(a). Section 13241 requires the consideration of each of the following factors, not generally, but specifically for each requirement:

(a) Past, present, and probable future uses of water;
(b) Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto;
(c) Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area
(d) Economic considerations
(e) The need for housing within the region.
(f) The need to develop and use recycled water.

Although a perfunctory and superficial analysis was included in the Fact Sheet, the Regional Board failed to properly consider and provide supporting evidence for each and every one of the required factors contained in Water Code section 13241 during the process of developing the new numeric and daily chronic toxicity effluent limitations contained in the Permit or the other related provisions that truncate or modify the requirements of the promulgated Part 136 methods. *See supra* Footnote 36. By failing to consider the provisions of Water Code section 13241 in conjunction with the specific issue of chronic toxicity, the Regional Board violated Water Code section 13263(a).

For the foregoing reasons, the State Board should find that the action and inaction of the Regional Board was inconsistent with the law and an abuse of discretion. Accordingly, the State Board should remove the chronic toxicity effluent limitations from the Permit because the

Regional Board failed to properly consider the factors contained in Water Code sections 13263(a) and 13241.

8) The Regional Board Imposed Unreasonable Requirements in Violation of Water Code Section 13000.

The California Legislature has found and declared that activities affecting water quality "shall be regulated to attain the highest water quality which is reasonable, considering all demands being made and to be made on those waters and the total values involved, beneficial and detrimental, economic and social, tangible and intangible." *See* Water Code §13000. This section sets State policy and imposes an overriding requirement on the Regional Boards that all effluent limits be reasonable considering all circumstances. For reasons set forth above, the requirements contained in the Permit as discussed above are not reasonable, considering all of the related circumstances. Therefore, the chronic toxicity limits and related implementation provisions contained in the Permit violate Water Code section 13000.

The Regional Board imposed numerous other requirements related to the chronic toxicity effluent limitations in the Permit that were objected to by the District as unreasonable or unauthorized, yet were not modified, including, but not limited to, the following:

a. The Permit Should Not Require Routine Toxicity Compliance Monitoring and the Continued Determination of Effluent Limit Violations After Triggering Accelerated Testing and Initiation of the TRE.

The 2009 NPDES permit for the San Jose Creek WRP required accelerated testing following an exceedance of the 1 TUc monthly median chronic toxicity trigger. *See* Order No. R4-2009-0078 at p. 22. The purpose of the accelerated testing was to confirm that toxicity was indeed present, not simply the result of false positive test results, and to ensure that any toxicity was persistent enough to identify the source of the toxicity. If accelerated testing confirmed the toxicity, the 2009 permit required a TIE/TRE to identify the specific cause or causes of the observed toxicity so that source could be addressed and controlled to avoid further triggering events in the future. *Id.* at p. E-22. The accelerated testing and TRE process represents essentially a confirmation and diagnosis process, as toxicity cannot be addressed until the cause of the

toxicity is known. *Id.* at p. E-23 ("The objective of the TIE shall be to identify the substance or combination of substances causing the observed toxicity.")

The new Permit does not allow time for this confirmation and diagnosis process to occur, but instead continues to require monthly chronic toxicity compliance determinations to be made during the parallel accelerated testing and TIE/TRE process. This subjects the District to additional liability for violations during this critical confirmation and diagnosis process, which is unnecessarily punitive. The District will be penalized even when all appropriate steps are being timely and diligently taken to resolve the issue. The apparent justification for this requirement is to incentivize the District to move quickly during this TIE/TRE process, but the Permit itself contains tight timelines for required actions, so no need exists to impose additional violations during this process so long as the process is being diligently undertaken.

In addition to being unnecessarily punitive, assessing compliance during accelerated testing would be challenging because the regulatory threshold used during accelerated testing is different from the threshold for used routine compliance determination. For routine compliance determination, the MMEL and MDEL using the TST t-test approach are used to evaluate compliance. During accelerated testing, a single TST exceedance is used as a TRE trigger. Under this bifurcated approach, a Permittee could "Fail" one of the four accelerated tests while "Passing" the MMEL compliance tests. *See* Permit at pp. 31 and E-30. This would result in the triggering of a TRE on a Permittee that is actually demonstrating compliance. Additionally, if the MMEL compliance monitoring tests and the accelerated monitoring both resulted in "Fail", it is unclear if additional accelerated testing would be conducted concurrently with the TRE in response to the new MMEL failure. Finally, during the TRE, a Permittee could demonstrate compliance with the MMEL while in the middle of the TRE analysis. In such a situation, it is unclear if the Permittee could end the TRE or would be forced to continue TRE implementation even while currently in compliance with the applicable effluent limit.

Overall, it seems to be of very little use to require accelerated testing or the initiation of a TRE while the Permittee is actually demonstrating compliance with the applicable limits. By requiring continued compliance monitoring during accelerated testing and TRE initiation, such

confounding scenarios are likely to occur. The only reasonable solution to these multiple conflicts, which is not addressed in any way in the Permit, is to discontinue compliance monitoring during the accelerated monitoring/TIE/TRE process.

Additionally, State Board staff has been actively working on the development of a statewide policy/plan to address regulation of WET for several years now. A significant and meaningful part of this process includes working with multiple stakeholders across the state and the issue discussed above has been a part of the discussions with State Board staff. As a result, State Board staff has made its intentions known that, after an initial WET limit violation, no further violations should be incurred during accelerated testing and for a period of six months after initiation of the TRE implementation plan provided that the Permittee conducts the required and appropriate actions to address the WET exceedance.[46] Under staff's proposal, an extension of the six-month exemption could be granted by the regulating authority on a case-by-case basis. This approach would allow for the Permittee to focus any and all available efforts on quickly confirming the persistence of toxicity during accelerated testing and/or more completely characterizing and identifying the toxicity-causing constituent(s) during the TRE instead of conducting additional independent testing that would not be useful in achieving the goal of controlling toxicity. Because the State Board approach is an outgrowth of a wider stakeholder process, this suggested approach should have been applied in the Permit.

The Petitioners have also become aware that USEPA may now be claiming that this suggested approach is illegal. However, this approach was included in the San Diego Regional

[46] State Board, Fact Sheet, Draft Toxicity Amendment to the Water Quality Control Plan for Enclosed Bays and Estuaries of California, Revision Summary (August 2013); State Board, Draft Policy for Toxicity Assessment and Control (June 2012); *see also* NPDES Permits issued by San Diego Regional Board for the U.S. Navy San Diego Complex (August 2013) and the Point Loma Complex (June 2014)(stating "Any exceedance occurring during a required accelerated monitoring period and, if appropriate, a TRE period **shall not constitute additional violations** provided that: (1) the Discharger proceeds with the accelerated monitoring and TRE (if required) in a timely manner; and (2) the accelerated monitoring and TRE are completed within one year of the initial exceedance." (Emphasis added.) Although the District asked for this same language, the Regional Board failed to include this language, which raises issues of Equal Protection since the same laws regulate the discharges.

Board's NPDES permit for the San Diego Naval Complex on August 14, 2013, which stated that there would be an initial violation imposed for exceeding the applicable limit, but:

> "...Any exceedances occurring during a required accelerated monitoring period and, if appropriate, a TRE period shall not constitute additional violations provided that: (1) the Discharger proceeds with the accelerated monitoring and TRE (if required) in a timely manner; and (2) the accelerated monitoring and TRE are completed within one year of the initial exceedance. The San Diego Water Board has the discretion to impose additional violations and initiate an enforcement action for toxicity tests that result in a "fail" after one year from the initial violation. Additionally, a discharger's failure to initiate an accelerated monitoring schedule or conduct a TRE, as required by this Order will result in all exceedances being considered violations of the MDEL or MMEL and may result in the initiation of an enforcement action."

See Naval Complex permit located at the following website and in the MRP at p. 21, Para. F, http://www.waterboards.ca.gov/sandiego/board_decisions/adopted_orders/2013/R9-2013-0064.pdf. Prior to adoption of that permit, USEPA sent a comment letter on the Naval Complex permit and in that letter stated that: "EPA has worked closely with the State and Regional Water Boards to ensure effluent limitations and testing are conducted consistent with federal and state requirements." *See* USEPA Region IX, Letter from David Smith, Manager of the NPDES Permits Office to David Barker, Supervising Water Resource Engineer, San Diego Water Board (July 8, 2013)(emphasis added). Thus, any argument that this approach is illegal is contradicted by USEPA's own approving comment letter.

Other similar issues were raised in the District's comment letter and are incorporated by reference herein in order to save space. However, these issues related to toxicity should also be addressed by the State Board if the numeric limits are not removed.

For the foregoing reasons, the State Board should find that the Regional Board acted contrary to law and abused its discretion. The State Board should issue an order instructing the Regional Board that imposition of the contested requirements was inappropriate. The State Board should issue an order directing the Regional Board to instead adopt requirements that are reasonable, considering all of the related circumstances.

5. THE MANNER IN WHICH THE PETITIONERS ARE AGGRIEVED:

Normally, end-of-pipe controls can be installed or at least considered in order to achieve consistent compliance with chemical specific effluent limitations contained in an NPDES permit.

However, for chronic toxicity, there is no advanced treatment technology that can be installed to guarantee compliance because the inherent variability of chronic toxicity tests, significantly exacerbated in this case by the selection of the non-promulgated TST test approach relying primarily upon just two concentrations, and extricating or decreasing the importance of vital test reliability steps, unreasonably exposes the discharger to the jeopardy of non-compliance due to false test results. Unlike conventional pollutants, toxicity is not a pollutant, it measures *an effect* that can be caused by a variety of reasons, not all of them related to pollutants. In fact, water that is too clean (i.e., distilled water) can demonstrate chronic toxicity effects on aquatic organisms.

The Petitioners are aggrieved because the challenged requirements contained in the Permit are unnecessary, inconsistent with law, infeasible to consistently comply with, and may place the District, and the other Petitioners' members with similar permit requirements, in enforcement jeopardy from civil and even criminal enforcement actions or from third party citizen suits under the CWA. If left to stand, the Permit may become the latest model for future permit decisions affecting wastewater treatment plants throughout the state and render Petitioners' efforts to work with the State Board on a clear and consistent statewide plan for addressing toxicity a nullity. The Petitioners are further aggrieved because many of the effluent limits and requirements were imposed without adequate justification and legal authority and without any demonstrated water quality or other public benefit. Water Code §13000, §13263.

6. SPECIFIC ACTION BY THE STATE OR REGIONAL BOARD WHICH PETITIONERS REQUEST

Petitioners seek an Order by the State Board removing the numeric chronic toxicity limits from the Permit, and replacing the limits with a narrative effluent limits and numeric triggers for accelerated monitoring and further evaluation of the potential sources of toxicity (e.g., TIE/TRE), as required in WQOs 2003-0012 and 2003-0013. Whether the limits ultimately remain or not, the Petitioners also seek an Order by the State Board that will change the requirement to use the five-concentration TST approach with limited consideration of concentration response and no PMSD bound evaluation, which is in essence much like a two-concentration TST approach, to allow full use of a multi-concentration toxicity test design with test acceptability criteria, including

consideration of concentration-response and the upper and lower PMSD bound, using the NOEC in the promulgated 2002 Methods (or allowing the use of the recommended point estimate approach (e.g., IC25) instead). *See supra* Footnote 8. In addition, Petitioners request that the State Board eliminate the requirement to continue routine compliance monitoring and assessment during the accelerated monitoring/TIE/TRE process.

7. A STATEMENT OF POINTS AND AUTHORITIES IN SUPPORT OF LEGAL ISSUES RAISED IN THE PETITION:

A preliminary statement of points and authorities are set forth in Section 4 above. In sum, the numeric ("Pass/Fail" and "Percent Effect") effluent limitations for chronic toxicity contained in the Permit are inconsistent with the law and otherwise inappropriate because, *inter alia*, the Regional Board failed to comply with the Porter-Cologne Water Quality Control Act (Cal. Water Code §§13000 *et seq.*) and its implementing regulations; failed to act in a manner consistent with the requirements of the APA, the SIP, the Basin Plan; the CWA and its implementing regulations; and precedential State Board orders, including ones directly related to the District's permits; failed to include findings supporting the provisions of the Permit; and included findings not supported by evidence.

8. A STATEMENT THAT THE PETITION HAS BEEN SENT TO THE REGIONAL BOARD AND THE DISCHARGER:

A true and correct copy of this Petition was mailed by First Class Mail on May 11, 2015 to the Regional Board at the following address:

Mr. Samuel Unger, Executive Officer
California Regional Water Quality Control Board
Los Angeles Region
320 W. 4th Street, Suite 200
Los Angeles, California 90013

One of the Petitioners in this case is the Discharger; therefore, a Petition was not separately sent to the Discharger.

9. A STATEMENT THAT THE SUBSTANTIVE ISSUES OR OBJECTIONS RAISED IN THE PETITION WERE RAISED BEFORE THE REGIONAL BOARD, OR WERE UNABLE TO BE RAISED:

The substantive and legal issues raised in this petition have been presented to the Regional Board before the Regional Board acted to adopt the Permit, or relate to issues raised at the adoption hearing. The District, CASA, SCAP, and NACWA have submitted extensive written comments to the Regional Board on the issues of chronic toxicity and/or appeared and provided comments during public hearing before the Regional Board.

10. PETITIONERS' REQUEST FOR HEARING:

Given the statewide importance of the issues raised, and for the reasons set forth above, the Petitioners request that the State Board conduct a hearing to consider this Petition in accordance with 23 C.C.R. sections 2052(c) and 2067.

Respectfully Submitted,

DATED: May 11, 2015

DOWNEY BRAND LLP

By: _____
NICOLE E. GRANQUIST
Attorneys for Petitioners
COUNTY SANITATION DISTRICT NO. 2
OF LOS ANGELES COUNTY,
SCAP, CASA, and NACWA

DATED: May 11, 2015

By: */s/ Nathan Gardner-Andrews*
NATHAN GARDNER-ANDREWS
General Counsel
NATIONAL ASSOCIATION OF CLEAN
WATER AGENCIES

DOWNEY BRAND LLP

EXHIBIT A

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

320 West 4th Street, Suite 200
(213) 576-6660 • Fax (213) 576-6640
http://www.waterboards.ca.gov

ORDER R4-2015-0070
NPDES NO. CA0053911

WASTE DISCHARGE REQUIREMENTS FOR THE JOINT OUTFALL SYSTEM, SAN JOSE CREEK WATER RECLAMATION PLANT

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

Table 1. Permittee Information

Discharger/Permittee	**Joint Outfall System**[1] (JOS, Permittee or Discharger)
Name of Facility	**San Jose Creek Water Reclamation Plant**
Facility Address	**1965 South Workman Mill Road**
	Whittier, CA 90601
	Los Angeles County

Table 2. Discharge Location

Discharge Point No.	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Tertiary treated wastewater	33.930524	-118.107743	San Gabriel River
001A	Tertiary treated wastewater	33.994167	-118.073333	San Gabriel River
001B	Tertiary treated wastewater	33.969723	-118.088612	San Gabriel River
002	Tertiary treated wastewater	34.035458	-118.021054	San Jose Creek
003	Tertiary treated wastewater	34.036076	-118.030765	San Gabriel River
004	Tertiary treated wastewater	34.111125	-117.971036	San Gabriel River
005	Tertiary treated wastewater	34.131603	-117.950228	San Gabriel River

[1] Ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995. These parties include County Sanitation Districts of Los Angeles Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County. The Joint Outfall System is an integrated network of facilities, which include La Canada, Los Coyotes, Long Beach, Pomona, Whittier Narrows, and San Jose Creek Water Reclamation Plants, and Joint Water Pollution Control Plant.

Table 3. Administrative Information

This Order was adopted on:	April 9, 2015
This Order shall become effective on:	June 1, 2015
This Order shall expire on:	May 31, 2020
The Permittee 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 U.S. Environmental Protection Agency (U.S. EPA) 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

Samuel Unger, Executive Officer

CONTENTS

TABLES

ATTACHMENTS

I. FACILITY INFORMATION

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

II. FINDINGS

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

A. **Legal Authorities** This Order serves as WDRs pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

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

C. **Notification of Interested Parties.** The Regional Water Board has notified the Permittee and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

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

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

THEREFORE, IT IS HEREBY ORDERED that this Order supersedes Order R4-2009-0078 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Permittee shall comply with the requirements in this Order. This action in no way prevents the 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 East and West Facilities shall not exceed the design capacity of 62.5 and 37.5 MGD, respectively.

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 animal or plant is prohibited.

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

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point Nos. 001, 001A and 001B (Effluent from East and West Facilities to San Gabriel River)

The Permittee shall maintain compliance with the following effluent limitations at Discharge Point Nos. 001,001A and 001B with compliance measured at Monitoring Locations EFF-001, 001A or 001B as described in the Monitoring and Reporting Program (MRP), Attachment E:

Table 4. Effluent Limitations at EFF-001, EFF-001A, and EFF-001B

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Effluent Limits at EFF-001, EFF-001A and EFF-001B						
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	20	30	45	--	--
	lbs/day[1]	16,700	25,000	37,500	--	--
Total Suspended Solids	mg/L	15	40	45	--	--
	lbs/day[1]	12,500	33,400	37,500	--	--
pH	standard units	--	--	--	6.5	8.5
Oil and Grease	mg/L	10	--	15	--	--
	lbs/day[1]	8,340	--	12,510	--	--
Removal Efficiency for BOD and TSS	%	85	--	--	--	--
Settleable Solids	ml/L	0.1	--	0.3	--	--
Total Residual Chlorine	mg/L	--	--	0.1	--	--
	lbs/day[1]	--	--	83		
Benzo(k)fluoranthene	µg/L	0.049	--	0.98	--	--
	lbs/day[1]	0.04	--	0.08	--	--
Dibenzo(a,h) Anthracene	µg/L	0.049	--	0.98	--	--
	lbs/day[1]	0.04	--	0.08	--	--
Indeno(1,2,3-cd)pyrene	µg/L	0.049	--	0.98	--	--

[1]The mass emission rates are based on the combined plant design flow rate of 100 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.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
	lbs/day[1]	0.04	--	0.08	--	--
Chronic Toxicity[2], [3]	Pass or Fail, % Effect (Test of Significant Toxicity, (TST))	Pass[4]	--	Pass or % Effect <50	--	--
Effluent Limits at EFF-001 ONLY						
Ammonia Nitrogen (ELS absent)	mg/L	5.5	--	8	--	--
	lbs/day[1]	4,587	--	6,670	--	--
Copper (dry weather)[5]	µg/L	17	--	22	--	--
Effluent Limits at EFF-001A and 001B ONLY						
Total Dissolved Solids	mg/L	750	--	--	--	--
	lbs/day[1]	625,500	--	--	--	--
Sulfate	mg/L	300	--	--	--	--
	lbs/day[1]	250,200	--	--	--	--
Chloride	mg/L	180	--	--	--	--
	lbs/day[1]	150,100	--	--	--	--
Boron	mg/L	1.0	--	--	--	--
	lbs/day[1]	830	--	--	--	--
Nitrite as Nitrogen	mg/L	1.0	--	--	--	--
	lbs/day[1]	830	--	--	--	--
MBAS	mg/L	0.5	--	--	--	--
	lbs/day[1]	417	--	--	--	--
Ammonia Nitrogen (ELS present)	mg/L	4.0	--	6.0	--	--
	lbs/day[1]	3,336	--	5,004	--	--
Ammonia Nitrogen (ELS	mg/L	4.9	--	6.8	--	--

[2] A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations will be implemented using the *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (U.S. EPA 2002, EPA-821-R-02-013), current USEPA guidance in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June /2010)* and *EPA Regions 8, 9 and 10 Toxicity Training Tool (January 2010), http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010.*

[3] 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."

[4] This is a Median Monthly Effluent Limitation.

[5] This effluent limitation applies only during dry-weather when the maximum daily flow measured at SGS Station 11087020 is less than 260 cubic feet per second.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum
absent)	lbs/day[1]	4,087	--	5,671	--	--
Nitrate + Nitrite as Nitrogen	mg/L	8	--	--	--	--
	lbs/day[1]	6,670	--	--	--	--
Lead (wet-weather)[6]	µg/L	--	--	166	--	--
Copper	µg/L	18-	--	24	--	--
	lbs/day[1]	15	--	20	--	--
Total Trihalomethanes[7]	µg/L	80	--	--	--	--
	lbs/day[1]	66.7	--	--	--	--

B. Effluent Limitations – Discharge Point No. 002 (Effluent from East Facility to San Jose Creek)

The Permittee shall maintain compliance with the following effluent limitations at Discharge Point No.002 with compliance measured at Monitoring Location EFF-002 as described in the MRP, Attachment E:

Table 5. Effluent Limitations at EFF-002

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	20	30	45	--	--
	lbs/day[8]	10,400	15,600	23,500	--	--
Total Suspended Solids	mg/L	15	40	45	--	--
	lbs/day[8]	7,820	20,900	23,500	--	--
pH	standard units	--	--	--	6.5	8.5
Oil and Grease	mg/L	10	--	15	--	--
	lbs/day[8]	5,210	--	7,820	--	--

[6] This final effluent limitation for lead is derived from the wet weather final waste load allocation, as set forth in the *Total Maximum Daily Loads for Metals and Selenium for the San Gabriel River and Impaired Tributaries (SGR Metals TMDL)*, promulgated by USEPA Region IX, on March 26, 2007. Consistent with the Implementation Recommendations of the *SGR Metals TMDL*, the wet weather waste load allocation was translated into effluent limitations by applying the SIP procedures. This effluent limitation applies only during wet weather, when the flow in the San Gabriel River is greater than or equal to 260 cubic feet per second (cfs), measured at USGS flow gauging station 11087020, located above the Whittier Narrows dam.

[7] Total Trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

[8] The mass emission rates are based on the east plant design flow rate of 62.5 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.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Removal Efficiency for BOD and TSS	%	85	--	--	--	--
Settleable Solids	ml/L	0.1	--	0.3	--	--
Methylene Blue Active Substances (MBAS)	mg/L	0.5	--	--	--	--
	lbs/day[8]	261	--	--	--	--
Total Residual Chloride	mg/L	--	--	0.1	--	--
	lbs/day[8]	--	--	52	--	--
Total Dissolved Solids	mg/L	750	--	--	--	--
	lbs/day[8]	391,000	--	--	--	--
Boron	mg/L	1	--	--	--	--
	lbs/day[8]	521	--	--	--	--
Sulfate	mg/L	300	--	--	--	--
	lbs/day[8]	156,000	--	--	--	--
Chloride	mg/L	180	--	--	--	--
	lbs/day[8]	93,800	--	--	--	--
Ammonia Nitrogen (ELS present)	mg/L	4.2	--	6.1	--	--
	lbs/day[8]	2,190	--	3,180	--	--
Ammonia Nitrogen (ELS absent)	mg/L	5.4	--	7.8	--	--
	lbs/day[8]	2,810	--	4,070	--	--
Nitrate plus Nitrite as Nitrogen	mg/L	8	--	--	--	--
	lbs/day[8]	4,170	--	--	--	--
Nitrite as Nitrogen	mg/L	1	--	--	--	--
	lbs/day[8]	521	--	--	--	--
Lead (wet-weather)[9]	µg/L	-	--	166	--	--
Selenium [Dry weather][10]	µg/L	4.6	--	6.5	--	--
	lbs/day[8]	2.4	--	3.4	--	--

[9] This final effluent limitation for lead is derived from the wet weather final waste load allocation, as set forth in the *Total Maximum Daily Loads for Metals and Selenium for the San Gabriel River and Impaired Tributaries (SGR Metals TMDL)*, promulgated by USEPA Region IX, on March 26, 2007. Consistent with the Implementation Recommendations of the *SGR Metals TMDL*, the wet weather waste load allocation was translated into effluent limitations by applying the SIP procedures. This effluent limitation applies only during wet weather, when the flow in the San Gabriel River is greater than or equal to 260 cubic feet per second (cfs), measured at USGS flow gauging station 11087020, located above the Whittier Narrows dam.

[10] This effluent limitation applies only during dry weather, when the flow in the San Gabriel River is less than 260 cubic feet per second (cfs), measured at United States Geological Survey (USGS) flow gauging station 11087020, located above the Whittier Narrows dam.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum
Chrysene[11]	µg/L	0.049	--	0.098	--	--
	lbs/day[8]	0.03	--	0.05	--	--
Dibenzo(a,h)anthracene[11]	µg/L	0.049	--	0.098	--	--
	lbs/day[8]	0.03	--	0.05	--	--
Indeno(1,2,3-cd)pyrene[11]	µg/L	0.049	--	0.098	--	--
	lbs/day[8]	0.03	--	0.05	--	--
Benzo(k)fluoranthene[11]	µg/L	0.049	--	0.098	--	--
	lbs/day[8]	0.03	--	0.05	--	--
Total Trihalomethanes	µg/L	80	--	--	--	--
	lbs/day[8]	41.7	--	--	--	--
Chronic Toxicity[12, 13]	Pass or Fail, % Effect (TST)	Pass[14]	--	Pass or % Effect <50	--	--

C. Effluent Limitations – Discharge Point No. 003, 004 and 005 (Effluent from West Facility to San Gabriel River)

The Permittee shall maintain compliance with the following effluent limitations at Discharge Point No. 003, 004 and 005 with compliance measured at Monitoring Location EFF-003 as described in the MRP, Attachment E. Discharge Point Nos.EFF-004 and EFF-005 have been added to this Order but are not approved for discharge until after the approval of a Title 22 Engineering Report by the Division of Drinking Water (DDW) and the WRR for the facility has been adopted.

[11] Chrysene, Dibenzo(a,h)anthracene, Benzo(k) fluoranthene, and Indeno(1,2,3)pyrene did not have limits in the previous Order, but receive limits in this Order because the background concentrations of the receiving water station RSW-001 were higher than the criteria and the constituent was present in the effluent,

[12] A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations will be implemented using the *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (U.S. EPA 2002, EPA-821-R-02-013), current USEPA guidance in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June /2010)* and *EPA Regions 8, 9 and 10 Toxicity Training Tool (January 2010), http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010.*

[13] 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."

[14] This is a Median Monthly Effluent Limitation.

Table 6. Effluent Limitations at EFF-003, 004 and 005

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Effluent Limits at EFF-003, EFF-004 and EFF-005						
Biochemical Oxygen Demand 5-day @ 20°C	mg/L	20	30	45	--	--
	lbs/day[15]	6,250	9,380	14,070	--	--
Total Suspended Solids	mg/L	15	40	45	--	--
	lbs/day[15]	4,690	12,500	14,070	--	--
pH	standard units	--	--	--	6.5	8.5
Oil and Grease	mg/L	10	--	15	--	--
	lbs/day[15]	3,130	--	4,690	--	--
Removal Efficiency for BOD and TSS	%	85	--	--	--	--
Settleable Solids	ml/L	0.1	--	0.3	--	--
Total Residual Chlorine	mg/L	--	--	0.1	--	--
	lbs/day[15]	--	--	31	--	--
Methylene Blue Active Substances (MBAS)	mg/L	0.5	--	--	--	--
	lbs/day[15]	156	--	--	--	--
Nitrate Plus Nitrite as Nitrogen	mg/L	8	--	--	--	--
	lbs/day[15]	2500	--	--	--	--
Nitrite as Nitrogen	mg/L	1	--	--	--	--
	lbs/day[15]	312	--	--	--	--
Lead (wet-weather)	µg/L	--	--	166[16]	--	--
Dibenzo(a,h)anthracene	µg/L	0.049	--	0.098	--	--
	lbs/day[15]	0.015	--	0.031	--	--
Total Trihalomethanes	µg/L	80	--	--	--	--
	lbs/day[15]	25.0	--	--	--	--

[15] The mass emission rates are based on the east plant design flow rate of 37.5 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] This final effluent limitation for lead is derived from the wet weather final waste load allocation, as set forth in the *Total Maximum Daily Loads for Metals and Selenium for the San Gabriel River and Impaired Tributaries (SGR Metals TMDL)*, promulgated by USEPA Region IX, on March 26, 2007. Consistent with the Implementation Recommendations of the *SGR Metals TMDL*, the wet weather waste load allocation was translated into effluent limitations by applying the SIP procedures. This effluent limitation applies only during wet weather, when the flow in the San Gabriel River is greater than or equal to 260 cubic feet per second (cfs), measured at USGS flow gauging station 11087020, located above the Whittier Narrows dam.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Minimum	Instan-taneous Maximum
Chronic Toxicity[17], [18]	Pass or Fail, % Effect (TST)	Pass[19]	--	Pass or % Effect <50	--	--
Effluent Limits at EFF-003 ONLY						
Total Dissolved Solids	mg/L	750	--	--	--	--
	lbs/day[15]	235,000	--	--	--	--
Sulfate	mg/L	300	--	--	--	--
	lbs/day[15]	93,830	--	--	--	--
Chloride	mg/L	180	--	--	--	--
	lbs/day[15]	56,300	--	--	--	--
Boron	mg/L	1.0	--	--	--	--
	lbs/day[15]	313	--	--	--	--
Ammonia Nitrogen (ELS present)	mg/L	4.0	--	6.3	--	--
	lbs/day[15]	1,250	--	1,970	--	--
Ammonia Nitrogen (ELS absent)	mg/L	5.0	--	7.8	--	--
	lbs/day[15]	1,564	--	2,439	--	--
Effluent Limits at EFF-004 and EFF-005 ONLY						
Total Dissolved Solids	mg/L	450	--	--	--	--
	lbs/day[15]	140,700	--	--	--	--
Sulfate	mg/L	100	--	--	--	--
	lbs/day[15]	31,130	--	--	--	--
Chloride	mg/L	100	--	--	--	--
	lbs/day[15]	31,130	--	--	--	--
Boron	mg/L	0.5	--	--	--	--
	lbs/day[15]	156	--	--	--	--

[17] A numeric WQBEL is established because effluent data showed that there was reasonable potential for the effluent to cause or contribute to an exceedance of the chronic toxicity water quality objective. The Chronic Toxicity final effluent limitation is protective of both the numeric acute toxicity and the narrative toxicity Basin Plan water quality objectives. These final effluent limitations will be implemented using the *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (U.S. EPA 2002, EPA-821-R-02-013), current USEPA guidance in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, June /2010)* and *EPA Regions 8, 9 and 10 Toxicity Training Tool (January 2010), http://www2.epa.gov/region8/epa-regions-8-9-and-10-toxicity-training-tool-january-2010.*

[18] 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."

[19] This is a Median Monthly Effluent Limitation.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Ammonia Nitrogen (ELS absent)	mg/L	2.8	--	4.4	--	--
	lbs/day[15]	880	--	1380	--	--
Arsenic	µg/L	10	--	--	--	--
	lbs/day[15]	3.13	--	--	--	--
Copper	µg/L	20	--	26	--	--
	lbs/day[15]	6.34	--	8.13	--	--
Selenium	µg/L	4.5	--	6.86	--	--
	lbs/day[15]	1.40	--	2.15	--	--

D. **Interim Effluent Limitations** – Not Applicable

E. **Other Effluent Limitations**

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

2. **Temperature:** The temperature of the wastes discharged shall not exceed 86°F except as a result of external ambient temperature.

3. **Radioactivity:** The radioactivity of the discharge 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.

4. **Disinfection:** The discharge to water courses shall at all times be adequately disinfected. For the purpose of this requirement, the discharge shall be considered adequately disinfected if: 1) the median number of coliform organisms at some point in the treatment process does not exceed a most probable number (MPN) or colony forming units (CFU) of 2.2 per 100 milliliters utilizing the bacteriological results of the last seven days for which analyses have been completed; 2) the number of coliform organisms does 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 exceeds 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.

5. **Turbidity:** 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 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.

6. **Groundwater Protection**: To protect the underlying ground water basins, pollutants shall not be present in the discharge at concentrations that pose a threat to groundwater quality

7. **Recycled Water Discharge:** Two additional outfalls are scheduled for construction to deliver tertiary treated recycled water to the Upper San Gabriel Indirect Reuse Replenishment Project (IRRP). Discharge Point Nos. 004 and 005 receive NPDES limits

in this Order for the surface water discharge. The objective of the IRRP is groundwater replenishment and the local hydrological conditions are expected to provide immediate percolation in the vicinity of the discharge. As a result, the outfalls EFF-004 and EFF-005 cannot be used until the Division of Drinking Water has approved the Title 22 Engineering Report for the specific discharge and a WRR has been adopted by the Regional Water Board for the area of discharge. Additional potential impacts to groundwater quality will be assessed during the issuance of the WRRs.

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives (WQOs) contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the exceedance of the following limitations in San Jose Creek or the San Gabriel 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 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 the discharge. Ambient pH levels shall not be changed more than 0.5 units from natural conditions as a result of the discharge. 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 discharge.

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 discharge.

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

   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 the discharge:

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

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

7. The waste discharge 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 waste discharge 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 discharge.

10. The waste discharge 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 waste discharge shall not cause the receiving waters to contain any substance in concentrations that adversely affect any designated beneficial use.

14. The waste discharge shall not alter the natural taste, odor, or color of fish, shellfish, or other surface water resources used for human consumption.

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

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

17. The waste discharge 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. Chronic Toxicity Narrative Receiving Water Quality Objective

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

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

19. The waste discharge shall not cause the ammonia water quality objective in the Basin Plan to be exceeded in the receiving waters. Compliance with the ammonia WQOs shall be determined by comparing the receiving water ammonia concentration to the ammonia

water quality objective in the Basin Plan. The ammonia water quality objective can also be calculated using the pH and temperature of the receiving water at the time of collection of the ammonia sample.

B. Groundwater Limitations

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

VI. PROVISIONS

A. Standard Provisions

1. The Permittee shall comply with all Standard Provisions included in Attachment D.
2. **Regional Water Board Standard Provisions.** The Permittee shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:
   a. Neither the treatment nor the discharge of pollutants shall create a pollution, contamination, or nuisance as defined by section 13050 of the CWC.
   b. Odors, vectors, and other nuisances of sewage or sludge origin beyond the 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.
   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 penalties of up to $5,000 per day, $10,000

per day, or $25,000 per day of violation, or when the violation involves the discharge of pollutants, is subject to civil penalties of up to $10 per gallon per day or $25 per gallon per day of violation, or some combination thereof, depending on the violation, or upon the combination of violations.

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

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

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

x. CWC section 13387(e) provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this order, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained in this order shall be punished by a fine of not more than twenty-five thousand dollars ($25,000), imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for 16, 20, or 24 months, or by both that fine and imprisonment. For a subsequent conviction, such a person shall be punished by a fine of not more than twenty-five thousand dollars ($25,000) per day of violation, by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code for two, three, or four years, or by both that fine and imprisonment.

y. In the event the Permittee does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Permittee shall notify the Chief of the Watershed Regulatory Section at the Regional Water Board by telephone (213) 576-6616, or by fax at (213) 576-6660 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing to the Regional Water Board within five days, unless the Regional Water Board waives confirmation. The written notification shall state the

nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and, prevent recurrence including, where applicable, a schedule of implementation. The written notification shall also be submitted via email with reference to CI-5542 to losangeles@waterboards.ca.gov. Other noncompliance requires written notification as above at the time of the normal monitoring report

z. The Permittee shall investigate the feasibility of recycling, conservation, and/or alternative disposal methods of wastewater (such as groundwater injection), and/or use of storm water and dry-weather urban runoff. The Permittee submitted a feasibility study on January 3, 2014. The Permittee shall submit an update to this feasibility study as part of the submittal of the Report of Waste Discharge (ROWD) for the next permit renewal.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

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

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

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

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

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

b. This Order may be reopened for modification, or revocation and reissuance, as a result of the detection of a reportable priority pollutant generated by special conditions included in this Order. These special conditions may be, but are not limited to, fish tissue sampling, whole effluent toxicity testing, monitoring of internal waste stream(s), and monitoring for surrogate parameters. Additional requirements may be included in this Order as a result of the special condition monitoring data.

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

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

e. This Order may also be modified, revoked, and reissued or terminated in accordance with the provisions of 40 CFR parts 122.44, 122.62 to 122.64, 125.62, and 125.64. Causes for taking such actions include, but are not limited to, failure to

comply with any condition of this Order, endangerment to human health or the environment resulting from the permitted activity, or acquisition of newly obtained information which would have justified the application of different conditions if known at the time of Order adoption. The filing of a request by the 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, the adoption of a site specific objective, the adoption of a new Total Maximum Daily Load (TMDL) for the San Gabriel River Watershed or a revision of any of the TMDLs within the San Gabriel River Watershed.

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

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

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

m. This Order may be reopened to modify effluent limits if the lead, copper or selenium waste load allocations are revised, following USEPA approval of a revised Metals TMDL for the San Gabriel River.

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

o. This Order may be reopened to make the necessary modifications for the Indirect Reuse and Replenishment Project (IRRP) once the Title 22 Engineering Report is approved by the State Water Resource Control Board Division of Drinking Water (DDW) and the WRR for the facility has been adopted.

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 to the Executive Officer of the Regional Water Board in accordance with Monitoring and Reporting Section V.A.6.

b. **Ammonia Site Specific Objective Evaluation**

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

i. Concurrent increases in hardness and sodium (measured as alkalinity) have been linked to decreases in ammonia sensitivity[20] and a relationship consistent with these findings was observed in the LA County SSO study. Therefore, on an annual basis, receiving water hardness and alkalinity will be evaluated and compared to conditions observed from 2000 through 2007. If the current year's annual mean hardness and alkalinity is 25% lower than the 2000 through 2007 mean, the Discharger will initiate quarterly receiving water chronic testing using the invertebrate Ceriodaphnia dubia at the downstream receiving water location 100 feet below the outfall. Results from this toxicity testing will be evaluated to determine if waste discharged ammonia is causing toxicity (see section (ii) below for details on this evaluation).

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

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

iv. Sampling observations and other available information will be evaluated every two years to determine if winter spawning fish species are present in Reach 2 of the San Gabriel River or the Rio Hondo. If winter spawning fish were observed, the Discharger will propose a plan to evaluate if significant numbers of early life-stage (ELS) fish are present during the period of October 1st to March 31st (ELS absent). This plan will identify appropriate methods for gathering additional information to determine if the Basin Plan ELS implementation provisions for the ammonia objective are protective of the species and life stages present.

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

c. **Treatment Facility 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 discharge flow rate equals the capacity of present units.

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

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

The Permittee has completed the two minimum required annual CECs Monitoring events.

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

The Permittee shall develop and conduct a PMP as further described below when there is evidence (e.g., sample results reported as DNQ when the effluent limitation

is less than the MDL; sample results from analytical methods more sensitive than those methods required by this Order; presence of whole effluent toxicity; health advisories for fish consumption; or, results of benthic or aquatic organism tissue sampling) that a pollutant is present in the effluent above an effluent limitation and either of the following is true:

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

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

The goal of the PMP shall be to reduce all potential sources of a pollutant through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the effluent 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; and

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

(1). All PMP monitoring results for the previous year;

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

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

(4). 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 Facility upset or outage due to power failure or other cause, discharge of raw or inadequately treated sewage does not occur.

5. **Special Provisions for Municipal Facilities (POTWs Only)**

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

b. **Pretreatment Requirements**

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

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

iii. In 2012, there were 429 CIU Permittees, 1,025 SIU Permittees, and 1,640 other industrial users in the Sanitation District'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 § 403.18.

v. Applications for renewal or modification of this Order must contain information about industrial discharges to the POTW pursuant to 40 CFR § 122.21(j)(6). Pursuant to 40 CFR § 122.42(b) and provision 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 § 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 § 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 San Jose Creek WRP is part of the Joint Outfall System (JOS), consisting of the Joint Water Pollution Control Plant (JWPCP) and the upstream plants. In the reevaluation of the local limits, the Permittee shall consider the effluent limitations contained in this Order, the contributions from the upstream WRPs in the JOS, and other relevant factors due to the interconnection of the Districts' WRPs within the JOS. The Permittee shall submit to the Regional Board revised local limits, as necessary, for Regional Water Board approval based on the schedule specified in the NPDES Permit issued to the JWPCP. In addition, the Permittee shall consider collection system overflow protection from such constituents as oil and grease, etc.

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

c. **Collection System Requirements**

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

d. **Filter Bypass**

Conditions pertaining to bypass are contained in Attachment D, Section I. Standard Provisions – Permit Compliance, subsection G. The bypass or overflow of untreated or partially treated wastewater to waters of the State is prohibited, except as allowed under conditions stated in 40 CFR part 122.41(m) and (n). Consistent with those provisions, during periods of elevated, wet-weather flows, the operational diversion of a portion of the secondarily treated wastewater around the tertiary filters is allowable provided that the resulting combined discharge of fully treated (tertiary) and partially treated (secondary) wastewater complies with the effluent and receiving water limitations in this Order.

6. **Spill Reporting Requirements**

a. **Initial Notification**

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

i. In accordance with the requirements of Health and Safety Code section 5411.5, the Permittee shall provide notification to the local health officer or the director of environmental health with jurisdiction over the affected water body of any unauthorized release of sewage or other waste that causes, or probably

will cause, a discharge to any waters of the state as soon as possible, but no later than two hours after becoming aware of the release.

ii. In accordance with the requirements of CWC section 13271, the Permittee shall provide notification to the California Office 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 water body. 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:

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

(2). The route of the spill including the water body that received or will receive the discharge;

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

(4). If ongoing, the estimated flow rate of the release at the time of the notification; and,

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

b. **Monitoring**

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

i. To define the geographical extent of the spill's impact, the Permittee shall obtain grab samples (if feasible, accessible, and safe) for all spills, overflows or bypasses of any volume that reach any waters of the state (including surface and ground waters). The Permittee shall analyze the samples for total coliform, fecal coliform, E. coli (if fecal coliform test shows positive), and enterococcus (if the spill reaches the marine waters), and relevant pollutants of concern, upstream and downstream of the point of entry of the spill (if feasible, accessible, and safe). This monitoring shall be done on a daily basis from the time the spill is known until the results of two consecutive sets of bacteriological monitoring indicate the return to the background level or the County Department of Public Health authorizes cessation of monitoring.

c. **Reporting**

The initial notification required under section VI.C.6.a shall be followed by:

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

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

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

(3). The water body that received the discharge;

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

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

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

(7). The name of the local health officer or director of environmental health representative notified (if contacted directly); the date and time of notification; and the method of notification (e.g., phone, fax, email).

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

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

maintenance plan. Any deviations from or modifications to the plan shall be discussed.

d. **Records**

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

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

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

iii. The estimated volume of each spill, overflow, and bypass including gross volume, amount recovered and amount not recovered, monitoring results as required by section VI.C.6.b;

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

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

vi. Any mitigation measures implemented;

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

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

e. **Activities Coordination**

Although not required by this Order, Regional Water Board expects that the POTW's owners/operators will coordinate their compliance activities for consistency and efficiency with other entities that have responsibilities to implement: (i) this NPDES permit, including the Pretreatment Program, (ii) a MS4 NPDES permit that may contain spill prevention, sewer maintenance, reporting requirements and (iii) the SSO WDR.

f. **Consistency with SSO WDRs**

The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 United States Code sections1311 &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 SSOs 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 § 122.41 (e)), report any non-compliance (40 CFR § 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR § 122.41(d)).

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

7. Compliance Schedules –Not Applicable

There are no compliance schedules included in this NPDES Order.

VII. COMPLIANCE DETERMINATION

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

A. General

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

B. Multiple Sample Data

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

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

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

C. Average Monthly Effluent Limitation (AMEL)

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

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

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

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

D. Average Weekly Effluent Limitation (AWEL)

If the average of daily discharges over a calendar week exceeds the AWEL for a given parameter, an alleged violation will be flagged and the Permittee will be considered out of compliance for each day of that week for that parameter, resulting in 7 days of non-compliance. The average of daily discharges over the calendar week that exceeds the AWEL for a parameter will be considered out of compliance for that week only. If only a single sample is taken during the calendar week and the analytical result for that sample exceeds the AWEL, the Permittee will be considered out of compliance for that calendar week. For any one calendar week during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar week with respect to the AWEL.

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

E. Maximum Daily Effluent Limitation (MDEL)

If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the Permittee will be considered out of compliance for that parameter for that one day only within the reporting period. 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, an alleged 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, an alleged violation will be flagged and the Permittee will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

H. Six-month Median Effluent Limitation

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

I. Monthly Median Effluent Limitation (MMEL)

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

J. Chronic Toxicity

The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response ≤0.75 × Mean control response. A test result that rejects this null hypothesis is reported as "Pass."." A test result that does not reject this null hypothesis is reported as "Fail." The relative "Percent Effect" at the discharge IWC is defined and reported as: ((Mean control response - Mean discharge IWC response) ÷ Mean control response)) × 100. This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations—in the case of WET, only two test concentrations (i.e., a control and IWC). The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC or

receiving water concentration differs from the control (the test result is "Pass" or "Fail")). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

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

The Median Monthly Effluent Limitation (MMEL) for chronic toxicity is exceeded and a violation will be flagged when the median of no more than three independent chronic toxicity tests, conducted within the same calendar month and analyzed using the TST statistical approach, results in "Fail."" The MMEL for chronic toxicity shall only apply when there is a discharge on more than one day in a calendar month period. During such calendar months, up to three independent toxicity tests may be conducted when one toxicity test results in "Fail".

The chronic toxicity MDEL and MMEL are set at the IWC for the discharge (100% effluent) and expressed in units of the TST statistical approach ("Pass" or "Fail", "Percent Effect"). All NPDES effluent compliance monitoring for the chronic toxicity MDEL and MMEL shall be reported using 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* (U.S. EPA 2002, EPA-821-R-02-013). The Regional Water Board's review of reported toxicity test results will include review of concentration-response patterns as appropriate (see Fact Sheet discussion at IV.C.5). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the Percent Minimum Significant Difference (PMSD) criteria only apply to compliance reporting for the NOEC and the sublethal statistical endpoints of the NOEC, and therefore are not used to interpret TST results. Standard Operating Procedures used by the toxicity testing laboratory to identify and report valid, 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 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, USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed. The Board may consider results of any TIE/TRE studies in an enforcement action.

K. Percent Removal

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

Percent Removal (%) = [1-(CEffluent/CInfluent)] x 100 %

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

L. Mass and Concentration Limitations

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

M. Compliance with Single Constituent Effluent Limitations

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

N. Compliance with effluent limitations expressed as a sum of several constituents

Permittees are out of compliance with an effluent limitation which applies to the sum of a group of chemicals (e.g., PCB's) if the sum of the individual pollutant concentrations is greater than the effluent limitation. Individual pollutants of the group will be considered to have a concentration of zero if the constituent is reported as ND or DNQ.

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

TCDD equivalents shall be calculated using the following formula, where the Minimum Levels (MLs), and toxicity equivalency factors (TEFs) are as provided in the table below. The Permittee shall report all measured values of individual congeners, including data qualifiers. When calculating TCDD equivalents, the Permittee shall set congener concentrations below the minimum levels to zero. USEPA method 1613 may be used to analyze dioxin and furan congeners.

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

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

TEFi = individual TEF for a congener

MLs and TEFs

Congeners	MLs (pg/L)	TEFs
2,3,7,8-TetraCDD	10	1
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

Congeners	MLs (pg/L)	TEFs
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:

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

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

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

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

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

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

Q. Bacterial Standards and Analysis

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

   Geometric Mean = (C1 x C2 x … x C3)1/n

   where n is the number of days samples were collected during the period and C is the concentration of bacteria (MPN/100 mL or CFU/100 mL) found on each day of sampling.

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

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

4. Detection methods used for *E. coli* shall be those presented in Table 1A of 40 CFR part 136 or in the USEPA publication EPA 600/4-85/076, Test Methods for Escherichia coli

and Enterococci in Water By Membrane Filter Procedure or any improved method determined by the Executive Officer and/or USEPA to be appropriate.

R. Single Operational Upset (SOU)

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

1. A SOU is broadly defined as a single unusual event that temporarily disrupts the usually satisfactory operation of a system in such a way that it results in violation of multiple pollutant parameters.
2. A Permittee may assert SOU to limit liability only for those violations which the Permittee submitted notice of the upset as required in Provision V.E.2(b) of Attachment D – Standard Provisions.
3. For purpose outside of CWC section 13385 subdivisions (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Permittees to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with USEPA Memorandum "Issuance of Guidance Interpreting Single Operational Upset" (September 27, 1989).
4. For purpose of CWC section 13385 (h) and (i), determination of compliance and civil liability (including any more specific definition of SOU, the requirements for Permittees to assert the SOU limitation of liability, and the manner of counting violations) shall be in accordance with CWC section 13385 (f)(2).

ATTACHMENT A – DEFINITIONS

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

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

Average Monthly Effluent Limitation (AMEL)
The highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL)
The highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

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

Biosolids
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 C.F.R. 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, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

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

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

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

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

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

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

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

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

measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

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

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

Minimum Level (ML)
ML is the concentration at which the entire analytical system must give a recognizable signal and acceptable calibration point. The ML is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method specified sample weights, volumes, and processing steps have been followed.

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

Not Detected (ND)
Sample results which are less than the laboratory's MDL.

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

Pollutant Minimization Program (PMP)
PMP means waste minimization and pollution prevention actions that include, but are not limited to, product substitution, waste stream recycling, alternative waste management methods, and education of the public and businesses. The goal of the PMP shall be to reduce all potential sources of a priority pollutant(s) through pollutant minimization (control) strategies, including pollution prevention measures as appropriate, to maintain the effluent concentration at or below the water quality-based effluent limitation. Pollution prevention measures may be particularly appropriate for persistent bioaccumulative priority pollutants where there is evidence that beneficial uses are being impacted. The Regional Water Board may consider cost effectiveness when establishing the requirements of a PMP. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), shall be considered to fulfill the PMP requirements.

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

Reporting Level (RL)
The RL is the ML (and its associated analytical method) chosen by the Permittee for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. The MLs included in this Order correspond to approved analytical methods for reporting a sample result that are selected by the Regional Water Board either from Appendix 4 of the SIP in accordance with section 2.4.2 of the SIP or established in accordance with section 2.4.3 of the SIP. The ML is based on the proper application of method-based analytical procedures for sample preparation and the absence of any matrix interferences. Other factors may be applied to the ML depending on the specific sample preparation steps employed. For example, the treatment typically applied in cases where there are matrix-effects is to dilute the sample or sample aliquot by a factor of ten. In such cases, this additional factor must be applied to the ML in the computation of the RL.

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

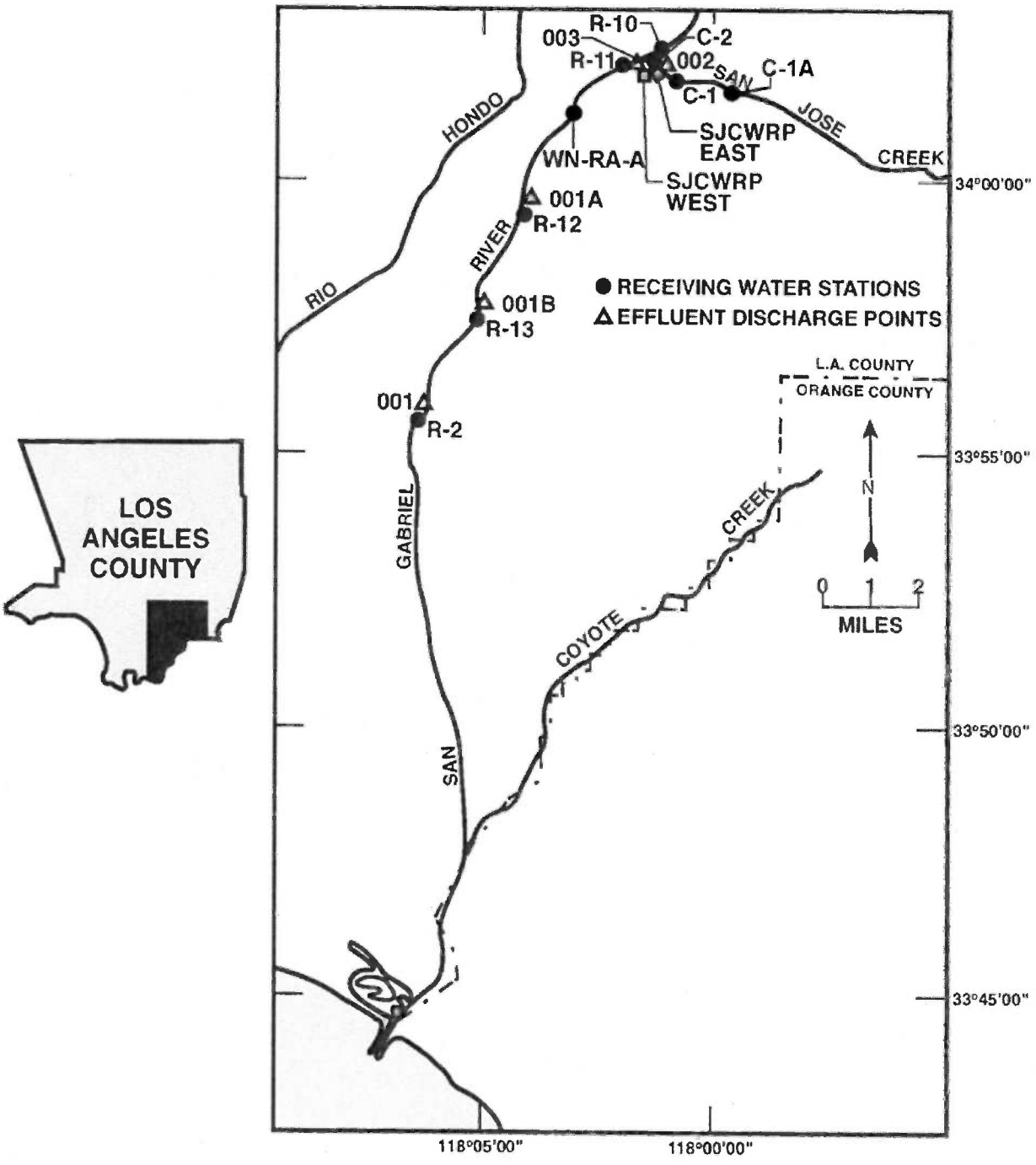
Standard Deviation (σ)
Standard Deviation is a measure of variability that is calculated as follows:

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

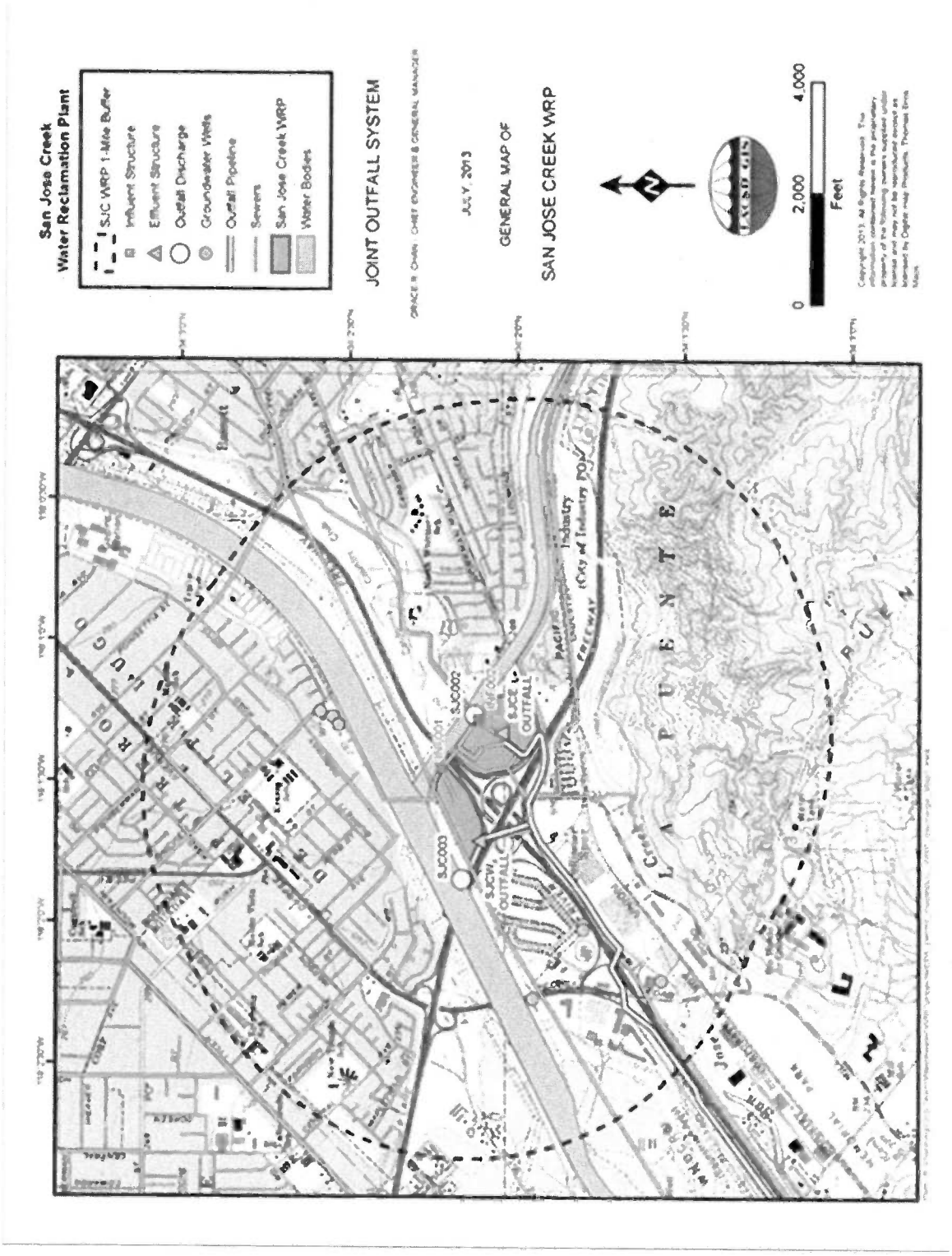
where:
x is the observed value;
μ is the arithmetic mean of the observed values; and
n is the number of samples.

Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a step-wise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first steps of the TRE consist of the collection of data relevant to the toxicity, including additional toxicity testing, and an evaluation of facility operations and maintenance practices, and best management practices. A Toxicity Identification Evaluation (TIE) may be required as part of the TRE, if appropriate. (A TIE is a set of procedures to identify the specific chemical(s) responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.)

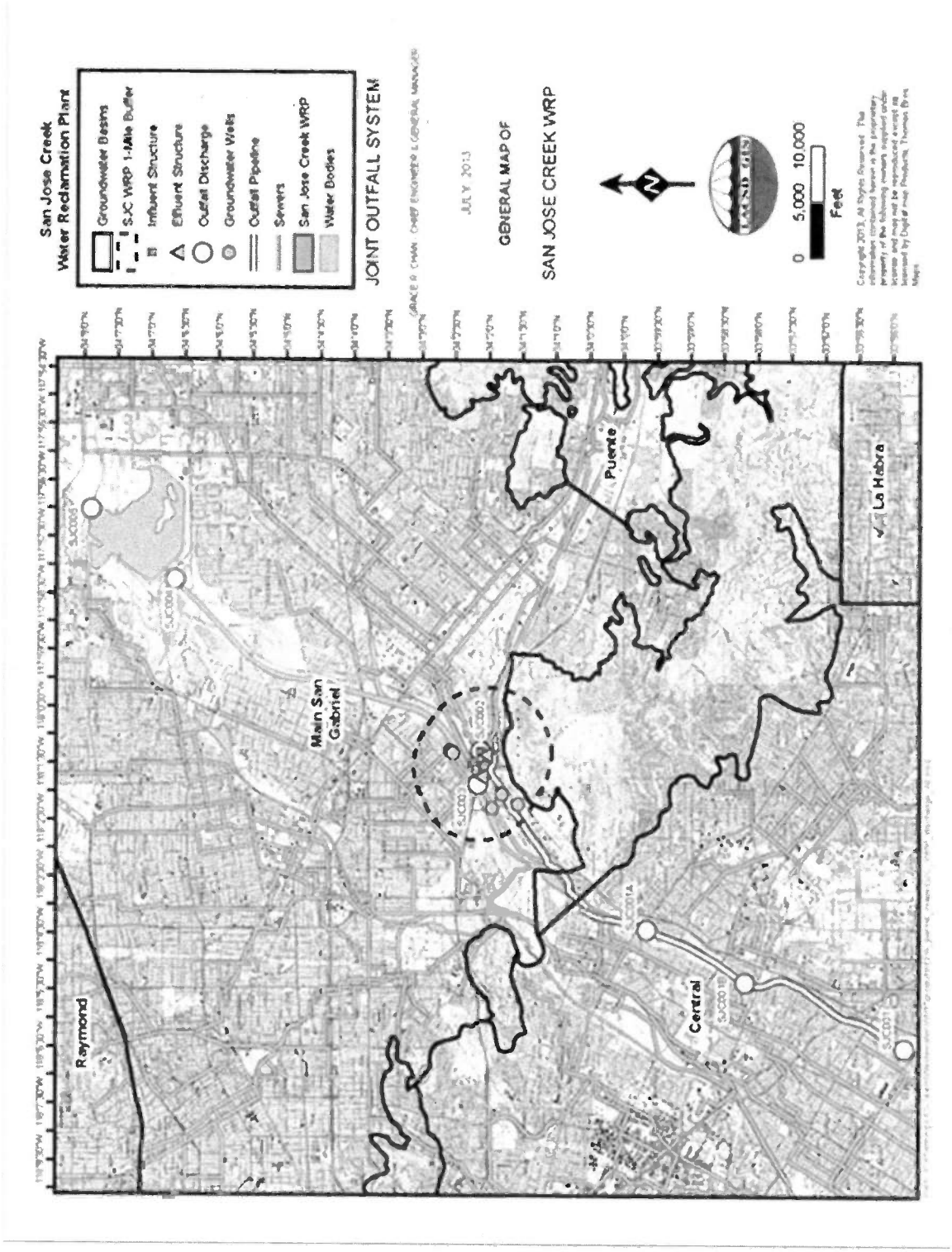
Attachment B-1 – Map of San Jose Creek WRP including Effluent Discharge and Receiving Water Monitoring Locations



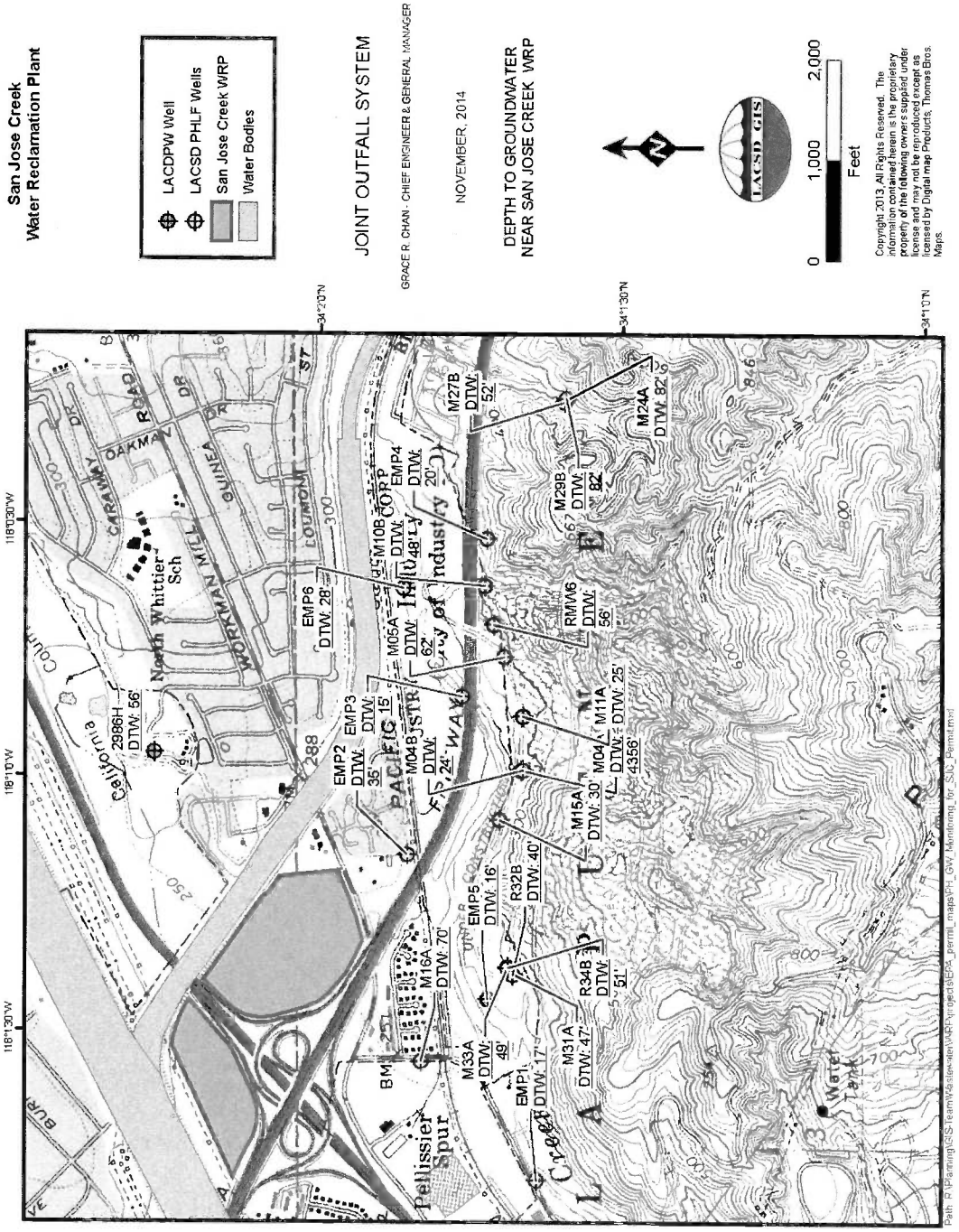
Attachment B-2 – Map of San Jose Creek WRP and surrounding area



Attachment B-3 – Map of San Jose Creek WRP Outfall Locations



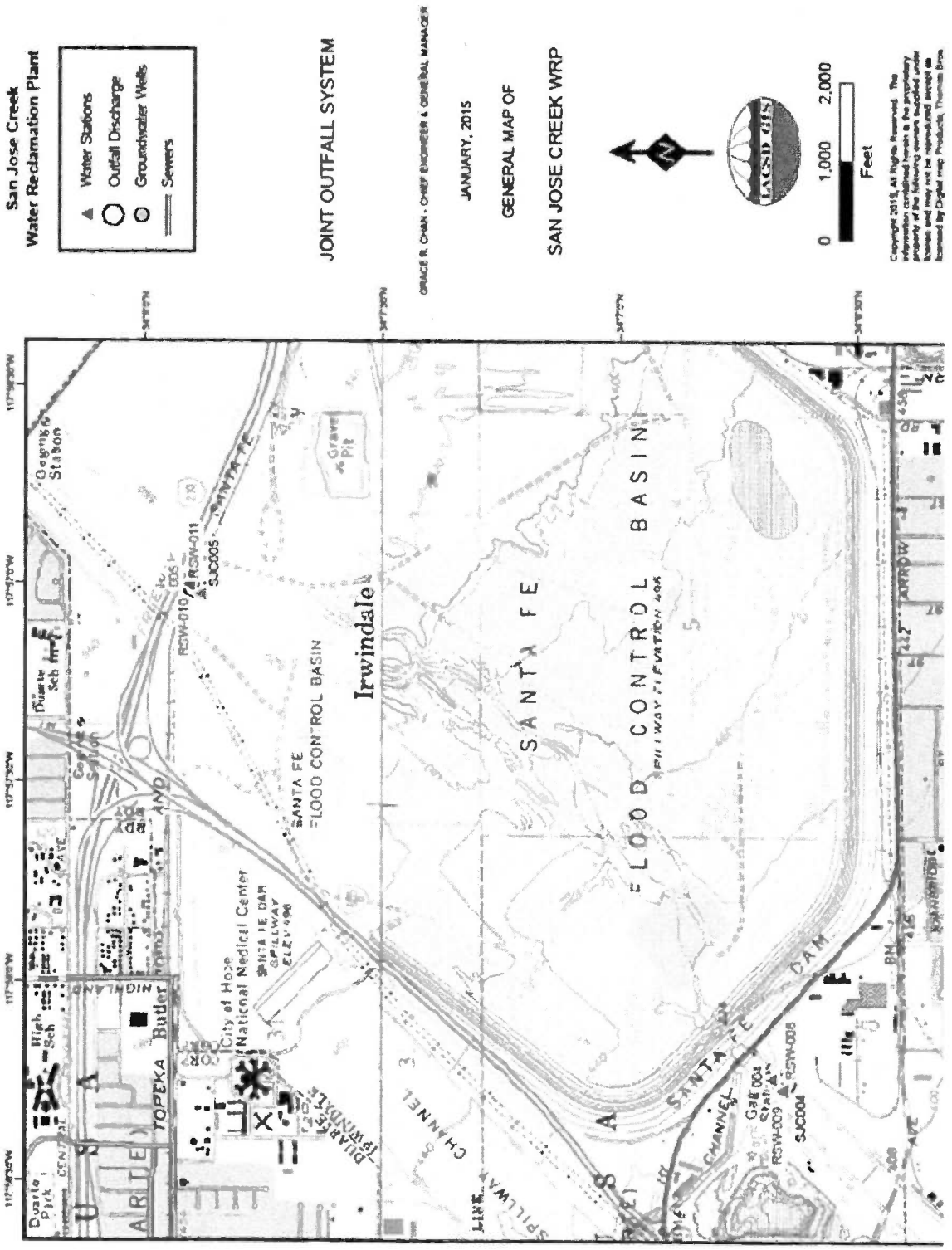
Attachment B-4 – Map of San Jose Creek WRP showing depth to groundwater near San Jose Creek



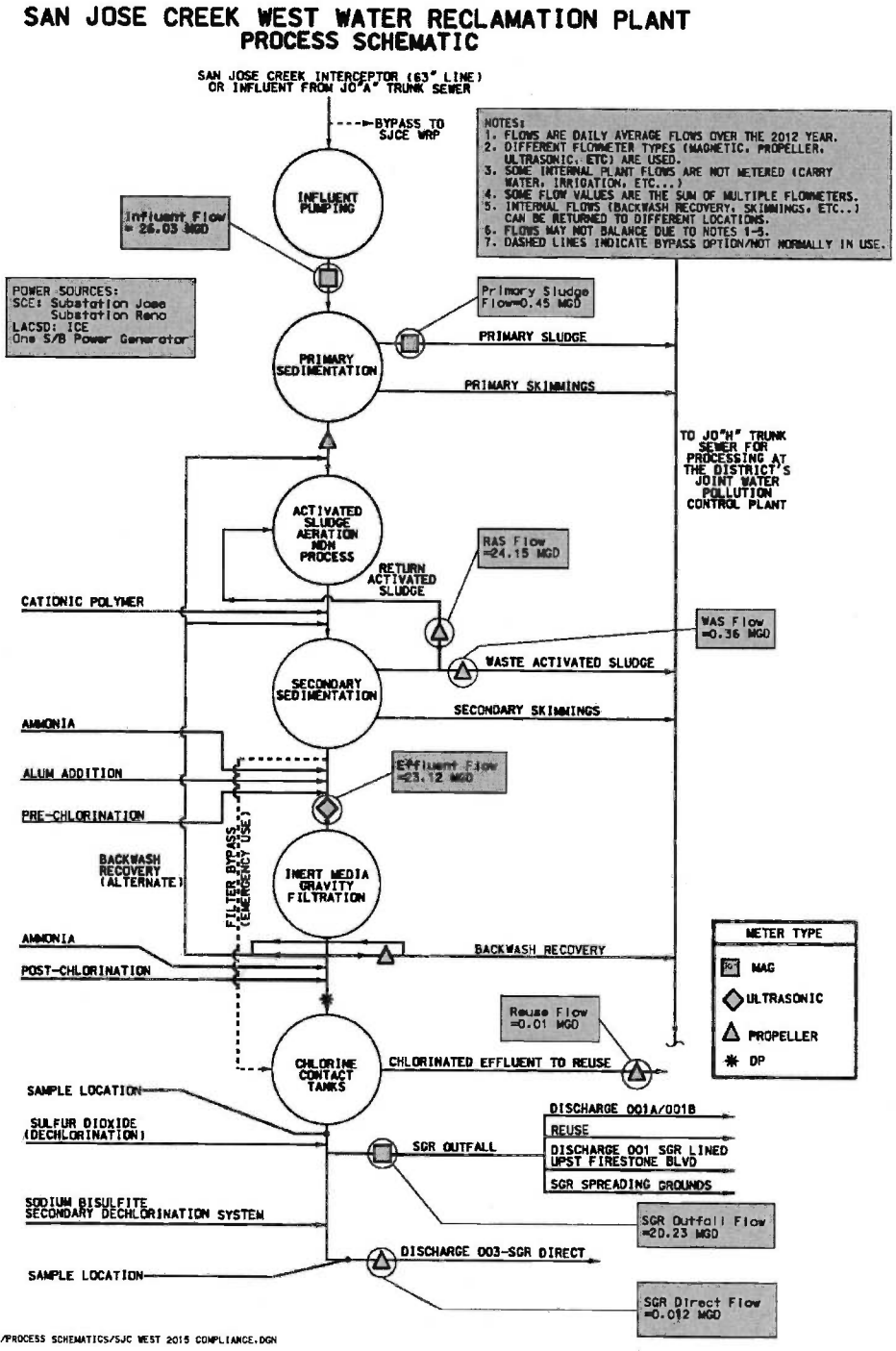
Attachment B-5 – Map of Indirect Reuse and Replenishment Project (IRRP)

FIGURE 1

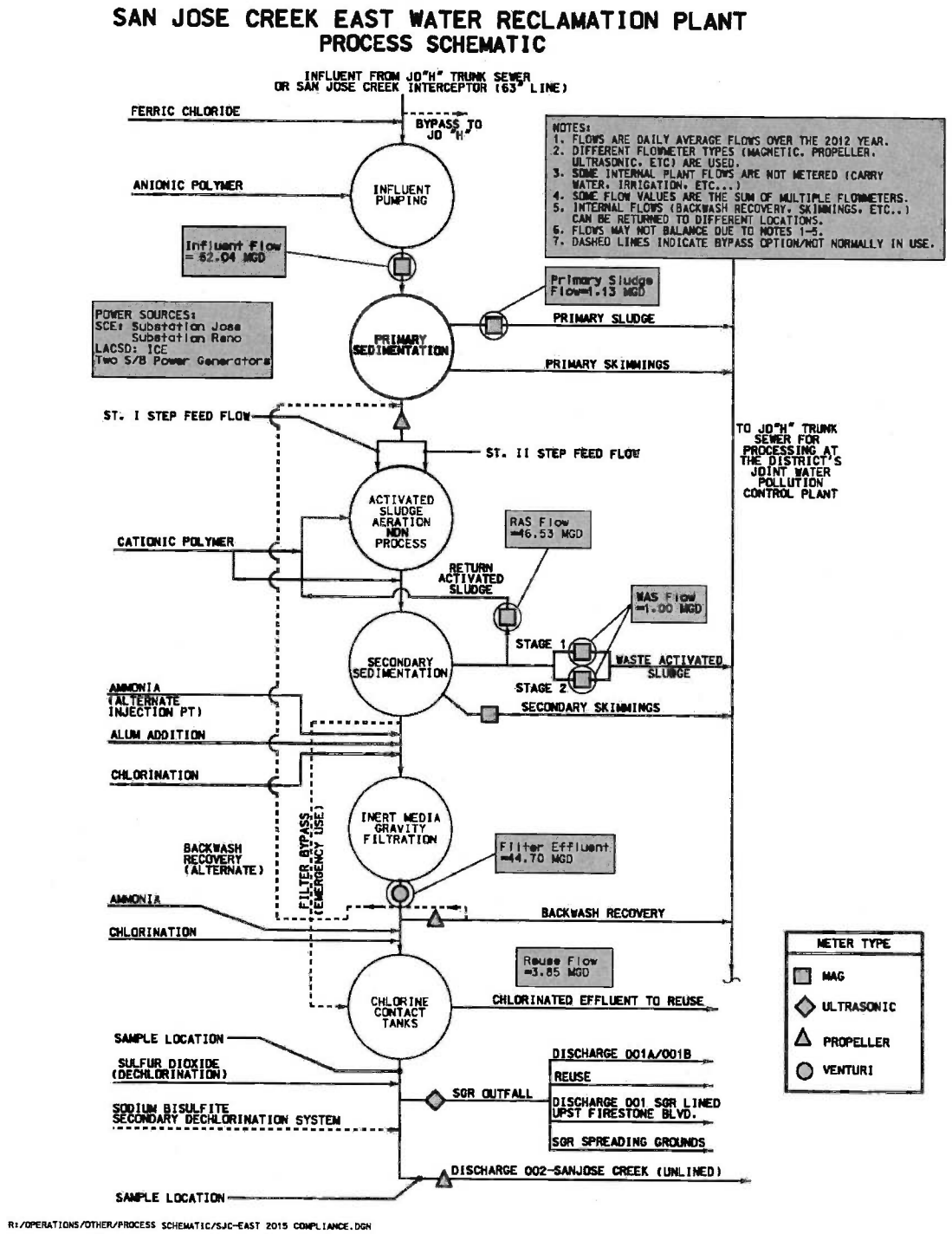
Attachment B-6 – Detail Map of Indirect Reuse and Replenishment Project (IRRP)



Attachment C-1 – San Jose Creek West Process Schematic



Attachment C-2 – San Jose Creek East Process Schematic



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Permittee must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. § 122.41(a); Wat. Code, §§ 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)
2. The Permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. § 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

F. Inspection and Entry

The Permittee shall allow the Regional Water Board, State Water Board, U.S. EPA, 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 C.F.R. § 122.41(i); Wat. Code, §§ 13267, 13383):

1. Enter upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C. § 1318(a)(4)(B)(i); 40 C.F.R. § 122.41(i)(1); Wat. Code, §§ 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 C.F.R. § 122.41(i)(2); Wat. Code, §§ 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 C.F.R. § 122.41(i)(3); Wat. Code, §§ 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 Water Code, any substances or parameters at any location. (33 U.S.C. § 1318(a)(4)(B); 40 C.F.R. § 122.41(i)(4); Wat. Code, §§ 13267, 13383.)

G. Bypass

1. Definitions

a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 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 C.F.R. § 122.41(m)(1)(ii).)

2. **Bypass not exceeding limitations.** The Permittee may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. § 122.41(m)(2).)

3. **Prohibition of bypass**. Bypass is prohibited, and the Regional Water Board may take enforcement action against a Permittee for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 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 C.F.R. § 122.41(m)(4)(i)(B)); and

c. The Permittee submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance I.G.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)

5. **Notice**

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

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

H. Upset

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

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

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

   a. An upset occurred and that the Permittee can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));

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

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

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

3. **Burden of proof**. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

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

B. Duty to Reapply

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

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Permittee and incorporate such other requirements as may be necessary under the CWA and the Water Code. (40 C.F.R. §§ 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 C.F.R. § 122.41(j)(1).)

B. Monitoring results must be conducted according to test procedures approved under 40 C.F.R. part 136 for the analyses of pollutants unless another method is required under 40 C.F.R. subchapters N or O. In the case of pollutants for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants. (40 C.F.R. §§ 122.41(j)(4), 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 C.F.R. part 503), the Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

B. Records of monitoring information shall include:

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

C. Claims of confidentiality for the following information will be denied (40 C.F.R. § 122.7(b)):

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

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Permittee shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Regional Water Board, State Water Board, or U.S. EPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Permittee shall also furnish to the Regional Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. § 122.41(h); Wat. Code, §§ 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, and V.B.5 below. (40 C.F.R. § 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 U.S. EPA). (40 C.F.R. § 122.22(a)(3).).
3. All reports required by this Order and other information requested by the Regional Water Board, State Water Board, or U.S. EPA 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 C.F.R. § 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 C.F.R. § 122.22(b)(2)); and
    c. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.22(d).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board for reporting results of monitoring of sludge use or disposal practices. (40 C.F.R. § 122.41(l)(4)(i).)
3. If the Permittee monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii).)

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

1. The Permittee shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Permittee becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance. (40 C.F.R. § 122.41(l)(6)(i).)
2. The following shall be included as information that must be reported within 24 hours under this paragraph (40 C.F.R. § 122.41(l)(6)(ii)):
   a. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

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

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours. (40 C.F.R. § 122.41(l)(6)(iii).)

F. Planned Changes

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

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

When the Permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, State Water Board, or U.S. EPA, the Permittee shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Regional Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, 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 § 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 § 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 § 122.41(j)(5)).

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

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 C.F.R. § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharge that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 C.F.R. § 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 C.F.R. § 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 C.F.R. § 122.42(b)(3).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

CONTENTS

TABLES

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP), CI-5542

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 C.F.R.) require that all NPDES permits specify monitoring and reporting requirements. Water Code 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 effluent analyses shall be performed during the months of February, May, August, and November. Semiannual analyses shall be performed during the months of February and August. Annual analyses shall be performed during the month of August, except for bioassessment monitoring, which will be conducted in the spring/summer. 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 quarterly, semiannual, and annual analyses shall be reported as due date specified in Table E-10 of MRP.

B. Pollutants shall be analyzed using the analytical methods described in 40 CFR § 136.3, 136.4, and 136.5; or where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Water Board. Laboratories analyzing effluent samples and receiving water samples shall be certified by the Environmental Laboratory Accreditation Program (ELAP)[1] or approved by the Executive Officer and must include quality assurance/quality control (QA/QC) data in their reports. A copy of the laboratory certification shall be provided in the Annual Report due to the Regional Water Board each time a new certification and/or renewal of the certification is obtained from ELAP.

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

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

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

F. Each monitoring report must affirm in writing that "all analyses were conducted at a laboratory certified for such analyses under the ELAP or approved by the Executive Officer and in

[1] On July 1, 2014, the Drinking Water Program's ELAP was transferred from the California Department of Public Health (CDPH) to the State Water Board's new Division of Drinking Water.

accordance with current USEPA guideline procedures or as specified in this Monitoring and Reporting Program."

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

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

I. The Permittee shall instruct its laboratories to establish calibration standards so that the ML (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve. In accordance with section J, below, the Permittee's laboratory may employ a calibration standard lower than the ML in Appendix 4 of the SIP.

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

1. When the pollutant under consideration is not included in Appendix 4, SIP;
2. When the Permittee and the Regional Water Board agree to include in the permit a test method that is more sensitive than those specified in 40 CFR part 136;
3. When the Permittee agrees to use an ML that is lower than those listed in Appendix 4;
4. When the Permittee demonstrates that the calibration standard matrix is sufficiently different from that used to establish the ML in Appendix 4 and proposes an appropriate ML for the matrix; or,
5. When the Permittee uses a method, which quantification practices are not consistent with the definition of the ML. Examples of such methods are USEPA-approved method 1613 for dioxins, and furans, method 1624 for volatile organic substances, and method 1625 for semi-volatile organic substances. In such cases, the Permittee, the Regional Water Board, and the State Water Board shall agree on a lowest quantifiable limit and that limit will substitute for the ML for reporting and compliance determination purposes.

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

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

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

M. For all bacteriological analyses, sample dilutions should be performed so the expected range of values is bracketed (for example, with multiple tube fermentation method or membrane filtration method, 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

II. MONITORING LOCATIONS

The Permittee shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order (Refer to Attachment B-1):

Table E-1. Monitoring Station Locations

Discharge Point Source	Monitoring Location Name	Monitoring Location Description
Influent Monitoring		
San Jose Creek East Influent	INF-001	Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and/or where representative samples of the influent can be obtained.
San Jose Creek West Influent	INF-002	Sampling stations shall be established at each point of inflow to the sewage treatment plant and shall be located upstream of any in-plant return flows and/or where representative samples of the influent can be obtained.

Discharge Point Source	Monitoring Location Name	Monitoring Location Description
Effluent Monitoring		
San Jose Creek West and East Combined	EFF-001, EFF-001A, EFF-001B	The effluent sampling station shall be located downstream of any in-plant return flows and after the final disinfection process, where representative samples of the effluent can be obtained. This location represents the flow-weighted calculations for the combined effluent to Discharge Point Nos. 001, 001A, or 001B. No sampling or continuous recorder monitoring is done at this location. Flow weighting calculation of required parameters is performed using samples taken from EFF-002 and EFF-003. Latitude 33.930524 N and Longitude -118.107743 W
San Jose Creek West and East Combined	EFF-001X	The effluent sampling station for total residual chlorine, pH, and temperature is located at outfall for the Discharge Point No. 001. The total residual chlorine, pH, and temperature limitations shall be applied to the effluent sample collected at this point.
San Jose Creek West and East Combined	EFF-001AX	The effluent sampling station for total residual chlorine, pH, and temperature is located at outfall for the Discharge Point No. 001A. The total residual chlorine, pH, and temperature limitations shall be applied to the effluent sample collected at this point.
San Jose Creek West and East Combined	EFF-001BX	The effluent sampling station for total residual chlorine, pH, and temperature is located at outfall for the Discharge Point No. 001B. The total residual chlorine, pH, and temperature limitations shall be applied to the effluent sample collected at this point.
San Jose Creek East Facility	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 effluent can be obtained from the San Jose Creek East WRP. Latitude 34.035458 N and Longitude -118.021054 W
San Jose Creek East Facility	EFF-002X	The effluent sampling station for total residual chlorine and temperature shall be located downstream of the dechlorination process and inside the San Jose Creek East WRP. The total residual chlorine and temperature limitations shall be applied to the effluent sample collected at this point.
San Jose Creek West Facility	EFF-003	The effluent sampling station shall be located downstream of any in-plant return flows and after the final disinfection process, where representative samples of the effluent can be obtained from the San Jose Creek West WRP. Latitude 34.036076 N and Longitude -118.030765 W
San Jose Creek West Facility	EFF-003X	The effluent sampling station for total residual chlorine and temperature shall be located downstream of the dechlorination process and inside the San Jose Creek West WRP. The total residual chlorine and temperature limitations shall be applied to the effluent sample collected at this point.

Discharge Point Source	Monitoring Location Name	Monitoring Location Description
San Jose Creek West Facility	EFF-004	The effluent sampling station shall be located downstream of any in-plant return flows and after the final disinfection process, where representative samples of the effluent can be obtained from the San Jose Creek West WRP. Latitude 34.111125 N and Longitude -117.971036 W
San Jose Creek West	EFF-004X	The effluent sampling station for total residual chlorine, pH, and temperature is located at outfall for the Discharge Point No. 004. The total residual chlorine, pH, and temperature limitations shall be applied to the effluent sample collected at this point.
San Jose Creek West Facility	EFF-005	The effluent sampling station shall be located downstream of any in-plant return flows and after the final disinfection process, where representative samples of the effluent can be obtained from the San Jose Creek West WRP. Latitude 34.131603 N and Longitude -117.950228 W
San Jose Creek West	EFF-005X	The effluent sampling station for total residual chlorine, pH, and temperature is located at outfall for the Discharge Point No. 005. The total residual chlorine, pH, and temperature limitations shall be applied to the effluent sample collected at this point.
Receiving Water Monitoring Stations		
Upstream		
San Jose Creek	RSW-001	34.033389 N, 118.017639 W, upstream of Discharge Point No. 002 (C1)
San Gabriel River	RSW-003	Latitude 34.0395833 N and Longitude -118.0251944 W, upstream of Discharge Point 003 and upstream of San Jose Creek confluence(R10)
San Gabriel River	RSW-008	Latitude 34.111333 N and Longitude -117.970722 W, 100 ft. upstream of Discharge Point No. 004.
San Gabriel River	RSW-010	Latitude 34.131833 N, and Longitude -117.950056 W, 100 ft. upstream of Discharge Point No. 005.
Downstream		
San Jose Creek	RSW-002	Latitude 34.035694 N and Longitude -118.021306 W, no further than 100 feet downstream of Discharge Point No. 002. This location is also used for San Jose Creek ammonia receiving water point of compliance. (C2)
San Gabriel River	RSW-004	Latitude 34.036083 N and Longitude -118.031500 W, no further than 100 feet downstream of Discharge Point No. 003. This location is also used for San Gabriel River ammonia receiving water point of compliance. (R11)
San Gabriel River	RSW-005	Latitude 33.9295278 N and Longitude -118.1078056 W, no further than 100 feet downstream of Discharge Point No. 001. This location is also used for San Gabriel River ammonia receiving water point of compliance. (R2)

Discharge Point Source	Monitoring Location Name	Monitoring Location Description
San Gabriel River	RSW-006	Latitude 33.993862 N and Longitude -118.073457 W, no further than 100 feet downstream of Discharge Point No. 001A. This location is also used for San Gabriel River ammonia receiving water point of compliance. (R12)
San Gabriel River	RSW-007	Latitude 33.969472 N and Longitude -118.088778 W, no further than 100 feet downstream of Discharge Point No. 001B. This location is also used for San Gabriel River ammonia receiving water point of compliance(R13)
San Gabriel River	RSW-009	Latitude 34.110972 N and Longitude -117.971194 W, no further than 100 ft. downstream of Discharge Point No. 004. This location is also used for San Gabriel River ammonia receiving water point of compliance.
San Gabriel River	RSW-011	Latitude 34.131417 N and Longitude -117.950476 W, 100 ft. downstream of Discharge Point No. 005. This location is also used for San Gabriel River ammonia receiving water point of compliance.
TMDL, Dry and Wet Weather Flow Monitoring Station		
San Gabriel River	RSW-004D	San Gabriel River, above the Whittier Narrows Dam, at USGS Gauging Station #11087020 (Latitude 34.034167 N, Longitude -118.037222) located in San Gabriel River Reach 3 above Whittier Narrows Dam. This gauging station is operated and maintained by the USGS (Previously RSW-008).
Bioassessment Monitoring Stations		
Upstream of Discharge 002	RSW-001-A	Latitude 34.032306 N and Longitude -118.008278 W, San Jose Creek Reach 1, upstream of Discharge Point No.002 and RSW-001 in the unlined portion of the channel (C1-A).
Downstream of Discharge 003	RSW-004-A	Latitude 34.024528 N and Longitude -118.053222 W, San Gabriel River Reach 3, downstream of Discharge Point No.003 (WN-RA-A).
Downstream of Discharge Point No. 001	RSW-005	Latitude 33.930139 N and Longitude -118.107528 W, San Gabriel River at Firestone Blvd., no further than 100 feet downstream of Discharge Point No. 001 (R-2)

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

On November 10, 2008, the Permittee submitted an ROWD and, on July 10, 2014,submitted a revision to the ROWD providing additional information regarding a planned indirect potable reuse project that will make use of recycled water from the San Jose Creek WRP, and to request that changes be made to several of the discharge locations in the NPDES permit for the San Jose Creek WRP to accommodate the proposed project (See Attachment B-5 and B-6). EFF-004 would be a new NPDES Discharge Point drop structure, with a receiving water monitoring station, located below the Santa Fe Dam. Immediately downstream, the river has a soft-bottom, which includes concrete-lined sides in the San Gabriel River bed. This design is intended to slow river movement and increase groundwater recharge.

EFF-005 would be a new NPDES Discharge Point, with a receiving water monitoring station, allowing discharge into the San Gabriel River channel above the Santa Fe dam and then into the Santa Fe Spreading Grounds.

III. INFLUENT MONITORING REQUIREMENTS

Influent monitoring is required to determine compliance with NPDES permit conditions, assess treatment plant performance and assess effectiveness of the Pretreatment Program.

A. Monitoring Location INF-001

1. The Permittee shall monitor influent to the San Jose Creek East Facility at INF-001 as follows:

Table E-2. Influent Monitoring INF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow[2]	mgd	Recorder	continuous[2]	[3]
pH	pH unit	Grab	weekly	[3]
Total suspended solids (TSS)	mg/L	24-hour composite	weekly	[3]
Biochemical oxygen demand (BOD_5 20°C)	mg/L	24-hour composite	weekly	[3]
Lead	µg/L	24-hour composite	monthly	[3]
Selenium	µg/L	24-hour composite	monthly	[3]
Chromium VI	µg/L	grab	annually	[3]
PCBs (aroclors)[4]	µg/L	24-hour composite	annually	[3]
PCBs (congeners)[4]	µg/L	24-hour composite	annually	[3]
Remaining EPA priority pollutants[5] excluding asbestos	µg/L	24-hour composite; grab for VOCs and Cyanide	semiannually	[3]

[2] Total daily flow, the 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 MLs specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

[4] PCBs as aroclors shall be analyzed using method EPA 608, PCBs as congeners shall be analyzed using method EPA 1668c. PCBs as congeners shall be analyzed for three years and may be discontinued for the remaining life of this Order if none of the PCBs congeners are detected using method EPA 1668c. USEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR 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, with lower detection levels, for monitoring data, reported as 41 congener results, that will be used for informational purposes.

[5] 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

B. Monitoring Location INF-002

1. The Permittee shall monitor influent to the San Jose Creek West Facility atINF-002 as follows:

Table E-3. Influent Monitoring INF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Recorder	continuous[2]	[6]
pH	pH unit	Grab	weekly	[7]
Total suspended solids (TSS)	mg/L	24-hour composite	weekly	[7]
Biochemical oxygen demand (BOD_5 20°C)	mg/L	24-hour composite	weekly	[7]
Lead	µg/L	24-hour composite	monthly	[7]
Selenium	µg/L	24-hour composite	monthly	[7]
Chromium VI	µg/L	grab	annually	[7]
PCBs (aroclors)[8]	µg/L	24-hour composite	annually	[7]
PCBs (congeners)[8]	µg/L	24-hour composite	annually	[7]
Remaining EPA priority pollutants[9] excluding asbestos	µg/L	24-hour composite; grab for VOCs and Cyanide	semiannually	[7]

IV. EFFLUENT MONITORING REQUIREMENTS

Effluent monitoring is required to: determine compliance with National Pollutant Discharge Elimination System (NPDES) permit conditions and water quality standards; assess plant performance, identify operational problems and improve plant performance; provide information on wastewater characteristics and flows for use in interpreting water quality and biological data and conduct reasonable potential analyses for toxic pollutants.

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[6] Total daily flow, the 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).

[7] 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 MLs specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

[8] PCBs as aroclors shall be analyzed using method EPA 608, PCBs as congeners shall be analyzed using method EPA 1668c. PCBs as congeners shall be analyzed for three years and may be discontinued for the remaining life of this Order if none of the PCBs congeners are detected using method EPA 1668c. USEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR 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.

[9] 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. PCB as aroclors shall be analyzed using method EPA 608 and PCB as congeners shall be analyzed using method EPA 1668c.

The same outfall pipeline discharges to the San Gabriel River at Discharge Points Nos. 001,001A and 001B. Although No. 001B has not been used as of December 2014, it is expected to receive discharge after 2015.

A. Monitoring Location EFF-001, EFF-001A and EFF-001B

1. Total residual chlorine, pH, and temperature are monitored at EFF-001X, EFF-001AX, and EFF-001BX and are required only when there is flow. Monitoring for other required parameters for EFF-001, EFF-001A and EFF-001B is based on flow-weighting calculations[10]. Monitoring for other parameters at EFF-001, EFF-001A, and EFF-001B is reportable to CIWQS if there is flow during the reporting month. If more than one analytical test method is listed for a given parameter, the Permittee must select from the listed methods and corresponding Minimum Level:

Table E-4. Effluent Monitoring EFF-001, EFF-001A and EFF-001B

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total waste flow	mgd	calculated	continuous[11]	[12]
Turbidity[13]	NTU	calculated	continuous [11,14]	[12]
Total residual chlorine	mg/L	grab	daily[15]	[12]

[10] Concentration = [(East Concentration x metered East Flow to outfall pipeline) + (West Concentration x metered West Flow to outfall pipeline]/(East Flow to outfall pipeline+ West Flow to outfall pipeline).
Mass = [(East Concentration x East Flow to EFF-001, 001A or 001B) + (West Concentration x West Flow to EFF-001, 001A or 001B)] x Conversion Factor.

[11] Where continuous monitoring of a constituent is required, the following shall be reported:
Total waste flow – Total daily and monthly average;
Turbidity – maximum daily value, total amount of time each day the turbidity exceeded five turbidity units, flow-proportioned average daily value. A grab sample can be used to determine compliance with the 10 NTU limit. A grab sample can be used to determine compliance with the 10 NTU limit.

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

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

[14] A flow-weighted 24-hour composite sample may be collected for turbidity at San Jose East and West WRPs in place of the recorder to determine the flow-proportioned average daily value. .A grab sample can be used to determine compliance with the 10 NTU limit. A flow-weighted 24-hour composite sample may be collected for turbidity at EFF-001, EFF-001A, and EFF-001B in place of the recorder to determine the flow-proportioned average daily value.

[15] Daily grab samples shall be collected during peak flow at monitoring location EFF-001, EFF-001A, and EFF-001B Monday through Friday only, except for holidays. Analytical results of daily grab samples will be used to determine compliance with total residual chlorine effluent limitation. Total residual chlorine cannot be monitored using a continuous recorder at Discharge Nos. 001, 001A, and 001B and is only monitoring by a grab sample at these outfalls. These outfalls are at a remote location in a streambed several miles downstream of the plant.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total coliform[13]	MPN/100mL or CFU/100mL	calculated	daily[16]	[12]
Fecal coliform[17]	MPN/100mL or CFU/100Ml	calculated	weekly	[12]
E. coli[18]	MPN/100mL or CFU/100mL	calculated	weekly	[12]
Temperature[19]	°F	grab	weekly	[12]
pH[19]	pH units	grab	weekly	[12]
Settleable solids	mL/L	calculated	weekly	[12]
Total suspended solids (TSS)	mg/L	calculated	weekly	[12]
BOD_5 20°C	mg/L	calculated	weekly[20]	[12]
Oil and grease	mg/L	calculated	quarterly	[12]
Dissolved oxygen	mg/L	calculated	monthly	[12]
Total Dissolved Solids	mg/L	calculated	monthly	[12]
Sulfate	mg/L	calculated	monthly	[12]
Chloride	mg/L	calculated	monthly	[12]
Boron	mg/L	calculated	monthly	[12]
Ammonia Nitrogen[19]	mg/L	calculated	monthly	[12]
Nitrite nitrogen[19]	mg/L	calculated	monthly	[12]
Nitrate plus nitrite as nitrogen[19]	mg/L	calculated	monthly	[12]
Organic nitrogen[19]	mg/L	calculated	monthly	[12]
Total kjeldahl nitrogen[19]	mg/L	calculated	monthly	[12]
Total nitrogen	mg/L	calculated	monthly	[12]
Total phosphorus	mg/L	calculated	monthly	[12]
Orthophosphate-P	mg/L	calculated	monthly	[12]

[16] Daily samples shall be collected Monday through Friday, except for holidays.

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

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

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

[20] If the result of the weekly BOD analysis yields a value greater than the average monthly effluent limitation (AMEL), the frequency of analysis shall be increased to daily within one week of knowledge of the test result for at least 30 days and until compliance with the average weekly effluent limitation (AWEL) and AMEL BOD limits is demonstrated; after which the frequency shall revert to weekly.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Surfactants (MBAS)[21]	mg/L	calculated	quarterly	[12]
Surfactants (CTAS)[21]	mg/L	calculated	quarterly	[12]
Total hardness ($CaCO_3$)	mg/L	calculated	monthly	[12]
Chronic toxicity	Pass or Fail, % Effect (TST)	24-hour composite (report only East and West toxicity data, do not flow-weight)	monthly[22]	[22]
Antimony	µg/L	calculated	semiannually	[12]
Arsenic	µg/L	calculated	semiannually	[12]
Cadmium	µg/L	calculated	semiannually	[12]
Chromium III[23]	µg/L	calculated	semiannually	[12]
Chromium VI	µg/L	calculated	semiannually	[12]
Total Chromium	µg/L	calculated	semiannually	[12]
Copper	µg/L	calculated	quarterly	[12]
Lead	µg/L	calculated	monthly	[12]
Mercury[24]	µg/L	calculated	semiannually	[12]
Nickel	µg/L	calculated	semiannually	[12]
Selenium	µg/L	calculated	monthly	[12]
Silver	µg/L	calculated	semiannually	[12]
Thallium	µg/L	calculated	semiannually	[12]
Zinc	µg/L	calculated	semiannually	[12]
Cyanide	µg/L	calculated	semiannually	[12]
Bis(2-ethylhexyl)phthalate	µg/L	calculated	semiannually	[12]
Total Trihalomethanes[25]	µg/L	calculated	monthly	[12]
PCBs as aroclors[26]	µg/L	calculated	annually	[12]
PCBs as congeners[27]	µg/L	calculated	annually	[12]

[21] MBAS is Methylene blue active substances and CTAS is cobalt thiocyanate active substances.

[22] 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."

[23] The results for Chromium III shall be calculated by subtracting the Chromium VI concentration from the Total Chromium concentration.

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

[25] Total Trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

[26] 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.

[27] PCBs as congeners means 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,

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Fluoride	mg/L	calculated	semiannually	[12]
Iron	µg/L	calculated	semiannually	[12]
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 & uranium)	pCi/L	calculated	semiannually	[28]
2,3,7,8-TCDD[29]	pg/L	calculated	semiannually	[12]
Chlorpyrifos[30]	µg/L	calculated	annually	[12]
Diazinon[30]	µg/L	calculated	annually	[12]
Perchlorate[31]	µg/L	calculated	annually	[31]
1,4-Dioxane[31]	µg/L	calculated	annually	[31]
1,2,3-Trichloropropane[31]	µg/L	calculated	annually	[31]
Methyl tert-butyl-ether (MTBE)[31]	µg/L	calculated	annually	[31]

158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified. PCBs as congeners shall be analyzed using method EPA 1668c for three years and may be discontinued for the remaining life of this Order if none of the PCB congeners are detected using method EPA 1668cUSEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR Part 136, Permittees should use for discharge monitoring reports/State monitoring reports (1) USEPA method 608 for monitoring data, reported as aroclor results, that will be used for assessing compliance with WQBELs, and (2) USEPA proposed method 1668c, with lower detection levels, for monitoring data, reported as 41 congener results, that will be used for informational purposes

[28] 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.

[29] In accordance with the SIP, the Permittee shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-001 and RSW-003, located upstream of the discharge point no. 002 and 003 ,respectively The Permittee shall use the appropriate Toxicity Equivalence Factor (TEF) to determine Toxic Equivalence (TEQ). Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding Toxicity Equivalence Factor (TEF_i), (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

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

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

[31] Emerging chemicals include 1,4-dioxane (USEPA 8270B 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).

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Remaining EPA priority pollutants[32] excluding asbestos	µg/L	calculated	semiannually	[12]

B. Monitoring Location EFF-002

1. The Permittee shall monitor the discharge of tertiary-treated effluent at EFF-002 as follows. Total residual chlorine, pH, and temperature are monitored at EFF-002X and is required only when there is flow through Discharger Point No. 002. Monitoring for all parameters at EFF-002 is reportable to CIWQS if there is flow to Discharge No. 002 during the reporting month. If more than one analytical test method is listed for a given parameter, the Permittee must select from the listed methods and corresponding Minimum Level:

Table E-5. Effluent Monitoring at EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Metho
Total waste flow	mgd	Recorder	continuous[33]	[34]
Turbidity[35]	NTU	Recorder	continuous [33]	[34]
Total residual chlorine	mg/L	Recorder	continuous[36]	[34]
Total residual chlorine	mg/L	Grab	daily[37]	[34]
Total coliform[35]	MPN/100mL	Grab	daily[38]	[34]

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

[33] Where continuous monitoring of a constituent is required, the following shall be reported:
Total waste flow – Total daily, monthly average, and peak daily flow (24-hour basis);
Turbidity – maximum daily value, total amount of time each day the turbidity exceeded five turbidity units, flow-proportioned average daily value. A grab sample can be used to determine compliance with the 10 NTU limit. A flow-weighted 24-hour composite sample may be collected for turbidity at EFF-002 in place of the recorder to determine the flow-proportioned average daily value.

[34] 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.

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

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

[37] Daily grab samples shall be collected during peak flow at monitoring location EFF-002 Monday through Friday only, except for holidays. Analytical results of daily grab samples will be used to determine compliance with total residual chlorine effluent limitation at EFF-002X. Furthermore, additional monitoring requirements specified in section IV.E.. shall be followed.

[38] Daily samples shall be collected Monday through Friday, except for holidays.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Metho
	or CFU/100mL			
Fecal coliform[39]	MPN/100mL or CFU/100mL	Grab	weekly	34
E. coli[40]	MPN/100mL or CFU/100mL	Grab	weekly	34
Temperature[41]	°F	grab	weekly	34
pH[41]	pH units	grab	weekly	34
Settleable solids	mL/L	grab	weekly	34
Total suspended solids (TSS)	mg/L	24-hour composite	weekly	34
BOD_5 20°C	mg/L	24-hour composite	weekly[42]	34
Oil and grease	mg/L	grab	quarterly	34
Dissolved oxygen	mg/L	grab	monthly	34
Total Dissolved Solids	mg/L	24-hour composite	monthly	34
Sulfate	mg/L	24-hour composite	monthly	34
Chloride	mg/L	24-hour composite	monthly	34
Boron	mg/L	24-hour composite	monthly	34
Ammonia Nitrogen[41]	mg/L	24-hour composite	monthly	34
Nitrite nitrogen[41]	mg/L	24-hour composite	monthly	34
Nitrate plus nitrite as nitrogen[41]	mg/L	24-hour composite	monthly	34
Organic nitrogen[41]	mg/L	24-hour composite	monthly	34
Total kjeldahl nitrogen (TKN)[41]	mg/L	24-hour composite	monthly	34
Total nitrogen	mg/L	24-hour composite	monthly	34
Total phosphorus	mg/L	24-hour composite	monthly	34
Orthophosphate-P	mg/L	24-hour composite	monthly	34
Surfactants (MBAS)[43]	mg/L	24-hour composite	quarterly	34
Surfactants (CTAS)[43]	mg/L	24-hour composite	quarterly	34

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

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

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

[42] If the result of the weekly BOD analysis yields a value greater than the average monthly effluent limitation (AMEL), the frequency of analysis shall be increased to daily within one week of knowledge of the test result for at least 30 days and until compliance with the average weekly effluent limitation (AWEL) and AMEL BOD limits is demonstrated; after which the frequency shall revert to weekly.

[43] MBAS is Methylene blue active substances and CTAS is cobalt thiocyanate active substances.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Metho
Total hardness ($CaCO_3$)	mg/L	24-hour composite	monthly	[34]
Chronic toxicity	Pass or Fail, % Effect (TST)	24-hour composite	monthly[44]	[34]
Antimony	µg/L	24-hour composite	semiannually	[34]
Arsenic	µg/L	24-hour composite	semiannually	[34]
Cadmium	µg/L	24-hour composite	semiannually	[34]
Chromium III[45]	µg/L	calculated	semiannually	[34]
Chromium VI	µg/L	grab	semiannually	[34]
Total Chromium	µg/L	grab	semiannually	[34]
Copper	µg/L	24-hour composite	semiannually	[34]
Lead	µg/L	24-hour composite	monthly	[34]
Mercury	µg/L	24-hour composite	semiannually	[34]
Nickel	µg/L	24-hour composite	semiannually	[34]
Selenium	µg/L	24-hour composite	monthly	[34]
Silver	µg/L	24-hour composite	semiannually	[34]
Thallium	µg/L	24-hour composite	semiannually	[34]
Zinc	µg/L	24-hour composite	semiannually	[34]
Cyanide	µg/L	grab	semiannually	[34]
Bis(2-ethylhexyl)phthalate	µg/L	24-hour composite	semiannually	[34]
Total Trihalomethanes[46]	µg/L	grab/calculated sum	monthly	[34]
PCBs as aroclors[47]	µg/L	24-hour composite	annually	[34]
PCBs as congeners[48]	µg/L	24-hour composite	annually	[34]
Toxaphene	µg/L	24-hour composite	semiannually	[34]

[44] 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" with a "% 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."

[45] The results for Chromium III shall be calculated by subtracting the Chromium VI concentration from the Total Chromium concentration.

[46] Total Trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

[47] 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.

[48] PCBs as Congeners means the sum of 41 congeners when monitoring using USEPA proposed method 1668c. PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105,110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified. . PCBs as congeners shall be analyzed using method EPA 1668c for three years and may be discontinued for the remaining life of this Order if none of the PCB congeners are detected using method EPA 1668c. USEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR Part 136, Permittees should use for discharge monitoring reports/State monitoring reports (1) USEPA method 608 for monitoring data, reported as aroclor results, that will be used for assessing compliance with WQBELs, and (2) USEPA proposed method 1668c, with lower detection levels, for monitoring data, reported as 41 congener results, that will be used for informational purposes

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Metho
Fluoride	mg/L	24-hour composite	semiannually	34
Iron	µg/L	24-hour composite	semiannually	34
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 & uranium)[49]	pCi/L	24-hour composite	semiannually	49
2,3,7,8-TCDD[50]	pg/L	24-hour composite	semiannually	34
Chlorpyrifos[51]	µg/L	24-hour composite	annually	34
Diazinon[51]	µg/L	24-hour composite	annually	34
Perchlorate[52]	µg/L	24-hour composite	annually	52
1,4-Dioxane[52]	µg/L	24-hour composite	annually	52
1,2,3-Trichloropropane[52]	µg/L	24-hour composite	annually	52
Methyl tert-butyl-ether (MTBE)[52]	µg/L	24-hour composite	annually	52
Remaining EPA priority pollutants[53] excluding asbestos	µg/L	24-hour composite; grab for VOCs	semiannually	34

[49] 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.

[50] In accordance with the SIP, the Permittee shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-001, located upstream of the discharge point no. 002. The Permittee shall use the appropriate Toxicity Equivalence Factor (TEF) to determine Toxic Equivalence (TEQ). Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding Toxicity Equivalence Factor (TEF_i), (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

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

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

[52] Emerging chemicals include 1,4-dioxane (USEPA 8270B 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).

[53] 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.

C. Monitoring Location EFF-003

1. The Permittee shall monitor the discharge of tertiary-treated effluent at EFF-003 as follows. Monitoring for total residual chlorine, pH, and temperature are monitored at EFF-003X and are required only when there is flow through Discharge Point No. 003. Monitoring results for all parameters at EFF-003 shall be reported to CIWQS if there is flow to Discharge No. 003 during the reporting month. If more than one analytical test method is listed for a given parameter, the Permittee must select from the listed methods and corresponding Minimum Level, such that compliance with effluent limitations can be determined and/or future RPA may be conducted.

Table E-6. Effluent Monitoring EFF-003

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total waste flow	mgd	recorder	continuous[54]	[55]
Turbidity[56]	NTU	recorder	continuous[54] [57] [58]	[55]
Total residual chlorine	mg/L	grab/recorder	daily[59]	[55]
Total coliform[56]	MPN/100mL or CFU/100mL	grab	daily[60]	[55]
Fecal coliform[61]	MPN/100mL	grab	weekly	[55]

[54] Where continuous monitoring of a constituent is required, the following shall be reported:
Total waste flow – Total daily, monthly average, and peak daily flow (24-hour basis);
Turbidity – maximum daily value, total amount of time each day the turbidity exceeded five turbidity units, flow-proportioned average daily value. . A grab sample can be used to determine compliance with the 10 NTU limit. A flow-weighted 24-hour composite sample may be used in place of the recorder to determine the flow-proportioned average daily value.

[55] 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.

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

[57] Grab samples may be collected for turbidity at monitoring location EFF-003 to determine compliance with the 10 NTU limit.

[58] A flow-weighted 24-hour composite sample may be collected for turbidity at monitoring location EFF-003 in place of the recorder to determine the flow-proportioned average daily value.

[59] Daily grab samples shall be collected during peak flow at monitoring location EFF-003 Monday through Friday only, except for holidays. Analytical results of daily grab samples will be used to determine compliance with total residual chlorine effluent limitation at EFF-003X. Furthermore, additional monitoring requirements specified in section IV.E. shall be followed. Total residual chlorine shall be recorded continuously. The recorded data shall be maintained by the Permittee for at least five years. The Permittee shall extract the maximum daily peak, minimum daily peak, and average daily from the recorded media and shall be made available upon request of the Regional Water Board. The continuous monitoring data are not intended to be used for compliance determination purposes.

[60] Daily samples shall be collected Monday through Friday, except for holidays.

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
	or CFU/100mL			
E. coli[62]	MPN/100mL or CFU/100mL	grab	weekly	[55]
Temperature[63]	°F	grab	weekly	[55]
pH[63]	pH units	grab	weekly	[55]
Settleable solids	mL/L	grab	weekly	[55]
Total suspended solids (TSS)	mg/L	24-hour composite	weekly	[55]
BOD_5 20°C	mg/L	24-hour composite	weekly[64]	[55]
Oil and grease	mg/L	grab	quarterly	[55]
Dissolved oxygen	mg/L	grab	monthly	[55]
Total Dissolved Solids	mg/L	24-hour composite	monthly	[55]
Sulfate	mg/L	24-hour composite	monthly	[55]
Chloride	mg/L	24-hour composite	monthly	[55]
Boron	mg/L	24-hour composite	monthly	[55]
Ammonia Nitrogen[63]	mg/L	24-hour composite	monthly	[55]
Nitrite nitrogen[63]	mg/L	24-hour composite	monthly	[55]
Nitrate plus nitrite as nitrogen[63]	mg/L	24-hour composite	monthly	[55]
Organic nitrogen[63]	mg/L	24-hour composite	monthly	[55]
Total kjeldahl nitrogen (TKN)[63]	mg/L	24-hour composite	monthly	[55]
Total nitrogen	mg/L	24-hour composite	monthly	[55]
Total phosphorus	mg/L	24-hour composite	monthly	[55]
Orthophosphate-P	mg/L	24-hour composite	monthly	[55]
Surfactants (MBAS)[65]	mg/L	24-hour composite	quarterly	[55]
Surfactants (CTAS)[65]	mg/L	24-hour composite	quarterly	[55]
Total hardness ($CaCO_3$)	mg/L	24-hour composite	monthly	[55]

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

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

[64]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 AWEL and AMEL BOD limits is demonstrated; after which the frequency shall revert to weekly.

[65]MBAS is Methylene blue active substances and CTAS is cobalt thiocyanate active substances.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chronic toxicity	Pass or Fail, % Effect (TST)	24-hour composite	monthly[66]	[66]
Antimony	µg/L	24-hour composite	semiannually	[55]
Arsenic	µg/L	24-hour composite	semiannually	[55]
Cadmium	µg/L	24-hour composite	semiannually	[55]
Chromium III[67]	µg/L	calculated	semiannually	[55]
Chromium VI	µg/L	grab	semiannually	[55]
Total Chromium	µg/L	grab	semiannually	[55]
Copper	µg/L	24-hour composite	semiannually	[55]
Lead	µg/L	24-hour composite	monthly	[55]
Mercury	µg/L	24-hour composite	semiannually	[55]
Nickel	µg/L	24-hour composite	semiannually	[55]
Selenium	µg/L	24-hour composite	monthly	[55]
Silver	µg/L	24-hour composite	semiannually	[55]
Thallium	µg/L	24-hour composite	semiannually	[55]
Zinc	µg/L	24-hour composite	semiannually	[55]
Cyanide	µg/L	Grab	semiannually	[55]
Bis(2-ethylhexyl)phthalate	µg/L	24-hour composite	semiannually	[55]
Total Trihalomethanes[68]		Grab/calculated sum	monthly	[55]
PCBs as aroclors[69]	µg/L	24-hour composite	annually	[55]
PCBs as congeners[70]	µg/L	24-hour composite	annually	[55]
Fluoride	mg/L	24-hour composite	semiannually	[55]
Iron	µg/L	24-hour composite	semiannually	[55]

[66] 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

[67] The results for Chromium III shall be calculated by subtracting the Chromium VI concentration from the Total Chromium concentration.

[68] Total Trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

[69] 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.

[70] PCBs as Congeners means the sum of 41 congeners when monitoring using USEPA proposed method 1668c. PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105,110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified. PCBs as congeners shall be analyzed using method EPA 1668c for three years and may be discontinued for the remaining life of this Order if none of the PCB congeners are detected using method EPA 1668c. USEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR Part 136, Permittees should use for discharge monitoring reports/State monitoring reports (1) USEPA method 608 for monitoring data, reported as aroclor results, that will be used for assessing compliance with WQBELs, and (2) USEPA proposed method 1668c, with lower detection levels, for monitoring data, reported as 41 congener results, that will be used for informational purposes.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 & uranium)[71]	pCi/L	24-hour composite	semiannually	[71]
2,3,7,8-TCDD[72]	pg/L	24-hour composite	semiannually	[72]
Chlorpyrifos[73]	µg/L	24-hour composite	annually	[73]
Diazinon[73]	µg/L	24-hour composite	annually	[73]
Perchlorate[74]	µg/L	24-hour composite	annually	[74]
1,4-Dioxane[74]	µg/L	24-hour composite	annually	[74]
1,2,3-Trichloropropane[74]	µg/L	24-hour composite	annually	[74]
Methyl tert-butyl-ether (MTBE)[74]	µg/L	24-hour composite	annually	[74]
Remaining EPA priority pollutants[75] excluding asbestos	µg/L	24-hour composite; grab for VOCs	semiannually	[55]

D. Monitoring Locations EFF-004 and EFF-005

1. The Permittee shall monitor the discharge of tertiary-treated effluent at EFF-004 and EFF-005 as directed in this Order. Total residual chlorine, pH, and temperature are monitored at EFF-004X and EFF-005X and are required only when there is flow. Monitoring for all parameters at EFF-004 and EFF-005 is reportable to CIWQS if there is

[71] 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.

[72] In accordance with the SIP, the Permittee shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-003, located upstream of the discharge point no. 003. The Permittee shall use the appropriate Toxicity Equivalence Factor (TEF) to determine Toxic Equivalence (TEQ). Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding Toxicity Equivalence Factor (TEF_i), (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

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

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

[74] Emerging chemicals include 1,4-dioxane (USEPA 8270B 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).

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

flow during the reporting month. In lieu of duplicative monitoring, results of samples collected during the month at EFF-003 may be reported to CIWQS for EFF-004 and EFF-005, during months when there is discharge from EFF-004 and EFF-005. If more than one analytical test method is listed for a given parameter, the Permittee must select from the listed methods and corresponding Minimum Level, such that compliance with effluent limitations can be determined and/or future RPA may be conducted. Discharge from outfalls EEF-004 and EEF-005 cannot begin until DDW has approved a Title 22 Engineering Report and the WRR has been adopted by the Regional Water Board.

Table E-7. Effluent Monitoring EFF-004 and/or EFF-005

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total waste flow	mgd	recorder	continuous[76]	76,77
Turbidity[78]	NTU	recorder	continuous 79 80	55
Total residual chlorine	mg/L	grab	daily[81]	55
Total coliform[78]	MPN/100mL or CFU/100mL	grab	daily[82]	55
Fecal coliform[83]	MPN/100mL or CFU/100mL	grab	weekly	55

[76] Where continuous monitoring of a constituent is required, the following shall be reported:
Total waste flow – Total daily, monthly average, and peak daily flow (24-hour basis);
Turbidity – maximum daily value, total amount of time each day the turbidity exceeded five turbidity units, flow-proportioned average daily value.

[77] 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.

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

[79] Grab samples may be collected for turbidity at monitoring location EFF-004 and 005 to determine compliance with the 10 NTU limit.

[80] A flow-weighted 24-hour composite sample may be collected for turbidity at monitoring location EFF-004 and EFF-005 in place of the recorder to determine the flow-proportioned average daily value.

[81] Total residual chlorine cannot be monitored using a continuous recorder at Discharge Nos. 004 and 005and is only monitoring by a grab sample at these outfalls. These outfalls are at a remote location in a streambed several miles upstream of the plant. Equipment cannot be maintained there due to vandalism and storm flooding. Analytical results of daily grab samples will be used to determine compliance with total residual chlorine effluent limitation at EFF-004X and 005X

[82] Daily samples shall be collected Monday through Friday, except for holidays.

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
E. coli[84]	MPN/100mL or CFU/100mL	grab	weekly	[55]
Temperature[85]	°F	grab	weekly	[55]
pH[86]	pH units	grab	weekly	[55]
Settleable solids	mL/L	grab	weekly	[55]
Total suspended solids (TSS)	mg/L	24-hour composite	weekly	[55]
BOD_5 20°C	mg/L	24-hour composite	weekly[86]	[55]
Oil and grease	mg/L	grab	quarterly	[55]
Dissolved oxygen	mg/L	grab	monthly	[55]
Total Dissolved Solids	mg/L	24-hour composite	monthly	[55]
Sulfate	mg/L	24-hour composite	monthly	[55]
Chloride	mg/L	24-hour composite	monthly	[55]
Boron	mg/L	24-hour composite	monthly	[55]
Ammonia Nitrogen[85]	mg/L	24-hour composite	monthly	[55]
Nitrite nitrogen[85]	mg/L	24-hour composite	monthly	[55]
Nitrate plus nitrite as nitrogen[85]	mg/L	24-hour composite	monthly	[55]
Organic nitrogen[85]	mg/L	24-hour composite	monthly	[55]
Total kjeldahl nitrogen (TKN)[85]	mg/L	24-hour composite	monthly	[55]
Total nitrogen	mg/L	24-hour composite	monthly	[55]
Total phosphorus	mg/L	24-hour composite	monthly	[55]
Orthophosphate-P	mg/L	24-hour composite	monthly	[55]
Surfactants (MBAS)[87]	mg/L	24-hour composite	quarterly	[55]
Surfactants (CTAS)[87]	mg/L	24-hour composite	quarterly	[55]
Total hardness ($CaCO_3$)	mg/L	24-hour composite	monthly	[55]
Chronic toxicity	Pass or Fail, % Effect (TST)	24-hour composite	monthly[88]	[55]

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

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

[86] 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 AWEL and AMEL BOD limits is demonstrated; after which the frequency shall revert to weekly.

[87] MBAS is Methylene blue active substances and CTAS is cobalt thiocyanate active substances.

[88] 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."

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Antimony	µg/L	24-hour composite	semiannually	[55]
Arsenic	µg/L	24-hour composite	monthly	[55]
Cadmium	µg/L	24-hour composite	semiannually	[55]
Chromium III[89]	µg/L	calculated	semiannually	[55]
Chromium VI	µg/L	grab	semiannually	[55]
Total Chromium	µg/L	grab	semiannually	[55]
Copper	µg/L	24-hour composite	monthly	[55]
Lead	µg/L	24-hour composite	monthly	[55]
Mercury	µg/L	24-hour composite	semiannually	[55]
Nickel	µg/L	24-hour composite	semiannually	[55]
Selenium	µg/L	24-hour composite	monthly	[55]
Silver	µg/L	24-hour composite	semiannually	[55]
Thallium	µg/L	24-hour composite	semiannually	[55]
Zinc	µg/L	24-hour composite	semiannually	[55]
Cyanide	µg/L	Grab	semiannually	[55]
Bis(2-ethylhexyl)phthalate	µg/L	24-hour composite	semiannually	[55]
Total Trihalomethanes[90]		Grab/calculated sum	monthly	[55]
PCBs as aroclors[91]	µg/L	24-hour composite	annually	[55]
PCBs as congeners[92]	µg/L	24-hour composite	annually	[55]
Fluoride	mg/L	24-hour composite	semiannually	[55]
Iron	µg/L	24-hour composite	semiannually	[55]
Radioactivity (Including gross alpha, gross beta, combined radium-226 and radium-228, tritium, strontium-90 & uranium)[93]	pCi/L	24-hour composite	semiannually	[93]

[89] The results for Chromium III shall be calculated by subtracting the Chromium VI concentration from the Total Chromium concentration.

[90] Total Trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

[91] 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.

[92] PCBs as Congeners means the sum of 41 congeners when monitoring using USEPA proposed method 1668c. PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105,110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified. PCBs as congeners shall be analyzed using method EPA 1668c for three years and may be discontinued for the remaining life of this Order if none of the PCB congeners are detected using method EPA 1668cUSEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR Part 136, Permittees should use for discharge monitoring reports/State monitoring reports (1) USEPA method 608 for monitoring data, reported as aroclor results, that will be used for assessing compliance with WQBELs, and (2) USEPA proposed method 1668c, with lower detection levels, for monitoring data, reported as 41 congener results, that will be used for informational purposes

[93] 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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
2,3,7,8-TCDD[94]	pg/L	24-hour composite	semiannually	[72]
Chlorpyrifos[95]	µg/L	24-hour composite	annually	[73]
Diazinon[95]	µg/L	24-hour composite	annually	[73]
Perchlorate[96]	µg/L	24-hour composite	annually	[74]
1,4-Dioxane[96]	µg/L	24-hour composite	annually	[74]
1,2,3-Trichloropropane[96]	µg/L	24-hour composite	annually	[74]
Methyl tert-butyl-ether (MTBE)[96]	µg/L	24-hour composite	annually	[74]
Remaining EPA priority pollutants[97] excluding asbestos	µg/L	24-hour composite; grab for VOCs	semiannually	[55]

E. Total Residual Chlorine Additional Monitoring

Continuous monitoring of total residual chlorine at the current location shall serve as an internal trigger for the increased grab sampling at effluent sampling points if either of the following occurs, except as noted in item 3:

1. Total residual chlorine concentration excursions of up to 0.3 mg/L lasting greater than 15 minutes; or
2. Total residual chlorine concentration peaks in excess of 0.3 mg/L lasting greater than 1 minute.

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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.

[94] In accordance with the SIP, the Permittee shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Station RSW-010, located upstream of the discharge point no. 004 and 005. The Permittee shall use the appropriate Toxicity Equivalence Factor (TEF) to determine Toxic Equivalence (TEQ). Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding Toxicity Equivalence Factor (TEF_i), (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

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

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

[96] Emerging chemicals include 1,4-dioxane (USEPA 8270B 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).

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

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

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Chronic Toxicity

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

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

2. Sample Volume and Holding Time

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

3. Chronic Freshwater Species and Test Methods

If effluent samples are collected from outfalls discharging to receiving waters with salinity <1 ppt, the Permittee shall conduct the following chronic toxicity tests on effluent samples at the in-stream waste concentration for the discharge in accordance with species and test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R-02/013, 2002; Table IA, 40 CFR Part 136). In no case shall these species be substituted with another test species unless written authorization from the Executive Officer is received.

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

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

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

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

The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 and Appendix B, Table B-1. The null hypothesis (Ho) for the TST statistical approach is: Mean discharge IWC response ≤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.

a. The Median Monthly Effluent Limitation (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."

b. If the effluent toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method, *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (U.S. EPA 2002, EPA-821-R-02-013) (see Table E-8, below), then the Permittee must re-sample and re-test within 14 days.

c. 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.

d. Monthly reference toxicant testing is sufficient. All reference toxicant test results should be reviewed and reported using the EC25[5].

e. The Permittee shall perform toxicity tests on final effluent samples. Chlorine in the final effluent sample may be removed prior to conducting toxicity tests in order to simulate the dechlorination process at the facility. However, 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 rational is explained in the Fact Sheet (Attachment F).

Table E-8. USEPA Test Methods and Test Acceptability Criteria

Species & USEPA Test Method Number	Test Acceptability Criteria (TAC)
Fathead Minnow, *Pimephales promelas*, Larval Survival and Growth Test Method 1000.0 (Table 1 of the test method, above).	80% or greater survival in controls; average dry weight per surviving organism in control chambers equals or exceeds 0.25 mg. (required)
Daphnid, *Ceriodaphnia dubia*, Survival and Reproduction Test Method 1002.0 (Table 3 of the test method, above).	80% or greater survival of all control organisms and an average of 15 or more young per surviving female in the control solutions. 60% of surviving control females must produce three broods.(required)
Green Alga, *Selenastrum capricornutum*, Growth Toxicity Test Method 1003.0 (Table 3 of the test 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)

6. **Preparation of an Initial Investigation TRE Work Plan**

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

a. A description of the investigation and evaluation techniques that will be used to identify potential causes and sources of toxicity, effluent variability, and treatment system efficiency.

b. A description of the Facility's methods of maximizing in-house treatment efficiency and good housekeeping practices, and a list of all chemicals used in the operation of the Facility; and,

[5] 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.

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 of only one day in a calendar month, the Maximum Daily single result shall be used to determine if accelerated testing needs to be conducted.

Once the Permittee becomes aware of this result, the Permittee shall implement an accelerated monitoring schedule within 48 hours for the *Ceriodaphnia dubia* test, and within 5 calendar days for both the *Pimephales promelas* and *Selenastrum capricornutum* tests. However, if the sample is contracted out to a commercial laboratory, the Permittee shall ensure that the first of four accelerated monitoring tests is initiated within seven calendar days of the Permittee becoming aware of the result. The accelerated monitoring schedule shall consist of four toxicity tests (including the discharge 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. **Toxicity Reduction Evaluation (TRE) Process**

During the TRE Process, monthly effluent monitoring shall resume and TST results ("Pass" or "Fail", "Percent Effect") for chronic toxicity tests shall be reported as effluent compliance monitoring results for the chronic toxicity MDEL and MMEL.

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

a. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the chronic toxicity IWC for the discharge. All toxicity test results (whether identified as valid or otherwise) conducted during the calendar month shall be reported on the SMR due date specified in Table E-11.

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

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

d. TRE/TIE results. The Executive Officer shall be notified no later than 30 days from completion of each aspect of TRE/TIE analyses. Prior to the completion of the final TIE/TRE report, the Permittee shall provide status updates in the monthly monitoring reports, indicating which TIE/TRE steps are underway and which steps have been completed.

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

f. Graphical plots clearly showing the laboratory's performance for the reference toxicant for the previous 20 tests and the laboratory's performance for the control

mean, control standard deviation, and control coefficient of variation for the previous 12-month period.

g. Any additional QA/QC documentation or any additional chronic toxicity-related information, upon written request from the Regional Water Board Chief Deputy Executive Officer or 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. However, chlorine may be removed from the San Jose Creek WRP effluent bioassay samples in the laboratory because often the recycled water demand is high and there is no effluent water available for sampling and the sampling locations and logistics are not feasible.

VI. LAND DISCHARGE MONITORING REQUIREMENTS– Not Applicable

VII. RECYCLING MONITORING REQUIREMENTS -- Not Applicable

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations RSW-001 (C-1), RSW-002 (C-2), RSW-003 (R-10), RSW-004 (R-11), RSW-005 (R-2), RSW-006 (R-12), RSW-007 (R-13), RSW-008, RSW-009, RSW-010, and RSW-011.

1. The Permittee shall monitor receiving water at RSW-001 (C-1), RSW-002 (C-2), RSW-003 (R-10), RSW-004 (R-11), RSW-005 (R-2), RSW-006 (R-12), RSW-007 (R-13), RSW-008[98], RSW-009, RSW-010[99], and RSW-011 as follows. Monitoring requirements at RSW-006 (R-12) or RSW-007 (R-13), are applicable when reclaimed water is discharged through Discharge Point Nos. 001A or 001B. Temperature and pH monitored at RSW-002, RSW-004, RSW-005, RSW-006, RSW-007, RSW-009 and RSW-011 are used to calculate the receiving water ammonia water quality objectives. Water shall be sampled at each location when present. However, monitoring does not need to be conducted at RSW-008, RSW-009, RSW-010, and RSW-011 if there is no discharge.

Table E-9. Receiving Water Monitoring Requirements at RSW-001 (C-1), RSW-002 (C-2), RSW-003 (R-10), RSW-004 (R-11), RSW-005 (R-2), RSW-006 (R-12), RSW-007 (R-13), RSW-008, RSW-009, RSW-010, and RSW-011.

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Total Flow[99]	cfs	Calculation	monthly	--
Turbidity	NTU	Grab	monthly	[100]
Temperature[101]	°F	Grab	monthly	[101]
pH[102]	pH units	Grab	monthly	[101]
E.Coli	MPN/100ml or CFU/100ml	Grab	monthly	[101]
Total residual chlorine	mg/L	Grab	monthly	[101]
Settleable Solids	mL/L	Grab	monthly	[101]
Total Suspended Solids	mg/L	Grab	monthly	[101]
BOD_5 20°C	mg/L	Grab	monthly	[101]
Oil and grease	mg/L	Grab	quarterly	[101]
Dissolved oxygen	mg/L	Grab	monthly	[101]
Total Hardness	mg/L	Grab	monthly	[101]

[98] Three samples are to be collected upstream of EFF-005 if there is discharge from the outfalls during the permit term, for background data in future RPA calculation. If sampling cannot take place at RSW-008 or RSW-010, the Permittee shall collect background information from another appropriate sampling location and identify this location in the subsequent annual report.

[99] When conditions at receiving water stations RSW-001, RSW-002, RSW-003, RSW-004, RSW-006, RSW-007, RSW-008, RSW-009, RSW-010, and RSW-011 prevent accurate measurement of the flow, the flow may be qualitatively estimated and reported.

[100] 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 MLs specified in Attachment 4 of the SIP, the analytical method with the lowest ML must be selected.

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

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
($CaCO_3$)				
Conductivity	µmho/cm	Grab	monthly	[101]
Total Dissolved Solids	mg/L	Grab	monthly	[101]
Sulfate	mg/L	Grab	monthly	[101]
Chloride	mg/L	Grab	monthly	[101]
Boron	mg/L	Grab	monthly	[101]
Chronic toxicity[102]	Pass or Fail, % Effect (TST)	Grab	quarterly	[101]
Nitrate plus nitrite as nitrogen[102]	mg/L	Grab	monthly	[101]
Nitrite nitrogen[102]	mg/L	Grab	monthly	[101]
Ammonia nitrogen[102]	mg/L	Grab	monthly	[101]
Organic nitrogen[102]	mg/L	Grab	monthly	[101]
Total kjeldahl nitrogen (TKN)[102]	mg/L	Grab	monthly	[101]
Total nitrogen	mg/L	Calculation	monthly	[101]
Total phosphorus	mg/L	Grab	monthly	[101]
Orthophosphate-p	mg/L	Grab	monthly	[101]
Surfactants (MBAS)	mg/L	Grab	quarterly	[101]
Surfactants (CTAS)	mg/L	Grab	quarterly	[101]
Selenium	µg/L	Grab	monthly	[101]
PCBs as aroclors[103]	µg/L	Grab	annually	[101]
PCBs as congeners[104]	µg/L	Grab	annually	[101]

[102] 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 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" with a "% 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.

[103] 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.

[104] PCBs as congeners means the sum of 41 congeners when monitoring using USEPA proposed method 1668c. PCB-18, 28, 37, 44, 49, 52, 66, 70, 74, 77, 81, 87, 99, 101, 105,110, 114, 118, 119, 123, 126, 128, 138, 149, 151, 153, 156, 157, 158, 167, 168, 169, 170, 177, 180, 183, 187, 189, 194, 201, and 206 shall be individually quantified. PCBs as congeners shall be analyzed using method EPA 1668c for three years and may be discontinued for the remaining life of this Order if none of the PCB congeners are detected using method EPA 1668c. USEPA recommends that until USEPA proposed method 1668c for PCBs is incorporated into 40 CFR Part 136, Permittees should use for discharge monitoring reports/State monitoring reports (1) USEPA method 608 for monitoring data, reported as aroclor results, that will be used for assessing compliance with WQBELs, and (2) USEPA proposed method 1668c, with lower detection levels, for monitoring data, reported as 41 congener results, that will be used for informational purposes

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Chromium III	µg/L	Calculation	semiannually	101
Chromium VI	µg/L	Grab	semiannually	101
Lead	µg/L	Grab	monthly	101
Fluoride	mg/L	Grab	semiannually	101
Barium	µg/L	Grab	semiannually	101
Methoxychlor	µg/L	Grab	semiannually	101
Chlorpyrifos[105]	µg/L	Grab	semiannually	101
Diazinon[106]	µg/L	Grab	semiannually	101
2,3,7,8-TCDD[106]	pg/L	Grab	semiannually	101
1,4-Dioxane[107]	µg/L	Grab	annually	96
Perchlorate[108]	µg/L	Grab	annually	96
1,2,3-Trichloropropane[108]	µg/L	Grab	annually	96
Methyl tert-butyl-ether (MTBE)[108]	µg/L	Grab	annually	96
Remaining EPA priority pollutants[108] excluding asbestos	µg/L	Grab	semiannually	101

2. Receiving water samples shall not be taken during or within 48-hours following the flow of rainwater runoff into the San Gabriel River. Sampling may be rescheduled within the same calendar month, at receiving water stations, if weather and/or flow conditions would endanger personnel collecting receiving water samples. The monthly monitoring report shall note such occasions.

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

[106] In accordance with the SIP, the Permittee shall conduct effluent monitoring for the seventeen 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD or dioxin) congeners in the effluent and in the receiving water Stations RSW-001 and RSW-003. The Permittee shall use the appropriate TEF to determine TEQ. Where TEQ equals the product between each of the 17 individual congeners' (i) concentration analytical result (C_i) and their corresponding TEF_i., (i.e., $TEQ_i = C_i \times TEF_i$). Compliance with the dioxin limitation shall be determined by the summation of the seventeen individual TEQs, or the following equation:

$$\text{Dioxinconcentraton} = \sum_{1}^{17}(TEQ_i) = \sum_{1}^{17}(C_i)(TEF_i)$$

[107] Emerging chemicals include 1,4-dioxane (USEPA 8270B 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).

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

B. TMDL Stream Flow and Rainfall Monitoring

1. The Permittee shall report the maximum daily flow at the San Gabriel River at United States Geological Survey (USGS) station 11087020. This station is RSW-004D for the purpose of this permit. This information is necessary to determine the wet-weather condition of the river as defined by the Total Maximum Daily Loads for Metals and Selenium for the San Gabriel River and Impaired Tributaries as promulgated by USEPA Region IX on March 26, 2007 (*San Gabriel River Metals TMDL)*. If the gauging station is not operational, an estimated maximum daily flow may be submitted.

Table E-10. TMDL Stream Flow and Rainfall Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Maximum Daily Flow	cubic feet per second(cfs)	recorder	daily	N/A

IX. OTHER MONITORING REQUIREMENTS

A. Watershed Monitoring

1. The goals of the Watershed-wide Monitoring Program for the San Gabriel River Watershed are to determine compliance with receiving water limits; monitor trends in surface water quality; ensure protection of beneficial uses; provide data for modeling contaminants of concern; characterize water quality including seasonal variation of surface waters within the watershed; assess the health of the biological community; and determine mixing dynamics of effluent and receiving waters in the estuary.
2. To achieve the goals of the Watershed-wide Monitoring Program, the Permittee shall undertake the responsibilities delineated under an approved watershed-wide monitoring plan in the implementation of the Watershed-wide Monitoring Program for the San Gabriel River, which was approved by the Regional Water Board on September 25, 2006.
3. In coordination with the Los Angeles County Public Works and other interested stakeholders in the San Gabriel River Watershed, the Permittee shall conduct instream bioassessment monitoring once a year, during the spring/summer period (unless an alternate sampling period is approved by the Executive Officer) and include an analysis of the community structure of the instream macroinvertebrate assemblages, the community structure of the instream algal assemblages (benthic diatoms and soft-bodied algae), chlorophyll and biomass for instream algae, and physical habitat assessment at the random monitoring stations designated by the San Gabriel River Watershed Monitoring Program. Over time, bioassessment monitoring will provide a measure of the physical condition of the water body and the integrity of its biological communities.

    a. The bioassessment program shall include an analysis of the community structure of the instream macroinvertebrate and algal assemblages, algal biomass, and physical habitat assessment at the bioassessment monitoring stations RSW-001A, RSW-004A, and RSW-005.

    This program shall be implemented by appropriately trained staff. Alternatively, a professional subcontractor qualified to conduct bioassessments may be selected to perform the bioassessment work for the Permittee. Analyses of the results of the bioassessment monitoring program, along with photographs of the monitoring site locations taken during sample collection, shall be submitted in the corresponding

annual report. If another stakeholder, or interested party in the watershed subcontracts a qualified professional to conduct bioassessment monitoring during the same season and at the same location as specified in the MRP, then the Permittee may, in lieu of duplicative sampling, submit the data, a report interpreting the data, photographs of the site, and related QA/QC documentation in the corresponding annual report.

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

c. Field sampling must conform to the SOP established for the California Stream Bioassessment Procedure (CSBP) or more recently established sampling protocols, such as used by the Surface Water Ambient Monitoring Program (SWAMP). Field crews shall be trained on aspects of the protocol and appropriate safety issues. All field data and sample Chain of Custody (COC) forms must be examined for completion and gross errors. Field inspections shall be planned with random visits and shall be performed by the Permittee or an independent auditor. These visits shall report on all aspects of the field procedure with corrective action occurring immediately.

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

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

B. Tertiary Filter Treatment Bypasses

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

2. The Permittee shall maintain chronological log of tertiary filter treatment process bypasses, to include the following:

   a. Date and time of bypass start and end;

   b. Total duration time; and,

c. Estimated total volume bypassed

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

   The Permittee shall submit a written report to the Regional Water Board, according to the corresponding monthly self-monitoring report schedule. The report shall include, at a minimum, the information from the chronological log. Results from the daily effluent monitoring, required by B.1. above, shall be verbally reported to the Regional Water Board as the results become available and submitted as part of the monthly SMR.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Permittee shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. If there is no discharge during any reporting period, the report shall so state.
3. Each monitoring report shall contain a separate section titled "Summary of Non-Compliance" which discusses the compliance record and the corrective actions taken or planned that may be needed to bring the discharge into full compliance with waste discharge requirements. This section shall clearly list all non-compliance with discharge requirements, as well as all excursions of effluent limitations.
4. The Permittee shall inform the Regional Water Board well in advance of any proposed construction activity that could potentially affect compliance with applicable requirements.
5. Each monthly monitoring report shall include a determination of compliance with receiving water ammonia water quality objectives at RSW-002, RSW-004, RSW-005, RSW-006, RSW-007, RSW-009, and RSW-011. Any exceedances of an ammonia water quality objective shall be noted in the "Summary of Non-Compliance" section of the monitoring report.

B. Self-Monitoring Reports (SMRs)

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

Table E-11. 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	1st day of calendar month through last day of calendar month	By the 15th day of the third month after the month of sampling
Quarterly	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	June 15 September 15 December 15 March 15
Semiannually	Closest of January 1 or July 1 following (or on) permit effective date	January 1 through June 30 July 1 through December 31	September 15 March 15
Annually	January 1 following (or on) permit effective date	January 1 through December 31	April 15

4. **Reporting Protocols.** The Permittee shall report with each sample result the applicable Reporting Level (RL) and the current Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. Part 136.

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

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

   b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

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

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

   d. Permittees are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to

calibration standards) is the lowest calibration standard. At no time is the Permittee to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

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

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

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

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

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

   a. The Permittee shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations. The Permittee is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Permittee shall electronically submit the data in a tabular format as an attachment.

   b. The Permittee shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify 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)

The Permittee shall submit DMRs electronically via CIWQS.

D. Other Reports

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

2. **Annual Summary Report**

   By April 15 of each year, the Permittee shall submit an annual report containing a discussion of the previous year's influent/effluent analytical results and receiving water monitoring data. The annual report shall contain an overview of any plans for upgrades to the treatment plant's collection system, the treatment processes, or the outfall system. The Permittee shall submit annual report to the Regional Water Board in accordance with the requirements described in subsection X.B.7 above.

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

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

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

   c. The concentration of the pollutant(s);

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

   e. The date and time of sample collection.

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

4. The Regional Water Board requires the Permittee to file with the Regional Water Board, within 90 days after the effective date of this Order, a technical report on 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

CONTENTS

TABLES

ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the Regional Water Board incorporates this Fact Sheet as findings of the Regional Water Board supporting the issuance of this Order. This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for Permittees in California. Only those sections or subsections of this Order that are specifically identified as "not applicable" have been determined not to apply to this Permittee. Sections or subsections of this Order not specifically identified as "not applicable" are fully applicable to this Permittee.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	4B190107020
Permittee	Joint Outfall System
Name of Facility	San Jose Creek Water Reclamation Plant
Facility Address	1965 South Workman Mill Road
	Whittier, CA 90601
	Los Angeles County
Facility Contact, Title and Phone	Ann Heil, Supervising Engineer, (562) 908-4288 Ext. 2803
Authorized Person to Sign and Submit Reports	Ann Heil, Supervising Engineer, (562) 908-4288 Ext. 2803
Mailing Address	1955 Workman Mill Road, Whittier, CA 90601
Billing Address	Same as above
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Y
Recycling Requirements	Producer
Facility Permitted Flow	100 million gallons per day
Facility Design Flow	100 million gallons per day (62.5 East and 37.5 West)
Watershed	San Gabriel River Watershed
Receiving Water	San Gabriel River and San Jose Creek
Receiving Water Type	Inland surface water

A. The Joint Outfall System (ownership and operation of the Joint Outfall System is proportionally shared among the signatory parties to the amended Joint Outfall Agreement effective July 1, 1995, which parties include County Sanitation Districts of Los Angeles County Nos. 1, 2, 3, 5, 8, 15, 16, 17, 18, 19, 21, 22, 23, 28, 29, and 34, and South Bay Cities Sanitation District of Los Angeles County), formerly referred to as the County Sanitation Districts of Los Angeles County and hereinafter Permittee or Districts, is the owner and operator of the San Jose Creek Water Reclamation Facility,[1] a Publicly-Owned Treatment Works. For the purposes of this Order, references to the "discharger" or "permittee" in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Permittee herein.

B. The Facility discharges wastewater to San Gabriel River and San Jose Creek, waters of the United States, and was previously regulated by Order No. R4-2009-0078, which was adopted on June 4, 2009 and expired on May 10, 2014. The terms and conditions of the previous NPDES order were automatically continued and remained in effect until new WDRs and NPDES permit were adopted pursuant to this Order. Attachment B provides maps of the area around the Facility. Attachments C provides flow schematics of the Facility.

Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a watercourse, the 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 Water Code section 1211.

C. The Permittee filed a report of waste discharge (ROWD) and submitted an application for reissuance of its Waste Discharge Requirements (WDRs) and NPDES permit on November 5, 2013. Supplemental information was requested on December 5, 2013, and received on January 29, 2014. A further revision to the ROWD was received on July 10, 2014. The revision requested the addition of two Discharge Points Nos. 004 and 005 to the San Gabriel River Reach 3 to provide advanced treated water to the San Gabriel Indirect Reused Replenishment Project proposed for construction in 2015. A site visit was conducted on January 8, 2015 to observe operations and collect additional data to confirm permit limitations and conditions. The application was deemed complete on May 20, 2014, so the NPDES permit was administratively extended.

II. FACILITY DESCRIPTION

A. Description of Wastewater and Biosolids Treatment and Controls

1. The Permittee owns and operates the San Jose Creek WRP, a tertiary wastewater treatment plant located at 1965 South Workman Mill Road, Whittier, California. Attachment B-2 shows the location of the Facility. The San Jose Creek WRP currently receives wastewater from the Cities of Arcadia, Azusa, Baldwin Park, Bradbury, Industry, Covina, Diamond Bar, Duarte, El Monte, Glendora, Irwindale, La Puente, La Verne, Monrovia, Pasadena, Pomona, Rosemead, San Dimas, San Gabriel, San Marino, Sierra Madre, Temple City, Walnut, West Covina, as well as some unincorporated areas. The wastewater is a mixture of domestic and industrial wastewater that is pre-treated pursuant to 40 CFR

[1] The San Jose Creek Water Reclamation Plant (San Jose Creek WRP) consists of East and West Water Reclamation Plants, which have two independently operated units. As reported in the ROWD, the Plant has a combined design capacity of 100 million gallons per day (mgd), of which San Jose Creek East and West WRPs have individual design capacities of 62.5 MGD and 37.5 MGD respectively.

Part 403. San Jose Creek WRP, including the East and West plants, has a design capacity of 100 mgd and serves an estimated population of 992,000 people.

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

2. Sections of the San Gabriel River and San Jose Creek, near the San Jose Creek WRP discharge points, are designated with the beneficial use of groundwater recharge (GWR). Surface water from the San Gabriel River and San Jose Creek enters the Main San Gabriel Valley, the Central Los Angeles Coastal Plain, and the San Gabriel Valley and Puente Groundwater Basins. Since ground water from these basins is used to provide drinking water to over one million people, Title 22-based limits are needed to protect the drinking water supply where there is a reasonable potential for the contaminant to be present in the discharge at concentrations which exceed drinking water criteria. By limiting the contaminants in the San Jose Creek WRP discharges, the amount of pollutants entering the groundwater basins are correspondingly reduced.

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

4. Treatment at the Facility consists of primary sedimentation, activated sludge biological treatment with nitrification-denitrification (NDN) secondary sedimentation with coagulation, inert media filtration, sequential chlorination, and dechlorination.

5. Gaseous chlorine is used as a disinfectant at the Facility. The disinfecting agent is added to the treated effluent prior to the filters to destroy bacteria, pathogens and viruses, and to minimize algal growth in the filters. Additional disinfectant may be dosed prior to the serpentine chlorine contact chamber. Prior to discharge, sulfur dioxide is added to the treated effluent to remove residual chlorine. Also, at this point, is a backup dechlorination system that uses sodium bisulfite. Treated wastewater discharged to San Gabriel River and San Jose Creek is dechlorinated. The existing chlorine and sulfur dioxide disinfection, chlorination and dechlorination are expected to be replaced with sodium hypochlorite and sodium bisulfite facilities to reduce health and safety risks to the public.

6. The Permittee constructed a biological nutrient removal system with nitrogen de-nitrification process (NDN) in order to achieve compliance with the ammonia Basin Plan objectives. The system was completed and has been in operation since June 2003.

7. No facilities are provided for solids processing at the plant. Sewage solids separated from the wastewater are returned to the trunk sewer for conveyance to JWPCP for treatment and disposal occurs, under Order No. R4-2011-0151 (NPDES No. CA0053813. Attachments C1 and C2 are schematics of the San Jose Creek WRP wastewater flow.)

B. Discharge Points and Receiving Waters

The Facility discharges tertiary-treated wastewater via four Discharge Point Nos. (001, 001A, 001B, and 003) to the San Gabriel River, above the Estuary (Figure B-1). Tertiary-treated effluent is also discharged via one discharge point (No. 002) to San Jose Creek, a tributary of the San Gabriel River (Figure B-2). Two new Discharge Points Nos. 004 and 005 are also proposed for discharge into the San Gabriel River upstream from the Facility in the vicinity of the Santa Fe dam. All of the receiving waters are located within the San Gabriel River Watershed and are shown on Figure B-3. Existing and proposed points of discharge are as follows:

Discharge Point No. 001: Existing discharge to San Gabriel River from both the East and West San Jose Creek WRPs (approximate coordinates: Latitude 33.93056 N and Longitude -118.107778 W). Discharge Point No. 001 is the primary discharge point and is located approximately eight miles south of the plant, north of Firestone Boulevard. From this point, treated effluent flows directly into a lined, low flow channel (San Gabriel River) and travels about 9 miles prior to reaching the estuary. It is located in Reach 2 of the San Gabriel River as defined in the Basin Plan, approximately 940 feet upstream of the division between Reach 1 and Reach 2. However, the *Total Maximum Daily Load for Metals and Selenium in the San Gabriel River (SGR Metals TMDL)* considers Discharge Point No. 001 to be in Reach 1 of the San Gabriel River. For the purposes of this Order, Discharge Point No. 001 is considered to lie in Reach 1. TMDL implementation guidance makes this assumption, a concrete apron at the outfall in Reach 2 ensures all discharge is to Reach 1, and water quality objectives and beneficial uses are judged to be fully protected at and downstream from the outfall into Reach 1.

The same outfall pipe also delivers reclaimed water for groundwater recharge under a separate permit. The turnout used to divert reclaimed water to the San Gabriel River Spreading Grounds is located next to Discharge Point No. 001A about half way between the treatment plants and Discharge Point No. 001. This turnout is not a NPDES Discharge Point and water quality is not measured by the Permittee at the turnout.

Attachment B-3 shows the following discharge points.

Discharge Point No. 001A Existing discharge to San Gabriel River from both the East and West San Jose Creek WRPs (approximate coordinates; Latitude 33.994167 N and Longitude -118.073333 W). Treated effluent from Discharge Point No. 001A is allowed to recharge groundwater underneath the unlined San Gabriel River, when the headworks of the spreading grounds are unavailable due to maintenance or other constraints. It is located in Reach 2 of the San Gabriel River.

Discharge Point No. 001B Existing discharge to San Gabriel River from both the East and West San Jose Creek WRPs (approximate coordinates: Latitude 33.969723 N and Longitude -118.088612 W). Treated effluent from Discharge Point No.001B increases the groundwater recharge in the vicinity through the unlined San Gabriel River. Discharge Point No.001B (nearby Rubber Dam No. 4) is located at the San Gabriel River bank, approximately 1475 feet upstream of Slauson Avenue. It can discharge into Reach 2 of the San Gabriel River, but did not operate between January 1, 2009 and September 30, 2013.

Discharge Point No. 002: Existing discharge to San Jose Creek from the San Jose Creek East WRP (approximate coordinates: Latitude 34.035458 N and Longitude -118.021054W). Treated effluent from Discharge Point No. 002 is allowed to recharge groundwater and is conveyed via various channels, the San Gabriel River and diversion structures to either the Rio Hondo Spreading Grounds or the San Gabriel River Spreading Grounds. San Jose Creek is unlined from the discharge point to the San Gabriel River.

Discharge Point No. 003: Existing discharge to the unlined San Gabriel River from the San Jose Creek West WRP (approximate coordinates: Latitude 34.036076 N and Longitude -118.030765 W). Treated effluent from Discharge No. 003 is allowed to recharge groundwater and is conveyed via various channels and diversion structures to either the Rio Hondo Spreading Grounds or the San Gabriel River Spreading Grounds. It is located in Reach 3 of the San Gabriel River.

Discharge Point Nos. 003 and 002 may contribute flow to the Zone 1 ditch which connects the San Gabriel River to Whittier Narrows Dam and the Rio Hondo spreading grounds. The facility has the ability to divert flow to EFF-004 and EFF-005.

Discharge Point No. 004: Proposed new discharge to the unlined Reach 4 of the San Gabriel River below Santa Fe Dam from the San Jose Creek West WRP(approximate coordinates: Latitude 34.111125 N and Longitude -117.971036 W). Detailed information on this outfall will be included in the Title 22 Engineering Report and Water Recycling Requirements (WRR) to be prepared for the Upper San Gabriel Valley Municipal Water District Indirect Reuse and Replenishment Project (IRRP). Before the SGR Metals TMDL was issued in 2007, Discharge Point Nos. 004 and 005 were in Reach 3 of the San Gabriel River. References in regulatory documents to Reach 3, including TMDLs which precede that modification, will continue to apply.

Discharge Point No. 005: Proposed new discharge to the unlined Reach 5 of the San Gabriel River above Santa Fe Dam from the San Jose Creek West WRP (approximate coordinates: Latitude 34.131603 N and Longitude -117.950228). Detailed information on this outfall will be included in the Title 22 Engineering Report and WRR to be prepared for the IRRP.

During dry weather (May 1 – October 31), the primary sources of water flow in San Gabriel River, downstream of the discharge outfalls, are the San Jose Creek WRP effluent and other NPDES-permitted discharges, including urban runoff conveyed through the municipal separate storm sewer systems (MS4). Storm water and dry weather urban runoff from MS4 are regulated under an NPDES permit, Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges within the County of Los Angeles (LA Municipal Permit), NPDES Permit No. CAS004001.

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

The San Gabriel River and San Jose Creek are unlined near the points of discharge, except at Discharge Point No. 001. Groundwater recharge occurs, both incidentally and through separate WRRs, in these unlined areas of the San Gabriel River where the underlying sediments are highly transmissive to water and pollutants. The Water Replenishment District of Southern California recharges the Rio Hondo and San Gabriel Spreading Grounds, located in the Montebello Forebay, with water purchased from JOS's Whittier Narrows, Pomona, and

San Jose Creek WRPs, under WRRs Order No. 91-100, adopted by the Board on September 9, 1991. The depth to groundwater is approximately 50 feet below ground surface in the vicinity of the receiving water, San Jose Creek and San Gabriel River, and near Discharge Point Nos.002 and 003. Figure B-4 shows the depth to groundwater near San Jose Creek WRP.

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

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

The effluent at Discharge Points Nos. 001, 001A, 001B comes from the same pipeline, which may contain different proportions of waste treated at San Jose Creek East and San Jose Creek West Facilities. The effluent at Discharge Points Nos. 004 and 005 contains waste treated at the San Jose Creek West Facility and is transported via a separate pipeline. Because the water quality at these outfalls is calculated from effluent discharged at Discharge Points Nos. 002 and 003, existing requirements and self-monitoring results are provided for only EFF-002 and EFF-003.

Where multiple samples are not collected in a month or where the number of samples in a month varies, the highest measured concentration may be used as both the highest average monthly discharge and the highest daily discharge.

Effluent limitations contained in the existing Order for discharges from Discharge Point No. 002 (Monitoring Location EFF-002) and representative monitoring data from the term of the previous Order, as reported by the Permittee in the ROWD, are as follows:

Table F-2. Historic Effluent Limitations and Monitoring Data at EFF 002

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
$BOD_5 20°C$	mg/L	20	30	45	3.9	--	3.9
Total Suspended Solids (TSS)	mg/L	15	40	45	3.0	--	3.0
Oil and Grease	mg/L	10	--	15	<5.2	--	<5.2
Settleable Solids	ml/L	0.1	--	0.3	<0.1	--	<0.1
Residual Chlorine	mg/L	--	--	0.1	--	--	0.1
Total Dissolved Solids	mg/L	750	--	--	736	--	736
MBAS	mg/L	0.5	--	--	<0.1	--	<0.1
Chloride	mg/L	180	--	--	162	--	162
Sulfate	mg/L	300	--	--	172	--	172
Boron	mg/L	1	--	--	0.6	--	0.6
Fluoride	mg/L	1.6	--	--	0.9	--	0.9
Nitrite-N (as N)	mg/L	1	--	--	0.62	--	0.62

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Nitrate plus Nitrite as Nitrogen	mg/L	8	--	--	6.25	--	6.25
Total Ammonia	mg/L	BP Table	--	BP Table	4.48	--	4.48
Antimony	µg/L	--	--	--	0.8	--	0.8
Arsenic	µg/L	--	--	--	0.7	--	0.7
Beryllium	µg/L	--	--	--	1.9	--	1.9
Cadmium	µg/L	--	--	--	<0.25	--	<0.25
Chromium III	µg/L	--	--	--	0.26	--	0.26
Chromium VI	µg/L	--	--	--	1.63	--	1.63
Copper	µg/L	--	--		0.13	--	0.13
Lead	µg/L	5.9	--	19	6.57	--	6.57
Mercury	µg/L	--	--	--	6.57	--	6.57
Nickel	µg/L	--	--	--	0.79	--	0.79
Selenium	µg/L	4.4	--	7.1	0.0029	--	0.0029
Silver	µg/L	--	--	--	10.6	--	10.6
Thallium	µg/L	--	--	--	<5	--	<5
Zinc	µg/L	--	--	--	<0.1	--	<0.1
Cyanide	µg/L	--	--	--	<0.25	--	<0.25
Asbestos	µg/L	--	--	--	77.8	--	77.8
2,3,7,8-TCDD (Dioxin)	µg/L	--	--	--	<12E-6	--	<12E-6
Acrolein	µg/L	--	--	--	0.51	--	0.51
Acrylonitrile	µg/L	--	--	--	<12	--	<12
Benzene	µg/L	--	--	--	1	--	1
Bromoform	µg/L	--	--	--	<2	--	<2
Carbon Tetrachloride	µg/L	--	--	--	<0.5	--	<0.5
Chlorobenzene	µg/L	--	--	--	1.6	--	1.6
Dibromochloromethane	µg/L	--	--	--	<0.25	--	<0.25
Chloroethane	µg/L	--	--	--	<0.5	--	<0.5
2-Chloroethyl vinyl ether	µg/L	--	--	--	9.8	--	9.8

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Maximum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Chloroform	µg/L	--	--	--	<0.5	--	<0.5
Dichlorobromomethane	µg/L	--	--	--	<0.5	--	<0.5
1,1-Dichloroethane	µg/L	--	--	--	37.2	--	37.2
1,2-Dichloroethane	µg/L	--	--	--	26.4	--	26.4
1,1-Dichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
1,2-Dichloropropane	µg/L	--	--	--	<0.5	--	<0.5
1,3-Dichloropropylene	µg/L	--	--	--	<0.5	--	<0.5
Ethylbenzene	µg/L	--	--	--	<0.5	--	<0.5
Methyl bromide	µg/L	--	--	--	<0.5	--	<0.5
Methyl chloride	µg/L	--	--	--	<0.5	--	<0.5
Methylene chloride	µg/L	--	--	--	<0.5	--	<0.5
1,1,2,2-Tetrachloroethane	µg/L	--	--	--	<0.25	--	<0.25
Tetrachloroethylene	µg/L	--	--	--	0.35	--	0.35
Toluene	µg/L	--	--	--	<0.5	--	<0.5
Trans 1,2-Dichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
1,1,1-Trichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,1,2-Trichloroethane	µg/L	--	--	--	<0.5	--	<0.5
Trichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
Vinyl Chloride	µg/L	--	--	--	<0.5	--	<0.5
2-Chlorophenol	µg/L	--	--	--	<0.5	--	<0.5
2,4-Dichlorophenol	µg/L	--	--	--	<0.5	--	<0.5
2,4-Dimethylphenol	µg/L	--	--	--	<0.5	--	<0.5
4,6-Dinitro-o-resol (2-methyl-4,6-Dinitrophenol)	µg/L	--	--	--	<0.5	--	<0.5
2,4-Dinitrophenol	µg/L	--	--	--	<2	--	<2
2-Nitrophenol	µg/L	--	--	--	<0.5	--	<0.5
4-Nitrophenol	µg/L	--	--	--	<0.5	--	<0.5
3-Methyl-4-Chlorophenol (P-chloro-m-resol)	µg/L	--	--	--	<10	--	<10

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Pentachlorophenol	µg/L	--	--	--	<10	--	<10
Phenol	µg/L	--	--	--	<1	--	<1
2,4,6-Trichlorophenol	µg/L	--	--	--	<1	--	<1
Acenaphthene	µg/L	--	--	--	3.7	--	3.7
Acenaphthylene	µg/L	--	--	--	<10	--	<10
Anthracene	µg/L	--	--	--	<1	--	<1
Benzidine	µg/L	--	--	--	<10	--	<10
Benzo(a)Anthracene	µg/L	--	--	--	<10	--	<10
Benzo(a)Pyrene	µg/L	--	--	--	<0.02	--	<0.02
Benzo(b)Fluoranthene	µg/L	--	--	--	<5	--	<5
Benzo(ghi)Perylene	µg/L	--	--	--	<0.02	--	<0.02
Benzo(k)Fluoranthene	µg/L	--	--	--	0.01	--	0.01
Bis(2-Chloroethoxy) Methane	µg/L	--	--	--	<5	--	<5
Bis(2-Chloroethyl)Ether	µg/L	--	--	--	0.014	--	0.014
Bis(2-Chloroisopropyl) Ether	µg/L	--	--	--	<5	--	<5
Bis(2-Ethylhexyl) Phthalate	µg/L	--	--	--	<1	--	<1
4-Bromophenyl Phenyl Ether	µg/L	--	--	--	<2	--	<2
Butylbenzyl Phthalate	µg/L	--	--	--	<2	--	<2
2-Chloronaphthalene	µg/L	--	--	--	<5	--	<5
4-Chlorophenyl Phenyl Ether	µg/L	--	--	--	<10	--	<10
Chrysene	µg/L	--	--	--	<10	--	<10
Dibenzo(a,h) Anthracene	µg/L	--	--	--	<5	--	<5
1,2-Dichlorobenzene	µg/L	--	--	--	<0.02	--	<0.02
1,3-Dichlorobenzene	µg/L	--	--	--	0.03	--	0.03
1,4-Dichlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
3-3'-Dichlorobenzidine	µg/L	--	--	--	<0.5	--	<0.5

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Diethyl Phthalate	µg/L	--	--	--	0.3	--	0.3
Dimethyl Phthalate	µg/L	--	--	--	<5	--	<5
Di-n-Butyl Phthalate	µg/L	--	--	--	1	--	1
2-4-Dinitrotoluene	µg/L	--	--	--	<2	--	<2
2-6-Dinitrotoluene	µg/L	--	--	--	<10	--	<10
Di-n-Octyl Phthalate	µg/L	--	--	--	<5	--	<5
1,2-Diphenylhydrazine	µg/L	--	--	--	<5	--	<5
Fluoranthene	µg/L	--	--	--	<10	--	<10
Fluorene	µg/L	--	--	--	<1	--	<1
Hexachlorobenzene	µg/L	--	--	--	<1	--	<1
Hexachlorobutadiene	µg/L	--	--	--	<10	--	<10
Hexachlorocyclopentadiene	µg/L	--	--	--	<1	--	<1
Hexachloroethane	µg/L	--	--	--	<1	--	<1
Indeno(1,2,3-cd)Pyrene	µg/L	--	--	--	<5	--	<5
Isophorone	µg/L	--	--	--	<1	--	<1
Naphthalene	µg/L	--	--	--	0.026	--	0.026
Nitrobenzene	µg/L	--	--	--	<1	--	<1
N-Nitrosodimethylamine	µg/L	--	--	--	<1	--	<1
N-Nitrosodi-n-Propylamine	µg/L	--	--	--	<1	--	<1
N-Nitrosodiphenylamine	µg/L	--	--	--	0.36	--	0.36
Phenanthrene	µg/L	--	--	--	<5	--	<5
Pyrene	µg/L	--	--	--	<1	--	<1
1,2,4-Trichlorobenzene	µg/L	--	--	--	<5	--	<5
Aldrin	µg/L	--	--	--	<10	--	<10
Alpha-BHC	µg/L	--	--	--	<5	--	<5
Beta-BHC	µg/L	--	--	--	<0.01	--	<0.01
Gamma-BHC (Lindane)	µg/L	--	--	--	<0.01	--	<0.01
Delta-BHC	µg/L	--	--	--	<0.01	--	<0.01
Chlordane	µg/L	--	--	--	<0.01	--	<0.01

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
4,4'-DDT	µg/L	--	--	--	<0.01	--	<0.01
4,4'-DDE	µg/L	--	--	--	<0.05	--	<0.05
4,4'-DDD	µg/L	--	--	--	<0.01	--	<0.01
Dieldrin	µg/L	--	--	--	<0.01	--	<0.01
Alpha-Endosulfan	µg/L	--	--	--	<0.01	--	<0.01
Beta-Endosulfan	µg/L	--	--	--	<0.01	--	<0.01
Endosulfan Sulfate	µg/L	--	--	--	<0.01	--	<0.01
Endrin	µg/L	--	--	--	<0.01	--	<0.01
Endrin Aldehyde	µg/L	--	--	--	<0.01	--	<0.01
Heptachlor	µg/L	--	--	--	<0.01	--	<0.01
Heptachlor Epoxide	µg/L	--	--	--	<0.01	--	<0.01
PCB 1016	µg/L	--	--	--	<0.01	--	<0.01
PCB 1221	µg/L	--	--	--	<0.01	--	<0.01
PCB 1232	µg/L	--	--	--	<0.1	--	<0.1
PCB 1242	µg/L	--	--	--	<0.1	--	<0.1
PCB 1248	µg/L	--	--	--	<0.5	--	<0.5
PCB 1254	µg/L	--	--	--	<0.3	--	<0.3
PCB 1260	µg/L	--	--	--	<0.1	--	<0.1
Toxaphene	µg/L	--	--	--	<0.1	--	<0.1
Barium	µg/L	--	--	--	83	--	83
Iron	µg/L	--	--	--	87	--	87

1. Effluent limitations contained in the existing Order for discharges from Discharge Point No. 003 (Monitoring Location EFF-003) and representative monitoring data from the term of the previous Order, as reported by the Permittee in the ROWD, are as follows:

Table F-3. Historic Effluent Limitations and Monitoring Data EFF-003

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
$BOD_5 20°C$	mg/L	20	30	45	5	--	5

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Total Suspended Solids (TSS)	mg/L	15	40	45	8.8	--	8.8
Oil and Grease	mg/L	10	--	15	5.9	--	5.9
Settleable Solids	ml/L	0.1	--	0.3	<0.1	--	<0.1
Residual Chlorine	mg/L		--	0.1		--	0.1
Total Dissolved Solids	mg/L	750	--	--	660	--	660
MBAS	mg/L	0.5	--	--	<0.1	--	<0.1
Chloride	mg/L	180			142	--	142
Sulfate	mg/L	300	--	--	134	--	134
Boron	mg/L	1	--	--	0.4	--	0.4
Fluoride	mg/L	1.6	--	--	0.87	--	0.87
Nitrite-N (as N)	mg/L	1	--	1	0.193	--	0.193
Nitrate plus Nitrite as Nitrogen	mg/L	8	--	8	8.65	--	8.8
Total Ammonia	mg/L	BP Table	--	BP Table	2.5	--	2.5
Antimony	µg/L	--	--	--	0.78	--	0.78
Arsenic	µg/L	--	--	--	1.4	--	1.4
Beryllium	µg/L	--	--	--	<0.25	--	<0.25
Cadmium	µg/L	--	--	--	0.43	--	0.43
Chromium III	µg/L	--	--	--	1.56	--	1.56
Chromium VI	µg/L	--	--	--	0.24	--	0.24
Copper	µg/L	--	--	--	9.08	--	9.08
Lead	µg/L	--	--	--	9.08	--	9.08
Mercury	µg/L	--	--	--	0.36	--	0.36
Nickel	µg/L	--	--	--	0.0036	--	0.0036
Selenium	µg/L	--	--	--	4.19	--	4.19
Silver	µg/L	--	--	--	0.67	--	0.67
Thallium	µg/L	--	--	--	0.1	--	0.1
Zinc	µg/L	--	--	--	<0.25	--	<0.25
Cyanide[36]	µg/L	--	--	--	64.3	--	64.3
Asbestos	µg/L	--	--	--	2.5	--	2.5
2,3,7,8-TCDD (Dioxin)	µg/L	--	--	--	<11E-6	--	<11E-6

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Acrolein	µg/L	--	--	--	<13	--	<13
Acrylonitrile	µg/L	--	--	--	1	--	1
Benzene	µg/L	--	--	--	<2	--	<2
Bromoform	µg/L	--	--	--	<0.5	--	<0.5
Carbon Tetrachloride	µg/L	--	--	--	0.66	--	0.66
Chlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
Dibromochloromethane	µg/L	--	--	--	<.5	--	<0.5
Chloroethane	µg/L	--	--	--	7.7	--	7.7
2-chloroethyl vinyl ether	µg/L	--	--	--	<0.5	--	<0.5
Chloroform	µg/L	--	--	--	<0.5	--	<0.5
Dichlorobromomethane	µg/L	--	--	--	63.2	--	63.2
1,1-dichloroethane	µg/L	--	--	--	24.4	--	24.4
1,2-dichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,1-dichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
1,2-dichloropropane	µg/L	--	--	--	<0.5	--	<0.5
1,3-dichloropropylene	µg/L	--	--	--	<0.5	--	<0.5
Ethylbenzene	µg/L	--	--	--	<0.5	--	<0.5
Methyl bromide	µg/L	--	--	--	<0.5	--	<0.5
Methyl chloride	µg/L	--	--	--	<0.5	--	<0.5
Methylene chloride	µg/L	--	--	--	0.22	--	0.22
1,1,2,2-tetrachloroethane	µg/L	--	--	--	0.93	--	0.93
Tetrachloroethylene	µg/L	--	--	--	<0.5	--	<0.5
Toluene	µg/L	--	--	--	0.43	--	0.43
Trans 1,2-Dichloroethylene	µg/L	--	--	--	0.25	--	0.25
1,1,1-Trichloroethane	µg/L	--	--	--	<0.5	--	<0.5
1,1,2-Trichloroethane	µg/L	--	--	--	<0.5	--	<0.5
Trichloroethylene	µg/L	--	--	--	<0.5	--	<0.5
Vinyl Chloride	µg/L	--	--	--	<0.5	--	<0.5
2-Chlorophenol	µg/L	--	--	--	<0.5	--	<0.5

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
2,4-Dichlorophenol	µg/L	--	--	--	<0.5	--	<0.5
2,4-Dimethylphenol	µg/L	--	--	--	<0.5	--	<0.5
4,6-Dinitro-o-resol (2-methyl-4,6-Dinitrophenol)	µg/L	--	--	--	<2	--	<2
2,4-Dinitrophenol	µg/L	--	--	--	<5	--	<5
2-Nitrophenol	µg/L	--	--	--	<5	--	<5
4-Nitrophenol	µg/L	--	--	--	<10	--	<10
3-Methyl-4-Chlorophenol (P-chloro-m-resol)	µg/L	--	--	--	<10	--	<10
Pentachlorophenol	µg/L	--	--	--	<1	--	<1
Phenol	µg/L	--	--	--	<1	--	<1
2,4,6-Trichlorophenol	µg/L	--	--	--	2	--	2
Acenaphthene	µg/L	--	--	--	0.41	--	0.41
Acenaphthylene	µg/L	--	--	--	<1	--	<1
Anthracene	µg/L	--	--	--	<10	--	<10
Benzidine	µg/L	--	--	--	<10	--	<10
Benzo(a)Anthracene	µg/L	--	--	--	<5	--	<5
Benzo(a)Pyrene	µg/L	--	--	--	<5	--	<5
Benzo(b)Fluoranthene	µg/L	--	--	--	<0.02	--	<0.02
Benzo(ghi)Perylene	µg/L	--	--	--	0.01	--	0.01
Benzo(k)Fluoranthene	µg/L	--	--	--	<5	--	<5
Bis(2-Chloroethoxy) Methane	µg/L	--	--	--	<0.02	--	<0.02
Bis(2-Chloroethyl)Ether	µg/L	--	--	--	<5	--	<5
Bis(2-Chloroisopropyl) Ether	µg/L	--	--	--	<1	--	<1
Bis(2-Ethylhexyl) Phthalate	µg/L	--	--	--	<2	--	<2
4-Bromophenyl Phenyl Ether	µg/L	--	--	--	<2	--	<2
Butylbenzyl Phthalate	µg/L	--	--	--	<5	--	<5

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
2-Chloronaphthalene	µg/L	--	--	--	<10	--	<10
4-Chlorophenyl Phenyl Ether	µg/L	--	--	--	<10	--	<10
Chrysene	µg/L	--	--	--	<5	--	<5
Dibenzo(a,h) Anthracene	µg/L	--	--	--	<0.02	--	<0.02
1,2-Dichlorobenzene	µg/L	--	--	--	<0.02	--	<0.02
1,3-Dichlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
1,4-Dichlorobenzene	µg/L	--	--	--	<0.5	--	<0.5
3-3'-Dichlorobenzidine	µg/L	--	--	--	0.25	--	0.25
Diethyl Phthalate	µg/L	--	--	--	<5	--	<5
Dimethyl Phthalate	µg/L	--	--	--	1	--	1
Di-n-Butyl Phthalate	µg/L	--	--	--	<2	--	<2
2-4-Dinitrotoluene	µg/L	--	--	--	<10	--	<10
2-6-Dinitrotoluene	µg/L	--	--	--	<5	--	<5
Di-n-Octyl Phthalate	µg/L	--	--	--	<5	--	<5
1,2-Diphenylhydrazine	µg/L	--	--	--	<10	--	<10
Fluoranthene	µg/L	--	--	--	<1	--	<1
Fluorene	µg/L	--	--	--	<1	--	<1
Hexachlorobenzene	µg/L	--	--	--	<10	--	<10
Hexachlorobutadiene	µg/L	--	--	--	<1	--	<1
Hexachlorocyclo-pentadiene	µg/L	--	--	--	<1	--	<1
Hexachloroethane	µg/L	--	--	--	<5	--	<5
Indeno(1,2,3-cd)Pyrene	µg/L	--	--	--	<1	--	<1
Isophorone	µg/L	--	--	--	0.021	--	0.021
Naphthalene	µg/L	--	--	--	<1	--	<1
Nitrobenzene	µg/L	--	--	--	<1	--	<1
N-Nitrosodimethyl-amine	µg/L	--	--	--	<1	--	<1
N-Nitrosodi-n-Propylamine	µg/L	--	--	--	0.48	--	0.48

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
N-Nitrosodiphenyl-amine	µg/L	--	--	--	<5	--	<5
Phenanthrene	µg/L	--	--	--	<1	--	<1
Pyrene	µg/L	--	--	--	<5	--	<5
1,2,4-Trichlorobenzene	µg/L	--	--	--	<10	--	<10
Aldrin	µg/L	--	--	--	<5	--	<5
Alpha-BHC	µg/L	--	--	--	<0.01	--	<0.01
Beta-BHC	µg/L	--	--	--	<0.01	--	<0.01
Gamma-BHC (Lindane)	µg/L	--	--	--	<0.01	--	<0.01
delta-BHC	µg/L	--	--	--	0.01	--	0.01
Chlordane	µg/L	--	--	--	<0.01	--	<0.01
4,4'-DDT	µg/L	--	--	--	<0.05	--	<0.05
4,4'-DDE	µg/L	--	--	--	<0.01	--	<0.01
4,4'-DDD	µg/L	--	--	--	<0.01	--	<0.01
Dieldrin	µg/L	--	--	--	<0.01	--	<0.01
Alpha-Endosulfan	µg/L	--	--	--	<0.01	--	<0.01
Beta-Endosulfan	µg/L	--	--	--	<0.01	--	<0.01
Endosulfan Sulfate	µg/L	--	--	--	<0.01	--	<0.01
Endrin	µg/L	--	--	--	<0.01	--	<0.01
Endrin Aldehyde	µg/L	--	--	--	<0.01	--	<0.01
Heptachlor	µg/L	--	--	--	<0.01	--	<0.01
Heptachlor Epoxide	µg/L	--	--	--	<0.01	--	<0.01
PCB 1016	µg/L	--	--	--	<0.01	--	<0.01
PCB 1221	µg/L	--	--	--	<0.01	--	<0.01
PCB 1232	µg/L	--	--	--	<0.1	--	<0.1
PCB 1242	µg/L	--	--	--	<0.05	--	<0.05
PCB 1248	µg/L	--	--	--	<0.3	--	<0.3
PCB 1254	µg/L	--	--	--	<0.1	--	<0.1
PCB 1260	µg/L	--	--	--	<0.1	--	<0.1
Toxaphene	µg/L	--	--	--	<0.05	--	<0.05

Parameter	Units	Effluent Limitation			Monitoring Data (From June 2009 To Sept. 2013)		
		Average Monthly	Average Weekly	Max-imum Daily	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Barium	µg/L	--	--	--	44.8	--	44.8
Iron	µg/L	--	--	--	66	--	66

D. Compliance Summary

1. Toxicity

No exceedances of the 1.0 TUc monthly median trigger were observed in the final effluent from June 1, 2009 to June 30, 2013. However, three individual tests had more than 1.0 TUc during the compliance testing and three species screening as shown in the tables below.

On June 6, 2014, the Regional Water Board issued the Joint Outfall System a Notice of Violation relating to effluent toxicity sampling. The specific example given in the NOV for the San Jose Creek WRP was the misinterpretation of the chronic toxicity test result for January 3, 2013.

Table F-4. Compliance History– Chronic Bioassay Toxicity for San Jose Creek East: (June 2009 – June 2013)

Test Date	Test Species	Endpoint	NOEC	TUc	Monthly Median TUc	EC/IC25	% Effect in 100% Sample (95% CI)
11/10/09 (Species Screening)	Pimephales promelas	Survival Growth	100% 100%	1.0 1.0	1.0	>100% >100%	-5.3% (N/A) -10.7% (-18.8 to -2.7)
	Ceriodaphina dubia[a]	Survival Reproduction	100% <20%	1.0 >5.0		>100% 7.4%	20.0% (-6.1 to 46.1) 73.0% (60.2 to 85.8)

Table F-5. Compliance History – Chronic Bioassay Toxicity for San Jose Creek West: (June 2009 – June 2013)

Test Date	Test Species	Endpoint	NOEC	TUc	Monthly Median TUc	EC/iC25	% Effect in 100% Sample (95% CI)
08/12/10	Ceriodaphina dubia	Survival Reproduction	100% 40%	1.0 2.5	1.0	90.0% 26.2%	30.0% (0.1 to 59.9) 69.3% (46.6 to 92.0)
08/24/10	Ceriodaphina dubia	Survival Reproduction	100% 100%	1.0 1.0		>100% >100%	-11.1% (N/A) -1.3% (-18.8 to 16.2)
08/27/10	Ceriodaphina dubia	Survival Reproduction	100% 100%	1.0 1.0		**>100%** **>100%**	0% (N/A) -2.8% (-10.4 to 4.9)

Test Date	Test Species	Endpoint	NOEC	TUc	Monthly Median TUc	EC/IC25	% Effect in 100% Sample (95% CI)
05/10/11	*Ceriodaphnia dubia*	*Survival* *Reproduction*	100% 80%	1.0 1.3	1.0	*>100%* *>100%*	*20.0% (-6.1 to 46.1)* *19.1% (6.3 to 31.9)*
05/20/11	*Ceriodaphnia dubia*	*Survival* *Reproduction*	100% 100%	1.0 1.0		*>100%* *>100%*	*0% (N/A)* *-6.5% (-11.9 to -1.1)*
05/26/11	*Ceriodaphnia dubia*	*Survival* *Reproduction*	100% 100%	1.0 1.0		*>100%* *>100%*	*-11.1% (N/A)* *-16.1% (-26.7 to -5.5)*

2. **Other Pollutants**

Between 2009 and 2013, monitoring at San Jose Creek WRP identified one pH exceedance.

E. Planned Changes

On July 10, 2014 the Permittee submitted a revision to the ROWD for San Jose Creek Water Reclamation Facility describing a pending groundwater recharge project with the Upper San Gabriel Valley Municipal Water District, the Indirect Reuse and Replenishment Project (IRRP). Up to 10,000 acre-feet per year (8.93 mgd) would flow through a nine-mile pipeline to two new outfalls, Discharge Point 004 and 005. A map of the IRRP area and proposed outfalls is shown in Figure B-5. Previous discharge locations associated with this project were described in R4-2009-0078, but were never constructed. Discharge from the IRRP at proposed future locations is contingent upon the issuance of Water Recycling Requirements (WRRs) for the Permittee and other project sponsors in addition to the Upper San Gabriel Valley Municipal Water District. The Los Angeles County Department of Public Works (LACDPW) operates and manages the river channel and pipelines used to transport suitably treated wastewater to the San Gabriel River. The Main San Gabriel Basin Watermaster, a special state agency, is charged with the responsibility of replenishing and monitoring the groundwater quality of the San Gabriel Groundwater Basins. Additional outfalls, Discharge Points No. 004 and 005 are proposed to deliver advanced treated water to the IRRP and are included in this Order. Recycled water use from the Plant is permitted for non-potable applications under Order Nos. 87-50 and 97-072, however, neither Order permits the recycled water use for groundwater replenishment requirements for surface application as regulated in DDW's Groundwater Reuse and Replenishment using Recycled Water adopted in June of 2014Discharge from such outfalls cannot begin until the DDW has approved a Title 22 Engineering Report and the WRR has been adopted by the Regional Water Board. In the event that this project goes forward, depending upon the final design and the exact location of spreading, this NPDES permit may need to be revised according.

Gaseous chlorine is currently used as a disinfectant at the Facility and sulfur dioxide is added prior to discharge to remove residual chlorine. Treated wastewater discharged to San Gabriel River and San Jose Creek is dechlorinated but the effluent delivered for reuse is not dechlorinated. The existing chlorine and sulfur dioxide disinfection, chlorination and dechlorination are expected to be replaced with sodium hypochlorite and sodium bisulfite facilities to reduce health and safety risk to the public. This sequential chlorination project entails the construction of new chemical facilities consisting of chemical storage tanks, secondary containment structures, piping and chemical feed, automated flow control valves and piping for metering; the decommissioning of the existing chlorine and sulfur dioxide

facilities; and the demolition of the existing emergency caustic scrubbers used to treat chlorine and sulfur dioxide gas leaks. The estimated start of construction is October 2015 with completion in March 2017.

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 (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this facility to surface waters.

B. California Environmental Quality Act (CEQA)

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

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

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

> 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 Clean Water Act ("CWA"). 33 U.S.C. § 1313(c)(3).

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

Table F-6. Basin Plan Beneficial Uses and Features

Water Body Designation	Receiving Water Name	Beneficial Use(s)	Feature
180701060502	San Jose Creek Reach 1	Existing: wildlife habitat (WILD); Intermittent: groundwater recharge (GWR); non-contact water recreation (REC-2); and, warm freshwater habitat (WARM); Potential: water contact recreation (REC-1)[3] and MUN[2].	Early Life Stages (ELS) Absent October 1 to April 30 Early Life Stages (ELS) Present May 1 to September 30 2008-2010 303(d) list ammonia, coliform bacteria, TDS, Toxicity, and pH
180701060601	San Gabriel River Reach 5 Santa Fe Dam to Huntington Drive	Existing: WILD Intermittent: GWR, WARM REC-1[3], REC-2 Potential: MUN[2].	Early Life Stages (ELS) Absent October 1 to April 30 Early Life Stages (ELS) Present May 1 to September 30
180701060601	San Gabriel River Reach 4 Ramona Blvd to Sana Fe Dam	Existing: WILD Intermittent: GWR, WARM REC-1[3], REC-2 Potential: MUN[2].	Early Life Stages (ELS) Absent October 1 to April 30 Early Life Stages (ELS) Present May 1 to September 30
180701060601	San Gabriel River Reach 3- Whittier Narrows to Ramona Blvd	Existing: WILD Intermittent: GWR, REC-1[3], REC-2, and WARM Potential: MUN[2].	Early Life Stages (ELS) Absent October 1 to April 30 Early Life Stages (ELS) Present May 1 to September 30
180701060606	San Gabriel River Reach 2 – Whittier Narrows Dam to Firestone Blvd.	Existing: REC-1[3], REC-2, WILD, and rare, threatened, or endangered species (RARE); Intermittent: GWR and WARM Potential: industrial service supply (IND), and industrial process supply (PROC), and MUN[2].	Early Life Stages (ELS) Absent October 1 to April 30 Early Life Stages (ELS) Present May 1 to September 30 2008-2010 303(d) list coliform bacteria, cyanide and lead

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

Water Body Designation	Receiving Water Name	Beneficial Use(s)	Feature
180701060606	San Gabriel River Reach 1: Firestone Boulevard to Estuary	Existing: REC-1[3] and REC-2 Potential: MUN[2], WARM, and WILD.	Early Life Stages (ELS) Absent 2008-2010 303(d) list coliform bacteria and pH
180701060606	San Gabriel River Estuary	Existing: IND, navigation (NAV), REC-1[3], REC-2, commercial and sport fishing (COMM), estuarine habitat (EST), marine habitat (MAR), WILD, RARE, Migration of aquatic organisms (MIGR); and spawning, reproduction, and/or early development (SPWN). Potential: shell harvesting (SHELL)	Early Life Stages (ELS) Absent 2008-2010 303(d) list copper, dioxin, nickel and dissolved oxygen

Table F-7. Basin Plan Beneficial Uses – Ground Waters

Department of Water Resources (DWR) Basin	Receiving Water Name	Beneficial Use(s)				
		MUN	IND	PROC	AGR	AQUA
4-13	**San Gabriel Valley**	existing	existing	existing	existing	
4-11.04	**Coastal Plain of Los Angeles**					
	Central basin	existing	existing	existing	existing	

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

3. **State Implementation Policy (SIP).** 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

[3] Although the Los Angeles County Department of Public Works post signs prohibiting access to the San Gabriel River, its tributaries and estuary, the public has been observed fishing and wading across the river. There is public access to the San Gabriel River, its tributaries, and estuary through the bike trails that run parallel to the river. Since there is public contact in the receiving water downstream of the discharge, the quality of wastewater discharged to the Rio Hondo and San Gabriel River must be such that no public health hazard is created. Access is prohibited by Los Angeles County Department of Public Works in concrete-channelized areas.

California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Board in the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria promulgated by the USEPA through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

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

5. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based effluent limitations (TBELs) and water quality-based effluent limitations (WQBELs) for individual pollutants. The TBELs consist of restrictions on BOD, TSS, oil and grease, settleable solids, turbidity, pH, and percent removal of BOD and TSS. Restrictions on BOD, TSS, oil and grease, settleable solids, turbidity, and pH are discussed in section IV.B.2 of the Fact Sheet. This Order's technology-based pollutant 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 § 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

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

7. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 CFR § 122.44(l) restrict backsliding in NPDES permits. These anti-

backsliding provisions require that effluent limitations in a reissued permit be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

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

9. **Water Rights.** Prior to making any change in the point of discharge, place of use, or purpose of use of treated wastewater that results in a decrease of flow in any portion of a surface or subterranean stream, the Permittee must file a petition with the State Water Board (State Water Board), Division of Water Rights, and receive approval for such a change. The State Water Board retains the jurisdictional authority to enforce such requirements under CWC section 1211.

10. **Domestic Water Quality.** 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.

11. **Water Recycling.** In accordance with statewide policies concerning water reclamation[4], this Regional Water Board strongly encourages, wherever practical, water recycling, water conservation, and use of storm water and dry-weather urban runoff. The Permittee shall investigate the feasibility of recycling, conservation, and/or alternative disposal methods of wastewater (such as groundwater injection), and/or use of storm water and dry-weather urban runoff. The Permittee submitted a feasibility study on January 3, 2014. The Permittee shall submit an update to this feasibility study as part of the submittal of the Report of Waste Discharge (ROWD) for the next permit renewal.

12. **Monitoring and Reporting.** 40 CFR § 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. CWC sections 13267 and 13383 authorize the Regional Water Board to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and state requirements. This MRP is provided in Attachment E.

13. **Sewage Sludge/Biosolids Requirements.** Section 405 of the CWA and implementing regulations at 40 CFR part 503 require that producers of sewage sludge/biosolids meet certain reporting, handling, and use or disposal requirements. The state has not been delegated the authority to implement this program; therefore, USEPA is the implementing agency.

[4] 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).

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

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

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

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

San Jose Creek Reach 1 (San Gabriel confluence to Temple St.)
Pollutants: Ammonia, Coliform bacteria, TDS, Toxicity and pH

San Gabriel River Reach 2 (Firestone Blvd. to Whittier Narrows Dam) -- Hydrologic unit 405.15, Calwater Watershed 18070104
Pollutants: Coliform bacteria, cyanide and lead.

San Gabriel River Reach 1 (Estuary to Firestone Blvd.) -- Hydrologic unit 405.15, Calwater Watershed 18070104
Pollutants: Coliform bacteria and pH.

San Gabriel River Estuary -- Hydrologic unit 405.15, Calwater Watershed 18070104
Pollutants: Copper, dioxin, nickel, and dissolved oxygen.

E. Other Plans, Polices and Regulations

1. **Sources of Drinking Water Policy.** On May 19, 1988, the State Water Board adopted Resolution No. 88-63, Sources of Drinking Water (SODW) Policy, which established a policy that all surface and ground waters, with limited exemptions, are suitable or potentially suitable for municipal and domestic supply. To be consistent with State Water Board's SODW Policy, on March 27, 1989, the Regional Water Board adopted Resolution No. 89-03, Incorporation of Sources of Drinking Water Policy into the Water Quality Control Plans (Basin Plans) – Santa Clara River Basin (4A)/ Los Angeles River Basin (4B).

   Consistent with Regional Water Board Resolution No. 89-03 and State Water Board Resolution No. 88-63, in 1994 the Regional Water Board conditionally designated all inland surface waters in Table 2-1 of the 1994 Basin Plan as existing, intermittent, or potential for Municipal and Domestic Supply (MUN). However, the conditional designation in the 1994 Basin Plan included the following implementation provision: "no new effluent limitations will be placed in Waste Discharge Requirements as a result of these [potential MUN designations made pursuant to the SODW policy and the Regional Water Board's enabling resolution] until the Regional Water Board adopts [a special Basin Plan Amendment that incorporates a detailed review of the waters in the Region that should be exempted from

the potential MUN designations arising from SODW policy and the Regional Water Board's enabling resolution]." On February 15, 2002, the USEPA clarified its partial approval (May 26, 2000) of the 1994 Basin Plan amendments and acknowledged that the conditional designations do not currently have a legal effect, do not reflect new water quality standards subject to USEPA review, and do not support new effluent limitations based on the conditional designations stemming from the SODW Policy until a subsequent review by the Regional Water Board finalizes the designations for these waters. This permit is designed to be consistent with the existing Basin Plan.

2. **Title 22 of the California Code of Regulations** (CCR Title 22). The California Department of Public Health (CDPH) established primary and secondary maximum contaminant levels (MCLs) for inorganic, organic, and radioactive contaminants in drinking water. These MCLs are codified in Title 22. The Basin Plan (Chapter 3) incorporates Title 22 primary MCLs by reference. This incorporation by reference is prospective, including future changes to the incorporated provisions as the changes take effect. Title 22 primary MCLs have been used as bases for effluent limitations in WDRs and NPDES permits to protect groundwater recharge beneficial use when that receiving groundwater is designated as MUN. Also, the Basin Plan specifies that "Ground waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses."

3. **Secondary Treatment Regulations.** 40 CFR Part 133 establishes the minimum levels of effluent quality to be achieved by secondary treatment. These limitations, established by USEPA, are incorporated into this Order, except where more stringent limitations are required by other applicable plans, policies, or regulations 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 § 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 becomes effective on July 1, 2015.

   Stormwater runoff from the San Jose Creek WRP is regulated separately under General NPDES permit No. CAS000001. On June 4, 1992, the Permittee filed a Notice of Intent to comply with the requirements of the general permit. The City 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 (SSOs).** The CWA prohibits the discharge of pollutants from point sources to surface waters of the United States unless authorized under an NPDES permit. (33 United States Code (USC) sections 1311 and 1342). The State Water Board adopted General WDRs for Sanitary Sewer Systems, (Water Quality Order No. 2006-0003-DWQ; SSO WDR) on May 2, 2006, to provide a consistent, statewide regulatory approach to address SSOs. The SSO WDR requires public agencies that own or operate sanitary sewer systems to apply for coverage under the SSO WDR, develop and implement sewer system management plans, and report all SSOs to the State Water Board's online SSO database. Regardless of the coverage obtained under the SSO WDR, the Permittee's collection system is part of the POTW that is subject to this NPDES permit. As such,

pursuant to federal regulations, the Permittee must properly operate and maintain its collection system (40 CFR § 122.41 (e)), report any non-compliance (40 CFR § 122.41(1)(6) and (7)), and mitigate any discharge from the collection system in violation of this NPDES permit (40 CFR § 122.41(d)).

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

6. **Watershed Management**. This Regional Water Board has been implementing a Watershed Management Approach (WMA) to address water quality protection in the Los Angeles Region, as detailed in the Watershed Management Initiative (WMI). The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science. Information about the San Gabriel River Watershed and other watersheds in the region can be obtained from the Regional Water Board's web site at http://www.waterboards.ca.gov/losangeles/water_issues/programs/regional_program/index.shtml#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 accompanying Order fosters the implementation of this approach by protecting beneficial uses in the watershed and requiring the Permittee to participate with other stakeholders, in the development and implementation of a watershed-wide monitoring program. The Monitoring and Reporting Program (Attachment E) requires the Permittee to undertake the responsibilities delineated under an approved watershed-wide monitoring plan in the implementation of the Watershed-wide Monitoring Program for the San Gabriel River, which was approved by the Regional Water Board on September 25, 2006.

   The Regional Water Board has prepared and periodically updates its Watershed Management Initiative Chapter, the latest was updated June 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.

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 water body for each pollutant of concern. TMDLs identify the maximum amount of pollutants that can be discharged to water bodies without causing violations of water quality standards.

   a. **San Gabriel River and Tributaries Metals TMDL** - On March 26, 2007, USEPA established the San Gabriel River watershed metals TMDLs. This Order includes effluent limitations for metals established by USEPA TMDLs. These effluent limitations are consistent with the concentration-based Waste Load Allocations (WLA) established for the POTWs and other point sources in these TMDLs. In this permit, Regional Water Board staff translates WLAs into effluent limitations by applying the CTR/SIP procedures or other applicable engineering practices authorized under federal regulations. The copper, lead, and zinc waste load allocations for San Gabriel River and its tributaries may be modified based on the results of new studies if the USEPA approves a revised TMDL and Implementation Plan for Metals in the San Gabriel River.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

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

A. Discharge Prohibitions

Effluent and receiving water limitations in this Order are based on the CWA, Basin Plan, State Water Board plans and policies, USEPA guidance and regulations, and best practicable waste treatment technology. This order authorizes the discharge of tertiary-treated wastewater from Discharge Point Nos. 001, 001A, 001B, 002, 003, 004 and 005. It does not authorize any other types of discharges.

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 EPA develop secondary treatment standards for POTWs as defined in

Section 304(d)(1). Regulations promulgated in 40 CFR § 125.3(a)(1) require technology-based effluent limitations for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards. EPA 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 five-day biochemical oxygen demand, total suspended solids, and pH.

2. Applicable Technology-Based Effluent Limitations

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, limitations in previous Order No. R4-2009-0076 are based on tertiary-treated wastewater treatment standards. These effluent limitations have been carried over from the previous Order to avoid backsliding. Mass-based effluent limitations are based on a design flow rate of 100 mgd at Discharge Point Nos. 001,001A and 001B, 62.5 mgd at Discharge Point No.002, and 37.5 mgd at Discharge Point No. 003, 004 and 005. 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-8. Summary of TBELS

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Max Daily	Instantaneous Minimum	Instantaneous Maximum
$BOD_5$20°C	mg/L	20	30	45	--	--
	lbs/day[5]	16,700	25,000	37,530	--	--
	lbs/day[6]	10,400	15,600	23,500	--	--
	lbs/day[7]	6,260	9,380	14,100	--	--
TSS	mg/L	15	40	45	--	--
	lbs/day[5]	12,500	33,400	37,500	--	--
	lbs/day[6]	7,820	20,900	23,500	--	--
	lbs/day[7]	4,700	12,500	14,100	--	--
pH	standard units	--	--	--	6.5	8.5

[5]The mass emission rate for EFF-001, EFF-001A, and EFF-001B is based on the plant design flow rate of 100.0 MGD, and is 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.

[6] The mass emission rate for EFF-002 is based on the plant design flow rate of 62.5 MGD, and is 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.

[7] The mass emission rate for EFF-003, EFF-004, or EFF-005 is based on the plant design flow rate of 37.5 MGD, and is 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.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Max Daily	Instantaneous Minimum	Instantaneous Maximum
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 for the City of Woodland.

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

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

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable WQOs and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objective

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

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

i. **$BOD_5$20°C and TSS**

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

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

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

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

The monthly average, the 7-day average, and the daily maximum limits cannot be removed because none of the anti-backsliding exceptions apply. Those limits were all included in the previous permit (Order R4-2009-0078) and the San Jose Creek WRP has been able to meet both limits (monthly average and the daily maximum), for both BOD and TSS.

In addition to having mass-based and concentration-based effluent limitations for BOD and TSS, the San Jose Creek WRP also has a percent removal requirement for these two constituents. In accordance with 40 CFR §§ 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 § 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 (page 3-15) 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 (page 3-16) 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 anti-backsliding exceptions apply. The monthly average and daily maximum limits were both included in the previous permit (Order R4-2009-0078) and the San Jose Creek WRP 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 (page 3-11) narrative, "Waters shall not contain oils, greases, waxes, or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect beneficial uses."

The numeric limits are empirically based on concentrations at which an oily sheen becomes visible in water. It is impracticable to use a 7-day average limitation, because spikes that occur under a 7-day average scheme could cause a visible oil sheen. A 7-day average scheme would not be sufficiently protective of beneficial uses. The monthly average and the daily maximum limits cannot be removed because none of the anti-backsliding exceptions apply. Both limits were included in the previous permit (Order No. R4-2009-0078) and the San Jose Creek WRP has been able to meet both limits.

v. **Residual Chlorine**

Disinfection of wastewaters with chlorine produces a chlorine residual. Chlorine and its reaction products are toxic to aquatic life. The limit for residual chlorine is based on the Basin Plan (page 3-9) narrative, "Chlorine residual shall not be present in surface water discharges at concentrations that exceed 0.1 mg/L and shall not persist in receiving waters at any concentration that causes impairment of beneficial uses."

It is impracticable to use a 7-day average or a 30-day average limitation, because it will not protect beneficial uses, which requires a daily maximum limitation. Chlorine is very toxic to aquatic life and short term exposures of chlorine may cause fish kills. The San Jose Creek WRP has been able to meet this limit.

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

The limitations for total dissolved solids, chloride, sulfate, and boron are based on Basin Plan Table 3-10(page 3-32), for the San Gabriel River watershed . For Discharge Points Nos. 001A, 001B, 002 and 003 which lie between Valley Boulevard and Firestone Boulevard, the limitation in the San Gabriel River for TDS is 750 mg/L; for chloride is 180 mg/L; for sulfate is 300 mg/L and for boron is 1.0 mg/L. For Discharge Points Nos. 004 and 005 which lie between Morris Dam and Valley Boulevard, the limitation in the San Gabriel River for TDS is 450 mg/L; for chloride is 100 mg/L; for sulfate is 100 mg/L; and for boron is 0.5 mg/L. Consistent with the approach that was used in the USEPA-promulgated SGR Metals TMDL, Discharge Point 001 is considered as though it discharged to Reach 1. Therefore, no limits for TDS, sulfate, chloride, or boron are established for Discharge Point No. 001. The chloride limit resulted from 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 SWRCB (Resolution 97-94); and, approved by OAL on January 8, 1998; and served to revise the chloride water quality objective in the San Gabriel River and other surface waters. It is practicable to express these limits as monthly averages, since they are not expected to cause acute effects on beneficial uses.

Limits based upon the Basin Plan 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 Facility. They may be present in concentrations which meet California drinking water standards but exceed the Basin Plan 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 Methylene Blue Activated Substances (MBAS) was developed based on the Basin Plan incorporation of Title 22, Drinking Water Standards, by reference, to protect the surface water groundwater recharge (GWR) beneficial use and the groundwater basin's MUN beneficial use.

Cobalt thiocyanate active substances (CTAS) is monitored like 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 of adversely affect beneficial uses. There is no limit or compliance requirement for CTAS.

Reaches of the San Jose Creek and San Gabriel River are unlined in several reaches downstream of the points of wastewater discharge and are designated with the beneficial use of groundwater recharge (GWR) in the Basin Plan. Given the nature of the Facility which accepts domestic wastewater into the sewer system and treatment plant, and the characteristics of the pollutants discharged, the discharge has reasonable potential to exceed both the numeric MBAS WQO and the narrative WQO for the prohibition of floating material such

as foams and scums. Monitoring is required to assess compliance with the Basin Plan Water Quality Objectives and those objectives which are based on the incorporation by reference of the MCLs contained in Title 22 of the California Code of Regulations, for the protection of the underlying groundwater quality with the MUN beneficial use. An effluent limit for MBAS is required.

viii. **Total Inorganic Nitrogen (NO2 as N + NO3 as N + Ammonia as N)**

Total inorganic nitrogen is the sum of Nitrate-nitrogen, Nitrite-nitrogen and Ammonia-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.

(1). Algae

Excessive growth of algae and/or other aquatic plants can degrade water quality. Algal blooms sometimes occur naturally, but they are often the result of excess nutrients (i.e., nitrogen, phosphorus) from waste discharges or nonpoint sources. These algal blooms can lead to problems with tastes, odors, color, and increased turbidity and can depress the dissolved oxygen content of the water, leading to fish kills. Floating algal scum and algal mats are also an aesthetically unpleasant nuisance.

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

(2). Concentration-based limit

Total inorganic nitrogen (NO2–N + NO3–N) effluent limitation of 8 mg/L is based on Basin Plan Table 3-10 (page 3-32, for San Gabriel River between Valley Boulevard and Firestone Boulevard and is applicable to Discharge Point EFF-001A, EFF-001B, EFF-003. This same limit applies to EFF-002 (San Jose Creek downstream of the 71 freeway) and to EFF-004 and EFF-005 (San Gabriel River between Morris Dam and Ramona Blvd).

(3). Mass-based limit

The mass emission rate for EFF-001, EFF-001A, and EFF-001B are based on the plant design flow rate of 100 mgd. The mass emission rate for EFF-003 are based on the plant design flow rate of 37.5 mgd

ix. **Nitrate and Nitrite as Nitrogen**

The effluent limits for nitrate as nitrogen of 10 mg/L and nitrite as nitrogen (NO_2-N) of 1.0 mg/L for EFF-001 are based on the Basin Plan narrative water

quality objectives and best professional judgment. Effluent limits for nitrate plus nitrite as total nitrogen of 8 mg/L for the other discharge points are based on the Basin Plan surface water quality criteria for San Gabriel River Reach 2 and San Jose Creek, as described in the previous section. The mechanism for reducing ammonia concentrations in the effluent involves the nitrification-denitrification treatment process, where the ammonia and organic nitrogen are oxidized to nitrite before final conversion to nitrate. Nitrite is converted to nitrate in the presence of oxygen. Therefore there is reasonable potential for nitrite or nitrate to be present in the discharge if the oxidation process is not complete.

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

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

x. **Total Ammonia**

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

(1). **San Gabriel River Ammonia**

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

On December 1, 2005, the Regional Water Board adopted Resolution No. 2005-014, An Amendment to the Water Quality Control 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. This amendment contains ammonia objectives to protect Early Life Stages

(ELS) of fish in inland surface water supporting aquatic life. This resolution was approved by the USEPA on April 5, 2007. This amendment revised the implementation provision included as part of the freshwater ammonia objectives relative to the protection of ELS of fish in inland surface waters.

(2). **Applicable Ammonia Objectives**

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 water body reaches and tributaries in the Santa Clara, Los Angeles, and San Gabriel River watersheds. Resolution No. 2007-005 was approved by the State Water Board, OAL, and USEPA on January 15, 2008, May 12, 2008, and March 30, 2009, respectively. It became operative on April 23, 2009. As part of its triennial review process, the Regional Board may reconsider the continued appropriateness of the site-specific objectives. The application of the SSO is not considered backsliding under Exception (2) of Section 402(o)(2) of the Clean Water Act 40 CFR § 122.44.

Translation of Ammonia Nitrogen Objectives into Effluent Limitations by applying the Ammonia SSO:

Discharge Point No. 002: For San Jose Creek (Discharge Point No. 002) from San Jose Creek East Facility when ELS are present and ELS are absent

Step 1 – Identify applicable water quality criteria.

The Permittee's effluent data is separated by time of year when ELS are present (from April 1 to September 30) and when ELS are absent (from October 1 to March 31), from 2009 to 2013:

ELS Present:
pH = 7.0 at 50th percentile and Temperature = 27.8°C
pH = 7.2 at 90^{th} percentile

From Table 3-1 of the Basin Plan, using 90^{th} percentile pH 7.2;
One-hour Average Objective = 29.54 mg/L

The Ammonia SSO formula replaces Table 3-2 of the Basin Plan.
Using 50^{th} percentile pH 7.0 and temperature = 27.8°C;
30-day Average $_{\text{SSO ELA Present}}$ = 4.275 mg/L

From Basin Plan amendment Resolution No. 2002-011;
4-day Average Objective = 2.5 times the 30-Day Ave. Obj.
4-day Average Objective = 2.5 x 4.275 = 10.68 mg/L

ELS Absent:
pH = 7.0 at 50th percentile and Temperature = 23.9°C
pH = 7.1 at 90th percentile

From Table 3-1 of the Basin Plan, using 90th percentile pH 7.0;
One-hour Average Objective = 36.09 mg/L

The Ammonia SSO formula replaces Table 3-2 of the Basin Plan.
Using 50th percentile pH 7.0 and temperature = 23.9°C;
30-day Average $_{\text{SSO ELA Absent}}$ = 5.50 mg/L

From Basin Plan amendment Resolution No. 2002-011;
4-day Average Objective = 2.5 times the 30-Day Ave. Obj.
4-day Average Objective = 2.5 x 5.50 = 13.74 mg/L

Ammonia Water Quality Objectives (WQO) Summary ELS Present:

One-hour Average= 29.54 mg/L
Four-day Average = 10.68 mg/L
30-day Average $_{\text{all year long}}$ = 4.275 mg/L

Ammonia Water Quality Objectives (WQO) Summary ELS Absent:

One-hour Average= 36.09 mg/L
Four-day Average = 13.74 mg/L
30-day Average $_{\text{all year long}}$ = 5.50 mg/L

Step 2 – For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not been allowed by the Regional Water Board, this equation applies:

ECA = WQO

Step 3 – Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with a factor (multiplier) that adjust for variability. By using Table 3-6, calculated CV (i.e., standard deviation/mean for ammonia), the following are the Effluent Concentration Allowance.

ECA multiplier when CV = 0.1953 (ELS Present)
ECA multiplier$_{\text{One-hour Average}}$ = 0.6496
ECA multiplier$_{\text{Four-day Average}}$ = 0.8010
ECA multiplier$_{\text{30-day Average}}$ = 0.9210

ECA multiplier when CV = 0.1859 (ELS Absent)
ECA multiplier$_{\text{One-hour Average}}$ = 0.663
ECA multiplier$_{\text{Four-day Average}}$ = 0.809
ECA multiplier$_{\text{30-day Average}}$ = 0.924

Using the LTA equations:

ELS Present:
$LTA_{\text{1-hour/99}} = ECA_{\text{1-hour}}$ x ELA Present ECA multiplier$_{\text{1-hour99}}$
= 29.54 x 0.6496 = 19.19 mg/L
$LTA_{\text{4-day/99 ELS Present}} = ECA_{\text{4-day}}$ x ELA Present ECA multiplier$_{\text{4-day99}}$
= 10.688 x 0.8010= 8.56 mg/L
$LTA_{\text{30-day/99 ELS Present}} = ECA_{\text{30-day}}$ x ELA Present ECA multiplier$_{\text{30-day99}}$
= 4.275 x 0.9210 = 3.937 mg/L

ELS Absent:
$LTA_{\text{1-hour/99}} = ECA_{\text{1-hour}}$ x ELA Absent ECA multiplier$_{\text{1-hour99}}$
= 36.09 x 0.663 = 21.77 mg/L
$LTA_{\text{4-day/99 ELS Absent}} = ECA_{\text{4-day}}$ x ELA Absent ECA multiplier$_{\text{4-day99}}$
= 13.74 x 0.809= 11.12 mg/L
$LTA_{\text{30-day/99 ELS Absent}} = ECA_{\text{30-day}}$ x ELA Absent ECA multiplier$_{\text{30-day99}}$
= 5.50 x 0.924 = 5.08 mg/L

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

ELS Present LTA_{min} = **3.94** mg/L
ELS Absent LTA_{min} = **5.08** mg/L

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

Monthly sampling frequency (n) is 30 times per month or less, and the minimum LTA is the $LTA_{\text{30-day/99}}$, therefore n = 30, ELS Present CV = .1930 and ELS Absent CV = .1859

ELS Present MDEL multiplier = 1.5394
ELA Present AMEL multiplier = 1.0597

ELS Absent MDEL multiplier = 1.51
ELA Absent AMEL multiplier = 1.06

ELS Present:
MDEL = LTA_{min} x MDEL multiplier$_{99}$ = 3.94x 1.5394 = 6.06
≈ 6.1 mg/L
AMEL = LTA_{min} x AMEL multiplier$_{95}$ = 3.94 x 1.0597 = 4.17
≈ 4.2 mg/L

ELS Absent:
MDEL = LTA_{min} x MDEL multiplier$_{99}$ = 5.08 x 1.51 = 7.67
≈ 7.7 mg/L
AMEL = LTA_{min} x AMEL multiplier$_{95}$ = 5.08 x 1.06 = 5.37
≈ 5.4 mg/L

Table F-9. Translated Ammonia Effluent Limitations with SSO Applied for San Jose Creek (Discharge Point No.002) from San Jose Creek East Facility

Constituent	MDEL (mg/L)	AMEL (mg/L)
Ammonia Nitrogen (ELS Present April 1 – September 30)	6.1	4.2
Ammonia Nitrogen (ELS Absent October 1 – March 31)	7.8	5.4

Discharge Point No. 003: For San Gabriel River (Discharge Point No. 003) from San Jose Creek West Facility and when ELS are present and ELS are absent

Step 1 – Identify applicable water quality criteria.

The Permittee's effluent data is separated by time of year when ELS are present (from December 2009 to January 2012) and when ELS are absent (from December 2009 to January 2012):

ELS Present:
pH = 7.15 at 50th percentile and Temperature = 27.2°C
pH = 7.22 at 90th percentile

From Table 3-1 of the Basin Plan, using 90th percentile pH 7.22;
One-hour Average Objective = 28.84 mg/L

The Ammonia SSO formula replaces Table 3-2 of the Basin Plan.
Using 50th percentile pH 7.15 and temperature = 27.2°C;
30-day Average $_{SSO\ ELA\ Present}$ = 4.16 mg/L

From Basin Plan amendment Resolution No. 2002-011;
4-day Average Objective = 2.5 times the 30-Day Ave. Obj.
4-day Average Objective = 2.5 x 4.16 = 10.41 mg/L

ELS Absent:
pH = 7.08 at 50th percentile and Temperature = 24.4°C
pH = 7.18 at 90th percentile

From Table 3-1 of the Basin Plan, using 90th percentile pH 7.08;
One-hour Average Objective = 30.21 mg/L

The Ammonia SSO formula replaces Table 3-2 of the Basin Plan.
Using 50th percentile pH 7.08 and temperature = 24.4°C;
30-day Average $_{SSO\ ELA\ Absent}$ = 5.15 mg/L

From Basin Plan amendment Resolution No. 2002-011;
4-day Average Objective = 2.5 times the 30-Day Ave. Obj.
4-day Average Objective = 2.5 x 5.15 = 12.88 mg/L

Ammonia Water Quality Objectives (WQO) Summary ELS Present:

One-hour Average= 28.84 mg/L
Four-day Average = 10.41 mg/L
30-day Average $_{Present}$= 4.16 mg/L

Ammonia Water Quality Objectives (WQO) Summary ELS Absent:

One-hour Average= 30.21 mg/L
Four-day Average= 12.88 mg/L
30-day Average $_{Absent}$ = 5.15 mg/L

Step 2 – For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not been allowed by the Regional Water Board, this equation applies:

ECA = WQO

Step 3 – Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with a factor (multiplier) that adjust for variability. By using Table 3-6, calculated CV (i.e., standard deviation/mean for ammonia), the following are the Effluent Concentration Allowance.

ECA multiplier when CV = 0.2393 (ELS Present)
ECA multiplier$_{One\text{-}hour\ Average}$ = 0.5939
ECA multiplier$_{Four\text{-}day\ Average}$ = 0.7632
ECA multiplier$_{30\text{-}day\ Average}$ = 0.9043

ECA multiplier when CV = 0.2362 (ELS Absent)
ECA multiplier$_{One\text{-}hour\ Average}$ = 0.5976
ECA multiplier$_{Four\text{-}day\ Average}$ = 0.7658
ECA multiplier$_{30\text{-}day\ Average}$ = 0.9055

Using the LTA equations:

ELS Present:

$LTA_{1\text{-hour/99}} = ECA_{1\text{-hour}}$ x ELA Present ECA $multiplier_{1\text{-hour99}}$
= 28.84 x 0.5939 = 17.13 mg/L

$LTA_{4\text{-day/99 ELS Present}} = ECA_{4\text{-day}}$ x ELA Present ECA $multiplier_{4\text{-day99}}$
= 10.40 x 0.7632= 7.94 mg/L

$LTA_{30\text{-day/99 ELS Present}} = ECA_{30\text{-day}}$ x ELA Present ECA $multiplier_{30\text{-day99}}$
= 4.16 x 0.9043 = 3.76 mg/L

ELS Absent:

$LTA_{1\text{-hour/99}} = ECA_{1\text{-hour}}$ x ELA Absent ECA $multiplier_{1\text{-hour99}}$
= 30.21 x 0.5976 = 18.05 mg/L

$LTA_{4\text{-day/99 ELS Absent}} = ECA_{4\text{-day}}$ x ELA Absent ECA $multiplier_{4\text{-day99}}$
= 12.88 x 0.7658= 9.86 mg/L

$LTA_{30\text{-day/99 ELS Absent}} = ECA_{30\text{-day}}$ x ELA Absent ECA $multiplier_{30\text{-day99}}$
= 4.66 x 0.9055 = 4.66 mg/L

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

ELS Present LTA_{min} = **3.76** mg/L
ELS Absent LTA_{min} = **4.66** mg/L

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

Monthly sampling frequency (n) is 30 times per month or less, and the minimum LTA is the $LTA_{30\text{-day/99}}$, therefore n = 30, ELS Present CV = .2393 and ELS Absent CV = .2362

ELS Present MDEL multiplier = 1.6837
ELA Present AMEL multiplier = 1.0735

ELS Absent MDEL multiplier = 1.6733
ELA Absent AMEL multiplier = 1.0725

ELS Present:

MDEL = LTA_{min} x $MDEL\ multiplier_{99}$ = 3.76x 1.6837 = 6.33
≈ 6.3 mg/L

AMEL = LTA_{min} x $AMEL\ multiplier_{95}$ = 3.76 x 1.0735 = 4.04
≈ 4.0 mg/L

ELS Absent:
MDEL = LTA_{min} x MDEL multiplier$_{99}$ = 4.66 x 1.6733 = 7.80
≈ 7.8 mg/L
AMEL = LTA_{min} x AMEL multiplier$_{95}$ = 4.66 x 1.0725 = 5.00
≈ 5.0 mg/L

Table F-10. Translated Ammonia Effluent Limitations with SSO Applied for San Gabriel River (Discharge Point No. 003) from San Jose Creek West Facility

Constituent	MDEL (mg/L)	AMEL (mg/L)
Ammonia Nitrogen (ELS Present April 1 – September 30)	6.3	4.0
Ammonia Nitrogen (ELS Absent October 1 – March 31)	7.8	5.0

Discharge Point No. 004 and 005: For Discharge Point Nos. 004 and 005, for San Gabriel River Reaches 4 and 5, when ELS are absent

Step 1 – Identify applicable water quality criteria.

ELS Absent:
pH = 7.14 at 50th percentile and Temperature = 24.7°C
pH = 7.23 at 90th percentile

From Table 3-1 of the Basin Plan, using 90th percentile pH 7.23;
One-hour Average Objective = 28.54 mg/L

The Ammonia formula replaces Table 3-2 of the Basin Plan.
Using 50th percentile pH 7.14 and temperature = 24.7°C;
30-day Average $_{ELA\ Absent}$= 2.88 mg/L

From Basin Plan amendment Resolution No. 2002-011;
4-day Average Objective = 2.5 times the 30-Day Ave. Obj.
4-day Average Objective = 2.5 x 2.88 = 7.21 mg/L

Ammonia Water Quality Objectives (WQO) Summary ELS Absent:

One-hour Average= 28.54 mg/L
Four-day Average= 7.21 mg/L
30-day Average $_{all\ year\ long}$ = 2.88 mg/L

Step 2 – For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not been allowed by the Regional Water Board, this equation applies:

ECA = WQO

Step 3 – Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with a factor (multiplier) that adjust for variability. By using Table 3-6, calculated CV (i.e., standard deviation/mean for ammonia), the following are the Effluent Concentration Allowance.

ECA multiplier when CV = 0.2355 (Year round)
ECA multiplier$_{\text{One-hour Average}}$= 0.5984
ECA multiplier$_{\text{Four-day Average}}$= 0.7664
ECA multiplier$_{\text{30-day Average}}$= 0.9057

Using the LTA equations:

ELS Absent:
$LTA_{\text{1-hour/99}}$= $ECA_{\text{1-hour}}$ x ELA Present ECA multiplier$_{\text{1-hour99}}$
= 28.54 x 0.5984 = 17.08 mg/L
$LTA_{\text{4-day/99 ELS Present}}$= $ECA_{\text{4-day}}$ x ELA Present ECA multiplier$_{\text{4-day99}}$ = 7.21 x 0.7664= 5.52 mg/L
$LTA_{\text{30-day/99 ELS Present}}$ = $ECA_{\text{30-day}}$ x ELA Present ECA multiplier$_{\text{30-day99}}$ = 2.88 x 0.9057 = 2.61 mg/L

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

ELS Absent LTA_{min} = **2.61** mg/L

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

Monthly sampling frequency (n) is 30 times per month or less, and the minimum LTA is the $LTA_{\text{30-day/99}}$, therefore n = 30, Year round CV = .2355

ELS Absent MDEL multiplier = 1.671
ELS Absent AMEL multiplier = 1.072

ELS Absent:
MDEL = LTA_{min} x MDEL multiplier$_{99}$ = 2.61 x 1.671 = 4.37
≈ 4.4 mg/L
AMEL = LTA_{min} x AMEL multiplier$_{95}$ = 2.61 x 1.072 = 2.801
≈ 2.8 mg/L

Table F-11. Translated Ammonia Effluent Limitations for Discharge Points Nos. 004 and 005 in San Gabriel Reach 4 and Reach 5

Constituent	MDEL (mg/L)	AMEL (mg/L)
Ammonia Nitrogen (ELS Absent)	4.4	2.8

Discharge Point Nos. , 001A and 001B: For combined effluent outfall (Discharge Point Nos. 001A and 001B) in San Gabriel Reach 2 when ELS are present and ELS are absent

Step 1 – Identify applicable water quality criteria.

For Discharge Point Nos.001A and 001B, the one day average is calculated because the CV, ECA multipliers, and LTA will be different for the ELS absent data set and the ELS present data set. However, as discussed above, the one day average calculated without a SSO will be identical for the Discharge Point Nos. 001 and 001A data sets.

ELS Present:
pH = 7.2 at 50th percentile and Temperature = 27.0°C
pH = 7.36 at 90^{th} percentile

From Table 3-1 of the Basin Plan, using 90^{th} percentile pH 7.36;
One-hour Average Objective = 24.25 mg/L

The Ammonia SSO formula replaces Table 3-2 of the Basin Plan.
Using 50^{th} percentile pH 7.2 and temperature = 27.0°C;
30-day Average $_{SSO\ ELA\ Present}$ = 4.1 mg/L

From Basin Plan amendment Resolution No. 2002-011;
4-day Average Objective = 2.5 times the 30-Day Ave. Obj.
4-day Average Objective = 2.5 x 4.1 = 10.26 mg/L

ELS Absent:
pH = 7.2 at 50th percentile and Temperature = 23.9°C
pH = 7.42 at 90^{th} percentile

From Table 3-1 of the Basin Plan, using 90^{th} percentile pH 7.42;
One-hour Average Objective = 22.34 mg/L

The Ammonia SSO formula replaces Table 3-2 of the Basin Plan.
Using 50^{th} percentile pH 7.2 and temperature = 23.9°C;
30-day Average $_{SSO\ ELA\ Absent}$ = 4.98 mg/L

From Basin Plan amendment Resolution No. 2002-011;
4-day Average Objective = 2.5 times the 30-Day Ave. Obj.
4-day Average Objective = 2.5 x 4.98 = 12.45 mg/L

Ammonia Water Quality Objectives (WQO) Summary ELS Present:

One-hour Average= 24.25 mg/L
Four-day Average = 10.26 mg/L
30-day Average $_{\text{all year long}}$ = 4.1 mg/L

Ammonia Water Quality Objectives (WQO) Summary ELS Absent:

One-hour Average= 22.34 mg/L
Four-day Average = 12.45 mg/L
30-day Average $_{\text{all year long}}$ = 4.98 mg/L

Step 2 – For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not been allowed by the Regional Water Board, this equation applies:

ECA = WQO

Step 3 – Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with a factor (multiplier) that adjust for variability. By using Table 3-6, calculated CV (i.e., standard deviation/mean for ammonia), the following are the Effluent Concentration Allowance.

ECA multiplier when CV = 0.1953 (ELS Present)
ECA multiplier$_{\text{One-hour Average}}$ = 0.6269
ECA multiplier$_{\text{Four-day Average}}$ = 0.7859
ECA multiplier$_{\text{30-day Average}}$ = 0.9144

ECA multiplier when CV = 0.1859 (ELS Absent)
ECA multiplier$_{\text{One-hour Average}}$ = 0.6769
ECA multiplier$_{\text{Four-day Average}}$ = 0.8187
ECA multiplier$_{\text{30-day Average}}$ = 0.9286

Using the LTA equations:

ELS Present:

$LTA_{\text{1-hour/99}}$ = $ECA_{\text{1-hour}}$ x ELA Present ECA multiplier$_{\text{1-hour99}}$
= 24.25 x 0.6269 = 15.20 mg/L

$LTA_{\text{4-day/99 ELS Present}}$ = $ECA_{\text{4-day}}$ x ELA Present ECA multiplier$_{\text{4-day99}}$
= 10.26 x 0.7859= 8.07 mg/L

$LTA_{\text{30-day/99 ELS Present}}$ = $ECA_{\text{30-day}}$ x ELA Present ECA multiplier$_{\text{30-day99}}$
= 4.1 x 0.9144 = 3.75 mg/L

ELS Absent:
$LTA_{1\text{-hour}/99}$ = $ECA_{1\text{-hour}}$ x ELA Absent ECA $multiplier_{1\text{-hour}99}$
= 22.34 x 0.6769 = 15.12 mg/L
$LTA_{4\text{-day}/99\ ELS\ Absent}$ = $ECA_{4\text{-day}}$ x ELA Absent ECA $multiplier_{4\text{-day}99}$
= 12.45 x 0.8187= 10.196 mg/L
$LTA_{30\text{-day}/99\ ELS\ Absent}$ = $ECA_{30\text{-day}}$ x ELA Absent ECA $multiplier_{30\text{-day}99}$
= 4.98 x 0.9286 = 4.63 mg/

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

ELS Present LTA_{min} = **3.75** mg/L
ELS Absent LTA_{min} = **4.63** mg/L

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

Monthly sampling frequency (n) is 30 times per month or less, and the minimum LTA is the $LTA_{30\text{-day}/99}$, therefore n = 30, ELS Present CV = .1953 and ELS Absent CV = .1859

ELS Present MDEL multiplier = 1.5951
ELA Present AMEL multiplier = 1.0651

ELS Absent MDEL multiplier = 1.4774
ELA Absent AMEL multiplier = 1.0536

ELS Present:
MDEL = LTA_{min} x MDEL $multiplier_{99}$ = 3.75 x 1.5951 = 5.9879
≈ 6.0 mg/L
AMEL = LTA_{min} x AMEL $multiplier_{95}$ = 3.75x 1.0651 = 3.998
≈ 4.0 mg/L

ELS Absent:
MDEL = LTA_{min} x MDEL $multiplier_{99}$ = 4.63 x 1.4774 = 6.8339
≈ 6.8 mg/L
AMEL = LTA_{min} x AMEL $multiplier_{95}$ = 4.63 x 1.0536 = 4.8738
≈ 4.9 mg/L

Table F-12. Translated Ammonia Effluent Limitations with SSO Applied for Combined Effluent Outfall (Discharge Point Nos. 001A and 001B) in San Gabriel Reach 2

Constituent	MDEL (mg/L)	AMEL (mg/L)
Ammonia Nitrogen (ELS Present April 1 – September 30)	6.0	4.0
Ammonia Nitrogen (ELS Absent October 1 – March 31)	6.8	4.9

Discharge Point Nos. 001: For combined effluent outfall (Discharge Point Nos. 001) in San Gabriel Reach 2, with limits established for the purpose of this Order for Reach 1, when ELS are absent

Step 1 – Identify applicable water quality criteria.

ELS Absent:
pH = 7.3 at 50th percentile and Temperature = 26.1°C
pH = 7.5 at 90^{th} percentile

From Table 3-1 of the Basin Plan, using 90^{th} percentile pH 7.5;
One-hour Average Objective = 19.89 mg/L

The Ammonia SSO formula replaces Table 3-2 of the Basin Plan.
Using 50^{th} percentile pH 7.3 and temperature = 26.1°C;
30-day Average $_{SSO\ ELA\ Absent}$= 5.54 mg/L

From Basin Plan amendment Resolution No. 2002-011;
4-day Average Objective = 2.5 times the 30-Day Ave. Obj.
4-day Average Objective = 2.5 x 5.54 = 13.86 mg/L

Ammonia Water Quality Objectives (WQO) Summary ELS Absent:

One-hour Average = 19.89 mg/L
Four-day Average = 13.86 mg/L
30-day Average $_{all\ year\ long}$ = 5.54 mg/L

Step 2 – For each water quality objective, calculate the effluent concentration allowance (ECA) using the steady-state mass balance model. Since mixing has not been allowed by the Regional Water Board, this equation applies:

ECA = WQO

Step 3 – Determine the Long-Term Average discharge condition (LTA) by multiplying each ECA with a factor (multiplier) that adjust for variability. By using Table 3-6, calculated CV (i.e., standard deviation/mean for ammonia), the following are the Effluent Concentration Allowance.

ECA multiplier when CV = 0.1859 (ELS Absent)
ECA multiplier$_{One\text{-}hour\ Average}$ = 0.654035
ECA multiplier$_{Four\text{-}day\ Average}$ = 0.803908
ECA multiplier$_{30\text{-}day\ Average}$ = 0.92226

Using the LTA equations:

ELS Absent:
$LTA_{1\text{-}hour/99}$= $ECA_{1\text{-}hour}$ x ELA Present ECA multiplier$_{1\text{-}hour99}$

= 19.89 x 0.654035 = 13.01 mg/L
$LTA_{4\text{-day/99 ELS Present}}$= $ECA_{4\text{-day}}$ x ELA Present ECA $multiplier_{4\text{-day99}}$
= 13.86 x 0.803908= 11.14 mg/L
$LTA_{30\text{-day/99 ELS Present}}$ = $ECA_{30\text{-day}}$ x ELA Present ECA
$multiplier_{30\text{-day99}}$ = 5.66 x 0.922263 = 5.22 mg/L

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

ELS Absent LTA_{min} = **5.22** mg/L

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

Monthly sampling frequency (n) is 30 times per month or less, and the minimum LTA is the $LTA_{30\text{-day/99}}$, therefore n = 30, ELS Present CV = .1953 and ELS Absent CV = .1859

ELS Absent MDEL multiplier = 1.529
ELA Absent AMEL multiplier = 1.059

ELS Absent:
MDEL = LTA_{min} x $MDEL\ multiplier_{99}$ = 5.22 x 1.529 = 7.98
≈ 8.0 mg/L
AMEL = LTA_{min} x $AMEL\ multiplier_{95}$ = 5.22 x 1.059 = 5.53
≈ 5.5 mg/L

Table F-13. Translated Ammonia Effluent Limitations with SSO Applied for Combined Effluent Outfall (Discharge Point No. 001) in San Gabriel Reach 2 with Reach 1 Requirements Applied

Constituent	MDEL (mg/L)	AMEL (mg/L)
Ammonia Nitrogen (ELS Absent)	6.0	4.0

(3). **Receiving Water Ammonia Limitation**

On March 2, 2011, the Regional Water Board approved the ammonia receiving water monitoring location based on the study conducted by the Permittee. The study concluded that the ammonia compliance monitoring shall be conducted 100 feet below the outfall. To ensure that downstream receiving waters are protected at all times, the Discharger shall monitor the ammonia concentrations at RSW-002, RSW-004, RSW-005, RSW-006, RSW-007, RSW-009 and RSW-011 as described in the MRP, 100 feet from the discharge outfall. The purpose of the monitoring location is to ensure that ammonia water quality objectives are met in the receiving water, even immediately downstream of the discharge when there has been little time for uptake or volatilization of ammonia in the receiving water. Concurrent sampling of ammonia, pH, and temperature will be

required at this monitoring location. The Discharger shall compare the ammonia results to Basin Plan ammonia water quality objectives, based on the real-time pH and temperature data collected at the time of ammonia sampling.

Table F-14. Summary of all Ammonia Nitrogen Effluent Limitations

Discharge Points	Conditions	MDEL (mg/L)	AMEL (mg/L)
No. 002 into San Jose Creek	ELS Present April 1 – September 30	6.1	4.2
	ELS Absent Oct 1 – March 31	7.8	5.4
No. 003 into San Gabriel River	ELS Present April 1 – September 30	6.3	4.0
	ELS Absent Oct 1 – March 31	7.8	5.0
Nos. 004 and 005 into the San Gabriel River	ELS Absent Year Round	4.4	2.8
Nos. 001, 001A and 001B into San Gabriel Reach 2	ELS Present April 1 – September 30	6.0	4.0
	ELS Absent Oct 1 – March 31	6.8	4.9
No. 001 into San Gabriel Reach 2 (With limits based on Reach 1 hydrological conditions)	ELS Absent all year	5.5	8

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. As such, the permit contains the following:

(1). Effluent Limitations:

(a) The 7-day median number of total coliform bacteria at some point at the end of the UV channel, during normal operation of the UV channel, and at the end of the chlorine contact chamber, when backup method is used, must not exceed a Most Probable Number (MPN) or Colony Forming Unit (CFU) of 2.2 per 100 milliliters,

(b) The number of total coliform bacteria must not exceed an MPN or CFU of 23 per 100 milliliters in more than one sample within any 30-day period; and

(c) No sample shall exceed an MPN of 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 limits 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.

(2). Receiving Water Limitations:

(a) Geometric Mean Limitations

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

(b) Single Sample Limitations

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

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

xii. Temperature

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

(1). 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).

(2). 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.

(3). (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.E.2. 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 Nephelometric turbidity units (NTU); (b) 5 NTU more than 5 percent of the time (72 minutes) during any 24 hour period; and (c) 10 NTU at any time" is based on the Basin Plan (page 3-17) and section 60301.320 of Title 22, chapter 3, "Filtered Wastewater" of the CCR.

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. Section 301(f) of the CWA contains the following statement with respect to effluent limitations for radioactive substances: "Notwithstanding any of other provisions of this Act it shall be unlawful to discharge any radiological, chemical, or biological warfare agent, any high-level radioactive

waste, or any medical waste, into the navigable waters." Chapter 5.5 of the CWC contains a similar prohibition under section 13375, which reads as follows: "The discharge of any radiological, chemical, or biological warfare agent into the waters of the state is hereby prohibited." However, rather than an absolute prohibition on radioactive substances, Regional Water Board staff have set the following effluent limit for radioactivity: "Radioactivity of the wastes discharged shall not exceed the limits specified in Title 22, Chapter 15, Article 5, sections 64442 and 64443, of the CCR, or subsequent revisions." The limit is based on the Basin Plan incorporation of Title 22, CCR, Drinking Water Standards, by reference, to protect the GWR beneficial use. Therefore, the accompanying Order will retain the limit for radioactivity.

c. CTR and SIP

The CTR and the SIP specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct reasonable potential analysis (RPA) to determine the need for effluent limitations for priority pollutants. The TSD also specifies procedures to conduct reasonable potential analyses.

3. Determining the Need for WQBELs

The Regional Water Board developed a WQBEL for copper, lead and selenium based upon *Total Maximum Daily Loads for Metals and Selenium in the San Gabriel River and Impaired Tributaries* (TMDL or San Gabriel River Metals TMDL). The effluent limitations for these pollutants were established regardless of whether or not there is reasonable potential for the pollutant 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 water quality-based effluent limitations for these pollutants pursuant to Part 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis. Similarly, the SIP at Section 1.3 recognizes that reasonable potential analysis is not appropriate if a TMDL has been developed.

In accordance with Section 1.3 of the SIP, the Regional Water Board conducted a reasonable potential analysis for each priority pollutant with an applicable criterion or objective to determine if a WQBEL is required in the permit. The Regional Water Board analyzed effluent data to determine if a pollutant in a discharge has a reasonable potential to cause or contribute to an excursion above a state water quality standard. For all parameters that demonstrate reasonable potential, numeric WQBELs are required. The RPA considers water quality criteria from the CTR and NTR, and when applicable, water quality objectives specified in the Basin Plan. To conduct the RPA, the Regional Water Board staff identified the maximum effluent concentration (MEC) and maximum background concentration in the receiving water for each constituent, based on data provided by the Permittee. The monitoring data cover the period from July 2009 to September 2013.

The RPA analysis requires a comparison between the criteria and the background conditions as defined by receiving water concentrations. San Jose Creek and the San Gabriel River are effluent dominated waterbodies, as such, an abundance of receiving water data may be lacking. Therefore, staff used whatever upstream receiving water data was available to conduct RPA...

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

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

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

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

Sufficient effluent and ambient data are needed to conduct a complete RPA. If data are not sufficient, the Permittee will be required to gather the appropriate data for the Regional Water Board to conduct the RPA. Upon review of the data, and if the Regional Water Board determines that WQBELs are needed to protect the beneficial uses, the permit will be reopened for appropriate modification.

The RPA was performed for the priority pollutants regulated in the CTR for which data are available and no priority pollutants demonstrated reasonable potential based on effluent concentration alone.

The CTR and the SIP specify numeric objectives for toxic substances and the procedures whereby these objectives are to be implemented. The procedures include those used to conduct reasonable potential analysis (RPA) to determine the need for effluent limitations for priority pollutants. The USEPA Technical Support Document (TSD) also specifies procedures to conduct reasonable potential analyses which are used for pollutants that are not priority pollutants. The TSD RPA may also be used for pollutants that have non-CTR based water quality objectives. Based on upstream receiving water conditions, the RPA indicated that limits are needed for Discharge Point Nos. 001/001A/001B, 002,003, 004 and 005 for Chrysene, Dibenzo(a,h)anthracene, Benzo(k)fluoranthene, and/or Indeno (1,2,3-cd) Pyrene. Based on receiving water conditions, the RPA indicated that limits are needed for Discharge Serial Nos. 004 and 005 for Arsenic, Copper and Selenium because the discharge could contribute to an exceedance of the Basin Plan water quality objective.

Total trihalomethanes data showed reasonable potential to cause or contribute to an exceedance of the Basin Plan Water Quality Objective, using the TSD methodology, for effluent from East and from the West San Jose Creek WRP. As a result, total trihalomethanes are limited at Discharge Point Nos. 001A/001B, 002 003, 004 and 005. Limits were set to protect Basin Plan Water Quality Objectives for Ammonia, Nitrate plus Nitrite and Nitrite because the facility has tier 3 RPA due to the nature of the facility as a publicly owned treatment works (POTW) and the influent composition entering the POTW.. No reasonable potential was found for other Basin Plan objectives such as Bis(2-ethylhexyl)phthalate.

RPA was not present at any discharge points for lead, but a limit was required for all the discharge points except for EFF-001 because they are either in or tributary to San Gabriel River Reach 2, where a San Gabriel Metals and Selenium TMDL limit is specified.

Discharge Point No. 001:

- A limit is needed for copper based on the 18µg/L dry weather WLA for Reach 1 of the San Gabriel River contained in the San Gabriel River Metals TMDL. Although outfall 001 is in Reach 2, it discharges to a concrete-lined section that is 920 feet upstream of Reach 1. Moreover, the TMDL WLA applicable to Reach 1 of the San Gabriel River (referred to as SGR1) was developed taking into account the load from Outfall 001, as described in section 4.1.2 - the Source Assessment section of the TMDL (on page 23) and in Table 4-4 of section 4.3 – Quantification of Sources (on page 27) of the TMDL.
- Tier 2 RPA is present for Benzo(k)fluoranthene, Dibenzo(a,g) anthracene, and indeno(1,2,3-cd)pyrene because receiving water concentrations exceeded the applicable criteria and the pollutants were present in the effluent.
- Tier 1 RPA is present for chronic toxicity because the individual effluent chronic toxicity data exceeded the 1 TUc trigger.

Discharge Points Nos. 001A and 001B:

- A limit for lead is needed based on the 166 µg/L wet weather WLA for Reach 2 of the San Gabriel River contained in the San Gabriel River Metals TMDL. The San Gabriel River Metals TMDL contains wet weather WLAs for SGR Reach 2 and all upstream reaches and tributaries. The TMDL specifies that only a Daily Maximum limit should be calculated for lead, under wet weather conditions.
- Tier 2 RPA is present for Copper, Benzo(k)fluoranthene, Dibenzo(a,h) anthracene, and indeno(1,2,3-cd)pyrene because receiving water concentrations exceeded the applicable criteria and the pollutants were present in the effluent.
- Tier 1 RPA is present for total trihalomethanes as described in the TSD RP calculations.
- Tier 1 RPA is present for chronic toxicity because the individual effluent chronic toxicity data exceeded the 1 TUc trigger.

Discharge Point No. 002:

- A limit for selenium is needed based on the 5 µg/L dry weather WLA for Reaches 1 & 2 of the San Jose Creek, contained in the San Gabriel River Metals TMDL. Permit writers translated the applicable selenium WLA into effluent limits.
- A limit for lead is needed based on the 166 µg/L wet weather WLA for Reach 2 of the San Gabriel River contained in the San Gabriel River Metals TMDL. The San Gabriel River Metals TMDL contains wet weather WLAs for SGR Reach 2 and all upstream reaches and tributaries. The TMDL specifies that only a Daily Maximum limit should be calculated for lead, under wet weather conditions.
- Tier 2 RPA is present for Chrysene, Benzo(k)fluoranthene, Dibenzo(a,h) anthracene, and indeno(1,2,3-cd)pyrene because receiving water concentrations exceeded the applicable criteria and the pollutants were present in the effluent.

- Tier 1 RPA is present for total trihalomethanes as described in the TSD RP calculations.
- Tier 1 RPA is present for chronic toxicity because the individual effluent chronic toxicity data exceeded the 1 TUc trigger.

Discharge Point No. 003:

- A limit is needed for lead based on the 166 µg/L wet weather WLA for Reach 2 of the San Gabriel River contained in the San Gabriel River Metals TMDL. The TMDL specifies that only a Daily Max limit should be calculated under wet weather conditions.
- Tier 2 RPA is present for Dibenzo(a,h) anthracene, receiving water concentrations exceeded applicable criteria and the pollutant was present in the effluent.
- Tier 1 RPA is present for total trihalomethanes as described in the TSD RP calculations.
- Tier 1 RPA is present for chronic toxicity because the individual effluent chronic toxicity data exceeded the 1 TUc trigger.

Discharge Points Nos. 004 and 005:

- A limit is needed for lead based on the 166 µg/L wet weather WLA for Reach 2 of the San Gabriel River and upstream reaches, contained in the San Gabriel River Metals TMDL. The TMDL specifies that only a Daily Maximum limit should be calculated under wet weather conditions.
- A limit is needed for arsenic to protect the GWR beneficial use for this reach. Tier 2 RPA is present because background concentrations exceed the groundwater objective and the pollutant was present in the effluent.
- A limit is needed for copper. Tier 2 RPA is present because the background receiving water concentration exceeds the CTR aquatic life criteria based on a hardness of 266 mg/L from RSW-004, and the pollutant was present in the effluent.
- A limit for selenium is also needed. Tier 2 RPA is present because the background receiving water concentration exceeds the criteria and the pollutant was present in the effluent.
- Tier 2 RPA is present for Dibenzo(a,h) anthracene, receiving water concentrations, where measures are available, exceeded applicable criteria and the pollutant was present in the effluent.
- Tier 1 RPA is present for total trihalomethanes as described in the TSD RP calculations.
- Tier 1 RPA is present for chronic toxicity because the individual effluent chronic toxicity data exceeded the 1 TUc trigger.

The following Table summarizes results from RPA for San Jose Creek East discharge at EFF-002.

Table F-15. Summary of Reasonable Potential Analysis for CTR Based Priority Pollutants at EFF-002

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[8]	RPA Result - Need Limitation?	Reason
1	Antimony	6	0.7	0.62	No	MEC<C
2	Arsenic	10	1.9	2.41	No	MEC<C
3	Beryllium	4	<.25	<.25	No	Not detected
4	Cadmium	14.31	0.26	<.2	No	MEC<C
5a	Chromium III	4019	1.63	3.6	No	MEC<C
5b	Chromium VI	11	0.13	3.26	No	MEC<C
6	Copper	36.68	6.57	7.86	No	MEC<C
7	**Lead**	300	0.79	1.38	**Yes**	**TMDL WLA**
8	Mercury	0.051	0.0029	<.04	No	MEC<C
9	Nickel	1114.28	10.6	3.37	No	MEC<C
10	**Selenium**	5	0.85	4.88	**Yes**	**TMDL WLA**
11	Silver	23.56	<0.1	<0.2	No	MEC<C
12	Thallium	2	<0.25	<.25	No	Not detected
13	Zinc	284.94	77.8	39.4	No	MEC<C
14	Cyanide	5.2	<5	<5	No	MEC<C
15	Asbestos	7x106 fibers/L	No sample		No	N/A
16	2,3,7,8-TCDD (Dioxin)	1.4E-8	<1.1E-8	<1.1E-8	No	Not detected
17	Acrolein	780	1	<2	No	MEC<C
18	Acrylonitrile	0.66	<2	<2	No	Not detected
19	Benzene	1	<.5	<.5	No	Not detected
20	Bromoform	360	1.6	<.5	No	MEC<C
21	Carbon Tetrachloride	0.5	<.25	<.5	No	Not detected
22	Chlorobenzene	21,000	<.5	<.5	No	Not detected
23	Dibromochloromethane	34	9.8	<.5	No	MEC<C
24	Chloroethane	No criteria	<.5	<.5	No	No criteria
25	2-Chloroethyl vinyl ether	No criteria	<.5	<.5	No	No criteria
26	Chloroform	No criteria	37.2	<.5	No	No criteria
27	Dichlorobromomethane	46	26.4	<.5	No	MEC<C
28	1,1-Dichloroethane	5	<.5	<.5	No	No criteria
29	1,2-Dichloroethane	0.5	<.5	<.5	No	Not detected

[8] Highest value measured at receiving water monitoring point immediately upstream at RSW-001 (C-1).

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[8]	RPA Result - Need Limitation?	Reason
30	1,1-Dichloroethylene	3.2	<.5	<.5	No	Not detected
31	1,2-Dichloropropane	5	<.5	<.5	No	Not detected
32	1,3-Dichloro-propylene	0.5	<.5	<.5	No	Not detected
33	Ethylbenzene	0.3	<0.5	<.5	No	Not detected
34	Methyl bromide	4,000	<.5	<.5	No	Not detected
35	Methyl chloride	No criteria	<.25	<.5	No	No criteria
36	Methylene chloride	1,600	0.35	<.5	No	MEC<C
37	1,1,2,2-Tetrachloroethane	1	<.5	<.5	No	Not detected
38	Tetrachloroethylene	5	<.5	<.5	No	Not detected
39	Toluene	150	<.5	6	No	B<C
40	Trans 1,2-Dichloroethylene	10	<.5	<.5	No	Not detected
41	1,1,1-Trichloroethane	200	<.5	<.5	No	Not detected
42	1,1,2-Trichloroethane	5	<.5	<.5	No	Not detected
43	Trichloroethylene	5	<.5	<.5	No	Not detected
44	Vinyl Chloride	0.5	<.5	<.5	No	Not detected
45	2-Chlorophenol	400	<.5	<.5	No	Not detected
46	2,4-Dichlorophenol	790	<.5	<.5	No	Not detected
47	2,4-Dimethylphenol	2,300	<.5	<2	No	Not detected
48	4,6-dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)	765	<.5	<.5	No	Not detected
49	2,4-Dinitrophenol	14,000	<2	<.5	No	Not detected
50	2-Nitrophenol	No criteria	<.5	<10	No	Not detected
51	4-Nitrophenol	No criteria	<.5	<10	No	Not detected
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	No criteria	<.5	<1	No	Not detected
53	Pentachlorophenol	1	<.5	<1	No	Not detected

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[8]	RPA Result - Need Limitation?	Reason
54	Phenol	4,600,000	3.7	2.3	No	MEC<C
55	2,4,6-Trichlorophenol	6.5	<10	<10	No	Not detected
56	Acenaphthene	2,700	<1	<1	No	Not detected
57	Acenaphthylene	No criteria	<10	<10	No	Not detected
58	Anthracene	110,000	<10	<10	No	Not detected
59	Benzidine	0.00054	<.2	<.02	No	Not detected
60	Benzo(a)Anthracene	0.049	<5	<5	No	Not detected
61	Benzo(a)Pyrene	0.049	<.02	<.02	No	Not detected
62	Benzo(b)Fluor-anthene	0.049	0.01	<0.02	No	MEC<C
63	Benzo(ghi)Perylene	No criteria	<5	<5	No	No criteria
64	**Benzo(k) Fluoranthene**	0.049	0.014	0.13	**Yes**	**B>C and detected in effluent**
65	Bis(2-Chloroethoxy) methane	No criteria	<5	<5	No	No criteria
66	Bis(2-Chloroethyl) Ether	1.4	<1	<1	No	Not detected
67	Bis(2-Chloroisopropyl) Ether	170,000	<2	<2	No	Not detected
68	Bis(2-Ethylhexyl) Phthalate	4.0	<2	<2	No	Not detected
69	4-Bromophenyl Phenyl Ether	No criteria	<5	<5	No	No criteria
70	Butylbenzyl Phthalate	5,200	<10	<10	No	Not detected
71	2-Chloronaphthalene	4,300	<10	<10	No	Not detected
72	4-Chlorophenyl Phenyl Ether	No criteria	<5	<5	No	No criteria
73	**Chrysene**	0.049	.011	0.12	**Yes**	**B>C and detected in effluent**
74	**Dibenzo(a,h)anthra-cene**	0.049	0.03	0.63	**Yes**	**B>C and detected in effluent**
75	1,2-Dichlorobenzene	600	<.5	<5	No	Not detected

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[8]	RPA Result - Need Limitation?	Reason
76	1,3-Dichlorobenzene	2,600	<0.16	<.5	No	Not detected
77	1,4-Dichlorobenzene	5	0.3	<.5	No	MEC<C
78	3-3'-Dichloro-benzidine	0.077	<5	<5	No	Not detected
79	Diethyl Phthalate	120,000	1	<2	No	MEC<C
80	Dimethyl Phthalate	2,900,000	<2	<2	No	MEC<C
81	Di-n-Butyl Phthalate	12,000	<10	<10	No	MEC<C
82	2-4-Dinitrotoluene	9.1	<5	<5	No	Not detected
83	2-6-Dinitrotoluene	No criteria	<5	<5	No	No criteria
84	Di-n-Octyl Phthalate	No criteria	<10	<10	No	Not detected
85	1,2-Diphenyl-hydrazine	0.54	<1	<1	No	Not detected
86	Fluoranthene	370	<1	<5	No	Not detected
87	Fluorene	14,000	<10	<5	No	Not detected
88	Hexachlorobenzene	0.00077	<1	<10	No	Not detected
89	Hexachlorobutadiene	50	<1	<1	No	Not detected
90	Hexachlorocyclo-penta-diene	17,000	<5	<1	No	Not detected
91	Hexachloroethane	8.9	<1	<10	No	Not detected
92	**Indeno(1,2,3-cd) Pyrene**	0.049	0.026	.088	**Yes**	**B>C and detected in effluent**
93	Isophorone	600	<1	<1	No	Not detected
94	Naphthalene	No criteria	<1	<1	No	No criteria
95	Nitrobenzene	1,900	<1	<5	No	Not detected
96	N-Nitrosodi-methylamine	8.1	0.36	<5	No	MEC<C
97	N-Nitrosodi-n-Propylamine	1.4	<5	<5	No	Not detected
98	N-Nitrosodi-phenylamine	16	<1	<1	No	Not detected
99	Phenanthrene	No criteria	<5	<5	No	Not detected
100	Pyrene	11,000	<10	<10	No	Not detected

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[8]	RPA Result - Need Limitation?	Reason
101	1,2,4-Trichlorobenzene	No criteria	<5	<5	No	Not detected
102	Aldrin	0.00014	<.01	<.01	No	Not detected
103	Alpha-BHC	0.013	<.01	<.01	No	Not detected
104	Beta-BHC	0.046	<.01	<.01	No	Not detected
105	Gamma-BHC (aka Lindane)	0.063	<.01	<.01	No	Not detected
106	delta-BHC	No criteria	<.01	<.01	No	Not detected
107	Chlordane	0.00059	<.05	<0.05	No	Not detected
108	4,4'-DDT	0.00059	<.01	<.01	No	Not detected
109	4,4'-DDE	0.00059	<.01	<.01	No	Not detected
110	4,4'-DDD	0.00084	<.01	<.01	No	Not detected
111	Dieldrin	0.00014	<.01	<.01	No	Not detected
112	Alpha-Endosulfan	0.056	<.01	<.01	No	Not detected
113	Beta-Endosulfan	0.056	<.01	<.01	No	Not detected
114	Endosulfan Sulfate	240	<0.01	<.01	No	Not detected
115	Endrin	0.036	<0.01	<.01	No	Not detected
116	Endrin Aldehyde	0.81	<0.01	<.01	No	Not detected
117	Heptachlor	0.00021	<.01	<.01	No	Not detected
118	Heptachlor Epoxide	0.00011	<0.01	<.01	No	Not detected
119	PCB 1016	0.00017	<.1	<.01	No	Not detected
120	PCB 1221	0.00017	<.5	<.05	No	Not detected
121	PCB 1232	0.00017	<.3	<.03	No	Not detected
122	PCB 1242	0.00017	<.1	<0.01	No	Not detected
123	PCB 1248	0.00017	<.1	<0.01	No	Not detected

CTR No.	Constituent	Applicable Water Quality Criteria (C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[8]	RPA Result - Need Limitation?	Reason
124	PCB 1254	0.00017	<.05	<.05	No	Not detected
125	PCB 1260	0.00017	<.1	<0.01	No	Not detected
126	Toxaphene	0.00075	<.5	<.05	No	Not detected

The following Table summarizes results from RPA for San Jose West discharge at EFF-003.

Table F-16. Summary of Reasonable Potential Analysis for CTR Based Priority Pollutants at EFF-003

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[9]	RPA Result Need Limitation?	Reason
1	Antimony	6	0.78	0.81*	No	MEC<C
2	Arsenic	10	1.4	2.18*	No	MEC<C
3	Beryllium	4	<.25	<.25	No	Not detected
4	Cadmium	13.62	0.43	0.25*	No	MEC<C
5a	Chromium III	3869.5	1.56	4.13*	No	MEC<C
5b	Chromium VI	11.69	.24	2.03*	No	MEC<C
6	Copper	35.19	9.08	7.72*	No	MEC<C
7	**Lead**	166	0.36	2.01*	**Yes**	**TMDL WLA**
8	Mercury	0.051	0.0036	.02*	No	MEC<C
9	Nickel	1073.46	4.19	6.55*	No	MEC<C
10	Selenium	5	0.67	4.75*	No	MEC<C
11	Silver	21.84	0.1	.03*	No	MEC<C
12	Thallium	2	<.25	<.25	No	Not detected
13	Zinc	274.48	64.3	66.1*	No	MEC<C
14	Cyanide	5.2	2.5	2.91*	No	MEC<C
15	Asbestos	$7x10^6$ fibers/L			No	N/A
16	2,3,7,8-TCDD (Dioxin)	1.4E-8	<1.2E-8	<1.2E-8	No	Not detected
17	Acrolein	780	1	<2	No	MEC<C
18	Acrylonitrile	0.66	<2	<2	No	Not detected
19	Benzene	1	<0.5	<0.5	No	Not detected
20	Bromoform	360	0.66	.69*	No	MEC<C

[9] Highest value measured at receiving monitoring point upstream at RSW-003 (R-10) or * RSW-002 (C-2).

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[9]	RPA Result Need Limitation?	Reason
21	Carbon Tetrachloride	0.5	<0.5	<0.5	No	Not detected
22	Chlorobenzene	21,000	<0.5	<0.5	No	Not detected
23	Dibromochlorometh ane	34	7.7	5.7*	No	MEC<C
24	Chloroethane	No criteria	<.5	<.5	No	No criteria
25	2-chloroethyl vinyl ether	No criteria	<.5	<.5	No	No criteria
26	Chloroform	No criteria	63.2	18.6*	No	No criteria
27	Dichlorobromometh ane	46	24.4	14.1*	No	MEC<C
28	1,1-Dichloroethane	5	<0.5	<0.5	No	Not detected
29	1,2-Dichloroethane	0.5	<0.5	<0.5	No	Not detected
30	1,1-Dichloroethylene	3.2	<0.5	<0.5	No	Not detected
31	1,2-Dichloropropane	5	<0.5	<0.5	No	Not detected
32	1,3-Dichloro-propylene	0.5	<0.5	<0.5	No	Not detected
33	Ethylbenzene	0.3	<0.5	<0.5	No	Not detected
34	Methyl bromide	4,000	<0.5	<0.5	No	Not detected
35	Methyl chloride	No criteria	0.22	<0.5	No	No criteria
36	Methylene chloride	1,600	0.93	0.62*	No	MEC<C
37	1,1,2,2-Tetrachloro-ethane	1	<.5	<.5	No	Not detected
38	Tetrachloroethylene	5	.43	<.5	No	MEC<C
39	Toluene	150	0.25	1.8*	No	MEC<C
40	Trans 1,2-Dichloro-ethylene	10	<0.5	<0.5	No	Not detected
41	1,1,1-Trichloroethane	200	<0.5	<0.5	No	Not detected
42	1,1,2-Trichloroethane	5	<0.5	<0.5	No	Not detected
43	Trichloroethylene	5	<0.5	<0.5	No	Not detected
44	Vinyl Chloride	0.5	<0.5	<0.5	No	Not detected
45	2-Chlorophenol	400	<5	<0.5	No	Not detected

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[9]	RPA Result Need Limitation?	Reason
46	2,4-Dichlorophenol	790	<5	<0.5	No	Not detected
47	2,4-Dimethylphenol	2,300	<2	<2	No	Not detected
48	4,6-Dinitro-o-resol (aka 2-methyl-4,6-Dinitrophenol)	765	<5	<0.5	No	Not detected
49	2,4-Dinitrophenol	14,000	<5	<0.5	No	Not detected
50	2-Nitrophenol	No criteria	<10	<10	No	No criteria
51	4-Nitrophenol	No criteria	<10	<10	No	No criteria
52	3-Methyl-4-Chlorophenol (aka P-chloro-m-resol)	No criteria	<1	<1	No	No criteria
53	Pentachlorophenol	1	<1	<1	No	Not detected
54	Phenol	4,600,000	2	4.2*	No	MEC<C
55	2,4,6-Trichloro-phenol	6.5	0.41	0.56*	No	MEC<C
56	Acenaphthene	2,700	<1	<1	No	Not detected
57	Acenaphthylene	No criteria	<10	<10	No	No criteria
58	Anthracene	110,000	<10	<10	No	Not detected
59	Benzidine	0.00054	<5	<5	No	Not detected
60	Benzo(a)Anthracene	0.049	<5	<5	No	Not detected
61	Benzo(a)Pyrene	0.049	<.02	<.02	No	Not detected
62	Benzo(b)Fluor-anthene	0.049	0.01	.02*	No	MEC<C
63	Benzo(ghi)Perylene	No criteria	<5	<5	No	No criteria
64	Benzo(k) Fluoranthene	0.049	.01	.029*	No	MEC<C
65	Bis(2-Chloroethoxy) methane	No criteria	<5	<5	No	No criteria
66	Bis(2-Chloroethyl)Ether	1.4	<1	<1	No	Not detected
67	Bis(2-Chloroisopropyl) Ether	170,000	<2	<2	No	Not detected
68	Bis(2-Ethylhexyl) Phthalate	.0049	<2	<2	No	Not detected
69	4-Bromophenyl phenyl ether	No criteria	<5	<5	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[9]	RPA Result Need Limitation?	Reason
70	Butylbenzyl Phthalate	5,200	<10	<10	No	Not detected
71	2-Chloro-naphthalene	4,300	<10	<10	No	Not detected
72	4-Chlorophenyl Phenyl Ether	No criteria	<5	<5	No	No criteria
73	Chrysene	0.049	<0.02	0.0045	No	MEC<C
74	**Dibenzo(a,h) Anthracene**	0.049	.017	0.1*	**Yes**	**B>C and detected in effluent**
75	1,2-Dichlorobenzene	600	<0.5	<0.5	No	Not detected
76	1,3-Dichlorobenzene	2,600	<0.5	<5	No	Not detected
77	1,4-Dichlorobenzene	5	0.25	<.5	No	MEC<C
78	3-3'-Dichloro-benzidine	0.077	<5	<5	No	Not detected
79	Diethyl Phthalate	120,000	1	<2	No	MEC<C
80	Dimethyl Phthalate	2,900,000	<2	<2	No	Not detected
81	Di-n-Butyl Phthalate	12,000	<10	<10	No	Not detected
82	2-4-Dinitrotoluene	9.1	<5	<5	No	Not detected
83	2-6-Dinitrotoluene	No criteria	<5	<5	No	No criteria
84	Di-n-Octyl Phthalate	No criteria	<10	<10	No	No criteria
85	1,2-Diphenylhydrazine	0.54	<1	<1	No	Not detected
86	Fluoranthene	370	<1	<1	No	Not detected
87	Fluorene	14,000	<10	<10	No	Not detected
88	Hexachlorobenzene	0.00077	<1	<1	No	Not detected
89	Hexachloro-butadiene	50	<1	<1	No	Not detected
90	Hexachloro-cyclopenta-diene	17,000	<5	<1	No	Not detected
91	Hexachloroethane	8.9	<1	<1	No	Not detected
92	Indeno(1,2,3-cd) Pyrene	0.049	0.021	0.045*	No	MEC<C
93	Isophorone	600	<1	<1	No	Not detected
94	Naphthalene	No criteria	<1	<1	No	Not detected

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[9]	RPA Result Need Limitation?	Reason
95	Nitrobenzene	1,900	<1	<5	No	Not detected
96	N-Nitrosodi-methylamine	8.1	0.48	<5	No	MEC<C
97	N-Nitrosodi-n-Propylamine	1.4	<5	<5	No	Not detected
98	N-Nitrosodi-phenylamine	16	<1	<1	No	Not detected
99	Phenanthrene	No criteria	<5	<5	No	Not detected
100	Pyrene	11,000	<10	<10	No	Not detected
101	1,2,4-Trichlorobenzene	No criteria	<5	<5	No	Not detected
102	Aldrin	0.00014	<0.01	<0.01	No	Not detected
103	Alpha-BHC	0.013	<0.01	<0.01	No	Not detected
104	Beta-BHC	0.046	<0.01	<0.01	No	Not detected
105	Gamma-BHC (aka Lindane)	0.063	0.01	<0.01	No	MEC<C
106	Delta-BHC	No criteria	<0.01	<0.01	No	No criteria
107	Chlordane	0.00059	<0.05	<0.05	No	Not detected
108	4,4'-DDT	0.00059	<0.01	<0.01	No	Not detected
109	4,4'-DDE	0.00059	<0.01	<0.01	No	Not detected
110	4,4'-DDD	0.00084	<0.01	<0.01	No	Not detected
111	Dieldrin	0.00014	<0.01	<0.01	No	Not detected
112	Alpha-Endosulfan	0.056	<0.01	<0.01	No	Not detected
113	Beta-Endosulfan	0.056	<0.01	<0.01	No	Not detected
114	Endosulfan Sulfate	240	<0.01	<0.01	No	Not detected
115	Endrin	0.036	<0.01	<0.01	No	Not detected
116	Endrin Aldehyde	0.81	<0.01	<0.01	No	Not detected
117	Heptachlor	0.00021	<0.01	<0.01	No	Not detected

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[9]	RPA Result Need Limitation?	Reason
118	Heptachlor Epoxide	0.00011	<0.01	<0.01	No	Not detected
119	PCB 1016	0.00017	<1	<0.01	No	Not detected
120	PCB 1221	0.00017	<0.05	<0.05	No	Not detected
121	PCB 1232	0.00017	<0.3	<0.03	No	Not detected
122	PCB 1242	0.00017	<0.1	<0.01	No	Not detected
123	PCB 1248	0.00017	<0.1	<0.01	No	Not detected
124	PCB 1254	0.00017	<0.05	<0.05	No	Not detected
125	PCB 1260	0.00017	<0.1	<0.01	No	Not detected
126	Toxaphene	0.00075	<0.5	<0.5	No	Not detected

The RPA for EFF-002 (Table F-1) and EFF-003 (Table F-2) apply to EFF-001. In addition, the following Table summarizes additional requirements from RPA for San Jose West and East discharge at EFF-001. Note that among all the outfalls, EFF-001 is the only discharge point which does not have a reasonable potential to exceed the lead criteria, because the San Gabriel Metals TMDL does not apply a lead WLA to Reach 1 of the San Gabriel River.

Table F-17. Summary of Further Reasonable Potential Analysis for CTR Based Priority Pollutants at EFF-001

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[10]	RPA Result - Need Limitation?	Reason
6	**Copper (dry weather)**	12.44	9.08	23.4	**YES**	**TMDL**
64	**Benzo(k) Fluoranthene**	0.049	0.01	0.063	**YES**	**B>C and detected in effluent**
74	**Dibenzo(a,h)anthracene**	0.049	0.03	0.12	**Yes**	**B>C and detected in effluent**

[10] Highest value measured at receiving monitoring point upstream of RSW-004 (R-11).

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[10]	RPA Result - Need Limitation?	Reason
92	Indeno(1,2,3-cd)Pyrene	0.049	0.026	0.08	YES	B>C and detected in effluent

The RPA for EFF-002 (Table F-1) and EFF-003 (Table F-2) apply to EFF-001A and EFF-001B. In addition, the following Table summarizes additional requirements from RPA for San Jose West and East discharge at EFF-001A and EFF-001B.

Table F-18. Summary of Further Reasonable Potential Analysis for CTR Based Priority Pollutants at EFF-001A and EFF-001B

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[11]	RPA Result - Need Limitation?	Reason
6	Copper	9.08	12.44	23.4	YES	B>C and detected in effluent
7	Lead (wet weather)	4.88	.36	1.91	YES	TMDL
64	Benzo(k) Fluoranthene	0.049	0.01	0.063	YES	B>C and detected in effluent
74	Dibenzo(a,h)anthracene	0.049	0.03	0.12	Yes	B>C and detected in effluent
92	Indeno(1,2,3-cd)Pyrene	0.049	0.026	0.08	YES	B>C and detected in effluent

[11] Highest value measured at receiving monitoring point upstream of RSW-004 (R-11).

The RPA for EFF-003 (Table F-2) applies to EFF-004 and EFF-005. In addition, the following table summarizes additional requirements from RPA for San Jose West discharge at EFF-004 and EFF-005 as described below and in the following table.

Table F-19. Summary of Further Reasonable Potential Analysis for CTR Based Priority Pollutants at Proposed Discharge Points Nos. EFF-004 and EFF-005

CTR No.	Constituent	Applicable Water Quality Criteria(C) µg/L	Max Effluent Conc. (MEC) µg/L	Maximum Detected Receiving Water Conc.(B) µg/L[12]	RPA Result - Need Limitation?	Reason
2	Arsenic	10	1.4	13.4	YES	B>C and detected in effluent
6	Copper	12.44	9.08	23.4	YES	B>C and detected in effluent
7	Lead (wet weather)	4.88	0.36	1.91	YES	TMDL
10	Selenium	5	0.0675	6.1	YES	B>C and detected in effluent

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. **Multiple Discharge Points**

      RPA was performed and separate effluent limits were established for Discharge Point Nos. 001, 001A and 001B, Discharge Point No. 002, Discharge Point 003, Discharge Point 004 and Discharge Point 005. Each of these discharge points go to different waterbodies (San Gabriel River Reach 2, San Jose Creek Reach 1, San Gabriel Reach 3, San Gabriel River Reach 4, and San Gabriel River Reach 5, respectively) where different TMDL-based waste load allocations apply.

   c. **San Gabriel River Metals.**

      Implementation Recommendations of the EPA-established metals TMDLs for San Gabriel River and Impaired Tributaries describes the implementation procedures and regulatory mechanisms that could be used to provide reasonable assurances that water quality standards will be met. For POTWs NPDES permits, USEPA suggest that permit writers could translate waste load allocations (WLAs) into

[12] Highest value measured at receiving monitoring point at the upstream SGRRMP station SGUT505.

effluent limits by applying the SIP procedures or other applicable engineering practices authorized under federal regulations.

According to Table 2-9, Summary of dry-weather and wet-weather impairments, San Gabriel River Reach 2 has only wet-weather impairment for lead. There is reasonable potential for lead because a TMDL WLA has been developed (Tier 3) for Reach 2. This WLA applies in San Gabriel River Reach 2 and all upstream reaches and tributaries. Therefore, an effluent limitation has been prescribed for lead at all of the discharge points except for Discharge Point No. 001. The effluent limit calculations are consistent with the San Gabriel River Metals TMDL implementation procedure. The final effluent limitations for lead shall apply to wet-weather conditions only. Wet-weather is defined as the condition in the San Gabriel River when maximum daily flow at the United States Geological Survey gauging station 11087020 is equal to or greater than 260 cubic feet per second. The San Gabriel River Metals TMDL on page 17 indicated that the USGS gauge station located just above Whittier Narrow Dam (station 11085000) is the best indicator of wet-weather flow conditions. However, USGS station 11085000 is actually located below Santa Fe Dam in Baldwin Park. The USGS flow gauging station above Whittier Narrows Dam in Reach 3 is 11087020. Therefore, for flow monitoring purpose, and for determination of wet-weather flow conditions, USGS station 11087020 will be used.

San Jose Creek Reach 1 has TMDL wasteload allocations for selenium in dry weather impairment. Therefore, limits were set for selenium in Discharge Serial No. 002, which discharges to San Jose Creek Reach 1.

The San Gabriel River Metals TMDL developed WLAs for copper, lead, and selenium in select upstream reaches and tributaries to meet TMDLs in downstream reaches. Receiving water concentrations above Discharge Points Nos. 004 and 005 exceeded copper and selenium water quality objectives and the constituents are present in the effluent at EFF-003. While copper and selenium are limited in applicable TMDLs, limits were applied at EFF-004 and EFF-005 because they show reasonable potential to exceed the water quality criteria (Tier 2) and not to meet TMDL waste loads..

d. **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 (starting on page 6) lists the statistical equations that adjust CTR criteria for effluent variability.

Step 5 of section 1.4 of the SIP (starting on page 8) lists the statistical equations that adjust CTR criteria for averaging periods and exceedance frequencies of the criteria/objectives. This section also reads, "For this method only, maximum daily effluent limitations shall be used for publicly-owned treatment works (POTWs) in place of average weekly limitations."

Sample calculation for Lead for Discharge Point No. 002:

Step 1: Identify applicable water quality criteria

The California Toxics Rule (CTR) gives the Criterion Maximum Concentration (CMC) and the Criterion Continuous Concentration (CCC).

Freshwater Aquatic Life Criteria for lead.
CMC = 300.05 (CTR page 31712, column B1) and
CCC = 11.69 (CTR page 31712, column B1)
The above values are based upon hardness average value of 278 mg/L of the receiving water.

Step 2: Calculate effluent concentration allowance (ECA)
ECA = Criteria in TMDL, since no dilution is allowed.

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

CV = Standard Deviation/Mean = .439
ECA Multiplier acute = 0.4113554 and
ECA Multiplier chronic = 0.6181632
LTA acute = ECA acute x ECA Multiplier acute
= 300.05 µg/L x 0.4113554 = 123.427 µg/L
LTA chronic = ECA chronic x ECA Multiplier chronic
= 11.69 µg/L x 0.6181632= 7.226 µg/L
Step 4: Select the lowest LTA, which is 7.226 µg/L.
Step 5: Calculate the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for AQUATIC LIFE
Find the multipliers.
AMEL Multiplier = 1.3955501
MDEL Multiplier = 2.4309879
AMEL aquatic life = lowest LTA (from Step 4) x AMEL Multiplier
= 7.226 µg/L x 1.3955501= 10.085 µg/L
MDEL aquatic life = lowest LTA (from Step 4) x MDEL Multiplier
= 7.226 µg/L x 2.4309879= 17.567 µg/L
Step 6: Find the Average Monthly Effluent Limitation (AMEL) & Maximum Daily Effluent Limitation (MDEL) for HUMAN HEALTH
It is not available, due to no human health CTR.
Step 7: Compare the AMELs for Aquatic life and Human health and select the lowest. Compare the MDELs for Aquatic life and Human health and select the lowest
Lowest AMEL = 10.1 µg/L (Based on Aquatic Life protection)
Lowest MDEL = 17.6 µg/L (Based on Aquatic Life protection)

The San Gabriel Metals and Selenium TMDL includes a concentration limit for lead which applies to the downstream Reach 2 of the San Gabriel River and all upstream reaches and tributaries. The TMDL also states that "Wet-weather allocations will be developed for all upstream reaches and tributaries in the

watershed that drain to impaired reaches during wet weather (pg. 16)." A wet-weather lead limit is also applied at the Pomona Water Reclamation Plant upstream on San Jose Creek. The TMDL concentration limit for lead is applied at this outfall during wet weather conditions.

e. **Impracticability Analysis**

Federal NPDES regulations contained in 40 CFR § 122.45 for continuous discharges, states that all permit limitations, standards, and prohibitions for POTWs, including those to achieve water quality standards, shall unless impracticable be stated as average weekly and average monthly discharge limitations for all dischargers 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 reason, 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 for mercury because it is considered to be a carcinogen, endocrine disruptor, and is bioaccumulative.

A 7-day average alone would not protect one, two, three, or four days of discharging pollutants in excess of the acute and chronic criteria. Fish exposed to these endocrine disrupting chemicals will be passed on to the human consumer. Endocrine disrupters alter hormonal functions by several means. These substances can:

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.

f. **Mass-based limits.**

40 CFR § 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 § 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-20. Summary of Water Quality Based Effluent Limits at EFF-001, EFF-001A and EFF-001B

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Min.	Instan-taneous Max.
Water Quality-Based Effluent Limitations Applicable to Discharge Points 001, 001A and 001B						
Benzo(k)fluoranthene	µg/L	0.049	--	0.098	--	--
	lbs/day	0.04	--	0.08	--	--
Dibenzo(a,h)anthracene	µg/L	0.049	--	0.098	--	--
	lbs/day	0.04	--	0.08	--	--
Indeno(1,2,3cd) pyrene	µg/L	0.049	--	0.098	--	--
	lbs/day	0.04	--	0.08	--	--
Chronic Toxicity[13]	Pass or Fail, % Effect (TST)	Pass[14]	--	Pass or % Effect <50	--	--
Water Quality-Based Effluent Limitations Applicable to Discharge Points 001 ONLY						
Ammonia Nitrogen (ELS absent)	mg/L	5.5	--	8	--	--
	lbs/day	4,587[15]	--	6,670	--	
Copper (dry weather)[15]	µg/L	17	--	22	--	--

[13] 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."

[14] This is a Median Monthly Effluent Limitation.

[15] This final effluent limitation for copper is derived from the final waste load allocation, as set forth in the SGR Metals TMDL. The copper limit only applies during dry weather when the flow is less than 260 cfs.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Min.	Instan-taneous Max.
Water Quality Based Effluent Limitations Applicable to Discharge Points 001A and 001B ONLY						
MBAS	mg/L	.5	--	--	--	--
	lbs/day	417	--	--	--	--
Ammonia Nitrogen (ELS present)	mg/L	4.0[16]	--	6.0	--	--
	lbs/day[17]	3,336	--	5,004	--	--
Ammonia Nitrogen (ELS absent)	mg/L	4.9[18]	--	6.8	--	--
	lbs/day[18]	4,057	--	5,671	--	--
Nitrate plus Nitrite as Nitrogen	mg/L	8	--	--	--	--
	lbs/day[17]	6,670	--	--	--	--
Nitrite (as N)	mg/L	1	--	--	--	--
	lbs/day[17]	830	--	--	--	--
Lead (wet weather)	µg/L	--	--	166[19]	--	--
Copper	µg/L	18	--	24	--	--
	lbs/day[17]	15	--	20	--	--
Total Trihalomethanes	µg/L	80[20]	--	--	--	--
	lbs/day[17]	66,720	--	--	--	--

[16] This seasonal final effluent limitation is derived from the site specific objective for ammonia nitrogen, when early life stage fish are **present (ELS present)**, contained in Regional Board Resolution No. 2007-005 and translated according to the procedures contained in the Implementation Section of Resolution No. 2002-011. This limitation applies from April 1 through September 30.

[17] The mass emission rates are based on the combined plant design flow rate of 100 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.

[18] This seasonal final effluent limitation is derived from the site specific objective for ammonia nitrogen, when early life stage fish are **absent (ELS absent)**, contained in Regional Board Resolution No. 2007-005 and translated according to the procedures contained in the Implementation Section of Resolution No. 2002-011. This limitation applies from October 1 through March 31.

[19] This final effluent limitation for lead is derived from the wet weather final waste load allocation, as set forth in the *SGR Metals TMDL)*. Consistent with the Implementation Recommendations of the *SGR Metals TMDL*, the wet weather waste load allocation was translated into effluent limitations by applying the SIP procedures. This effluent limitation applies only during wet weather, when the flow in the San Gabriel River is greater than or equal to 260 cubic feet per second (cfs), measured at USGS flow gauging station 11087020, located above the Whittier Narrows dam. The effluent load is given as a concentration, so calculation of a mass load is not consistent with the TMDL.

[20] Total Trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

Table F-21. Summary of Water Quality Based Effluent Limits at EFF-002

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Min.	Instantaneous Max.
Ammonia Nitrogen (ELS present)	mg/L	4.2[21]	--	6.1	--	--
	lbs/day[22]	2,190	--	3,180	--	--
Ammonia Nitrogen (ELS absent)	mg/L	5.4[23]	--	7.8	--	--
	lbs/day[22]	2,810	--	4,070	--	--
Nitrate plus Nitrite as nitrogen	mg/L	8	--	--	--	--
	lbs/day[22]	4170	--	--	--	--
Nitrite (as N)	mg/L	1	--	--	--	--
	lbs/day[22]	520	--	--	--	--
MBAS	mg/L	0.5	--	--	--	--
	lbs/day[22]	261	--	--	--	--
Lead [Wet weather]	µg/L	--	--	166[24]	--	--
Selenium [Dry weather]	µg/L	4.6	--	6.5	--	--
	lbs/day[22]	2.4	--	3.4	--	--
Chrysene	µg/L	0.049	--	0.098	--	--
	lbs/day[22]	0.026	--	0.051	--	--
Dibenzo(a,h) anthracene	µg/L	0.049	--	0.098	--	--
	lbs/day[22]	0.026	--	0.051	--	--
Indeno(1,2,3cd) pyrene	µg/L	0.049	--	0.098	--	--
	lbs/day[22]	0.026	--	0.051	--	--
Benzo(k) fluoranthene	µg/L	0.049	--	0.098	--	--
	lbs/day[22]	0.026	--	0.051	--	--

[21] This seasonal final effluent limitation is derived from the site specific objective for ammonia nitrogen, when early life stage fish are **present (ELS present)**, contained in Regional Board Resolution No. 2007-005 and translated according to the procedures contained in the Implementation Section of Resolution No. 2002-011. This limitation applies from April 1 through September 30.

[22] The mass emission rates are based on the San Jose Creek East plant design flow rate of 62.5 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.

[23] This seasonal final effluent limitation is derived from the site specific objective for ammonia nitrogen, when early life stage fish are **absent (ELS absent)**, contained in Regional Board Resolution No. 2007-005 and translated according to the procedures contained in the Implementation Section of Resolution No. 2002-011. This limitation applies from October 1 through March 31.

[24] This final effluent limitation for lead is derived from the wet weather final waste load allocation, as set forth in the *SGR Metals TMDL)*. Consistent with the Implementation Recommendations of the *SGR Metals TMDL*, the wet weather waste load allocation was translated into effluent limitations by applying the SIP procedures. This effluent limitation applies only during wet weather, when the flow in the San Gabriel River is greater than or equal to 260 cubic feet per second (cfs), measured at USGS flow gauging station 11087020, located above the Whittier Narrows dam.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Min.	Instantaneous Max.
Total Trihalomethanes	µg/L	80[25]	--	--	--	--
	lbs/day[22]	41.7	--	--	--	--
Chronic Toxicity[26]	Pass or Fail, % Effect (TST)	Pass[27]	--	Pass or % Effect <50	--	--

Table F-22. Summary of Water Quality Based Effluent Limits at EFF-003, EFF-004, and EFF-005

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Min.	Instantaneous Max.
Nitrate plus Nitrite as Nitrogen	mg/L	8	--	--	--	--
	lbs/day[32]	2,500	--	--	--	--
Nitrite (as N)	mg/L	1	--	--	--	--
	lbs/day[32]	312	--	--	--	--
MBAS	mg/L	0.5	--	--	--	--
	lbs/day[32]	156	--	--	--	--
Lead [Wet weather]	µg/L	--	--	166[28]	--	--
Dibenzo(a,h)anthracene	µg/L	0.049	--	0.098	--	--
	lbs/day[32]	0.02	--	0.03	--	--
Total Trihalomethanes	µg/L	80	--	--	--	--
	lbs/day[32]	25.0	--	--	--	--

[25] Total Trihalomethanes is the sum of concentrations of the trihalomethane compounds: bromodichloromethane, bromoform, chloroform, and dibromochloromethane.

[26] 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."

[27] This is a Median Monthly Effluent Limitation.

[28] This final effluent limitation for lead is derived from the wet weather final waste load allocation, as set forth in the *SGR Metals TMDL)*. Consistent with the Implementation Recommendations of the *SGR Metals TMDL*, the wet weather waste load allocation was translated into effluent limitations by applying the SIP procedures. This effluent limitation applies only during wet weather, when the flow in the San Gabriel River is greater than or equal to 260 cubic feet per second (cfs), measured at USGS flow gauging station 11087020, located above the Whittier Narrows dam.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Min.	Instan-taneous Max.
Chronic Toxicity[29]	Pass or Fail, % Effect (TST)	Pass[30]	--	Pass or % Effect<50	--	--
Water Quality Based Effluent Limitations Applicable to Discharge Points 003 ONLY						
Ammonia Nitrogen (ELS present)	mg/L	4.0[31]	--	6.3	--	--
	lbs/day[32]	1,250	--	1,970	--	--
Ammonia Nitrogen (ELS absent)	mg/L	5.0[33]	--	7.8	--	--
	lbs/day[32]	1,560		2,440	--	--
Total dissolved solid	mg/L	750	--	--	--	--
	lbs/day[32]	235,000	--	--	--	--
Sulfate	mg/L	300	--	--	--	--
	lbs/day[32]	93,800	--	--	--	--
Chloride	mg/L	180	--	--	--	--
	lbs/day[32]	56,300	--	--	--	--
Boron	mg/L	1	--	--	--	--
	lbs/day[32]	313	--	--	--	--
Water Quality Based Effluent Limitations Applicable to Discharge Points 004 and 005 ONLY						
Ammonia Nitrogen (ELS absent)	mg/L	4.4	--	2.8	--	--
	lbs/day[32]	1380	--	880	--	--

[29] 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."

[30] This is a Median Monthly Effluent Limitation.

[31] This seasonal final effluent limitation is derived from the site specific objective for ammonia nitrogen, when early life stage fish are **present (ELS present)**, contained in Regional Board Resolution No. 2007-005 and translated according to the procedures contained in the Implementation Section of Resolution No. 2002-011. This limitation applies from April 1 through September 30.

[32] The mass emission rates are based on the San Jose Creek West plant design flow rate of 37.5 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.

[33] This seasonal final effluent limitation is derived from the site specific objective for ammonia nitrogen, when early life stage fish are **absent (ELS absent)**, contained in Regional Board Resolution No. 2007-005 and translated according to the procedures contained in the Implementation Section of Resolution No. 2002-011. This limitation applies from October 1 through March 31.

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Min.	Instantaneous Max.
Arsenic	µg/L	10	--	--	--	--
	lbs/day[32]	3.1	--	--	--	--
Copper	µg/L	20	--	26	--	--
	lbs/day[32]	6.3	--	8.1	--	--
Selenium	µg/L	4.5	--	6.9	--	--
	lbs/day[32]	1.4	--	2.2	--	--
Total dissolved solids	mg/L	450	--	--	--	--
	lbs/day[32]	140,700	--	--	--	--
Sulfate	mg/L	100	--	--	--	--
	lbs/day[32]	31,130	--	--	--	--
Chloride	mg/L	100	--	--	--	--
	lbs/day[32]	31,130	--	--	--	--
Boron	mg/L	0.5	--	--	--	--
	lbs/day[32]	156	--	--	--	--

5. Whole Effluent Toxicity (WET)

Whole effluent toxicity (WET) testing protects receiving waters from the aggregate toxic effect of a mixture of pollutants in the effluent. An acute toxicity test is conducted over a short time period and measures mortality. A chronic toxicity test is conducted over a short or a longer period of time and may measure mortality, reproduction, and growth. A chemical at a low concentration could have chronic effects but no acute effects until the chemical was at a higher concentration. Because of the nature of industrial discharges into the POTW sewershed, it is possible that toxic constituents could be present in the San Jose Creek WRP effluent, or could have synergistic or additive effects.

A total of 83 chronic and four acute whole effluent toxicity (WET) tests and 74 chronic and four acute toxicity test were conducted on San Jose Creek East WRP and San Jose Creek West WRP final effluent, respectively, between January 2009 and 2013. No exceedances of the 1.0 TUc monthly median accelerated testing trigger were reported in the effluent from either plant. However, a reasonable potential was identified for toxicity exceedances because endpoint TUcs, recorded for a single species on a specific day, were recorded above 1 TUc at both plants.

Sampling of East WRP effluent on March 6, 2012 showed a TUc for Pimpephales growth of 1.3. Accelerated testing did not duplicate this result. On November 10, 2009, the Ceriodaphnia reproductive test had a TUc greater than 5 and was part of a single sampling event that month, but no accelerated sampling was conducted. On September 8, 2011 anomalous results were reported, but additional monitoring did not reveal the cause of the toxicity.

Sampling of San Jose Creek West WRP effluent on August 12, 2010, and May 10, 2011, showed Ceriodaphnia reproduction TUc of 2.5 and 1.3, respectively, but the observations were not duplicated during accelerated testing. On October 15, 2009,

Ceriodaphnia reproduction tests had a TUc of 1.3 and were part of a single sampling event that month, but no accelerated sampling was conducted. On September 10 and December 10 of 2009, invalid tests were reported, but no additional monitoring was conducted during the month.

The 2009 permit contained final effluent limitations for both acute toxicity and chronic toxicity, but the 2015 permit only contains final effluent limitations for chronic toxicity, expressed as a median monthly and a maximum daily, since chronic toxicity is a more stringent requirement than acute toxicity. Removal of the numeric acute toxicity effluent limitations from the 2009 permit does not constitute backsliding because of this.Effluent limitations for chronic toxicity were established because effluent data showed that there is reasonable potential for the chronic toxicity to be present in the discharge at levels that would cause or contribute to a violation of the water quality standard. The Permittee's past compliance summary is discussed in greater detail in section II.D. of this Fact Sheet.

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 San Jose Creek WRP 2009 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 limits for chronic toxicity and has adopted numeric chronic toxicity effluent limits for industrial facilities and POTWs with TMDL WLAs of 1 TUc; and the Santa Ana Regional Water Board adopted an NPDES permit for a POTW incorporating TST-based effluent limits for chronic toxicity. In addition to these and other 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 because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the toxicity water quality objective. The San Jose Creek WRP 2015 permit contains numeric chronic toxicity effluent limitations. Compliance with the chronic toxicity requirements contained in the 2015 Order shall be determined in accordance with sections VII.J of the WDR.

On July 7, 2014, the Chief Deputy of the Water Quality Division announced that the State Water Board would be releasing a revised version of the Chronic Toxicity Plan for public comment within a few weeks. Regional Water Board staff await its release. Because effluent data exhibited reasonable potential to cause or contribute to an exceedance of the water quality objective, the San Jose WRP 2015 permit contains numeric chronic toxicity effluent limitations. Compliance with the chronic toxicity requirement contained in the 2015 Order shall be determined in accordance to sections VII.J of the WDR.Never the less, this Order contains a reopener to require 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 median monthly effluent limitation and a maximum daily effluent limitation that utilizes USEPA's 2010 Test of Significant Toxicity (TST) hypothesis testing approach. The chronic toxicity effluent limitations are expressed as "Pass" for the median monthly summary results and as "Pass" or "<50% Effect" for each maximum daily individual results.

In January 2010, USEPA published a guidance document titled; "*EPA Regions 8, 9 and 10 Toxicity Training Tool*," which among other things discusses permit limit expression for chronic toxicity. The document acknowledges that NPDES regulations at 40 CFR 122.45(d) require that all permit limits be expressed, unless impracticable, as an average weekly limit (AWL) and Average Monthly Limitation (AML) for POTWs. Following Section 5.2.3 of the Technical Support Document (TSD), the use of an AWL is not appropriate for WET. In lieu of an AWL for POTWs, USEPA recommends establishing a Maximum Daily Limitation (MDL) 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 standard. 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 AWL, 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 MDL is the highest allowable value for the discharge measured during a calendar day or 24-hour period representing a calendar day. The AML 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, EPA Regions 8, 9 and 10 continue to recommend that the AML for chronic WET should be expressed as a median monthly limit (MML).

Later in June 2010, USEPA published another guidance document titled, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, June 2010), in which they recommend the following: "Permitting authorities should consider adding the TST approach to their implementation procedures for analyzing valid WET data for their current NPDES WET Program." The TST approach is another statistical option for analyzing valid WET test data. Use of the TST approach does not result in any changes to USEPA's WET test methods. Section 9.4.1.2 of USEPA's *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to 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 present.[34] 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, EPA provided guidance for such reviews to ensure that test endpoints for determining toxicity based on the statistical approaches utilized at the time the guidance was written (NOEC, LC50's, 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 ten 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: that calculated effect concentrations are reliable and should be reported, that calculated effect concentrations are anomalous and should be explained, or 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 EPA'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 TSTstatistical approach, application of EPA'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-

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

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 122.44(h)). As described in the bioassay laboratory audit directives to the San Jose Creek Water Quality Laboratory from the State Water Resources Control Board dated August 7, 2014, and from the USEPA dated December 24, 2013, the PMSD criteria only apply to compliance for NOEC and the sublethal endpoints of the NOEC, and therefore are not used to interpret TST results.

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

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 § 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of the relaxation of effluent limitations for copper at EFF 001/001A/001B; lead at EFF-001A, EFF-1B and EFF-002; ammonia as nitrogen at EFF-002 and EFF-003; and selenium at EFF 002. In addition, several effluent limitations are removed from this Order: effluent limitations at EFF-001 for selenium, lead, MBAS, TDS, sulfate, chloride, boron, nitrite as nitrogen; EFF-001A and EFF-001B for selenium; and EFF-003 for selenium.

Sections 402(o)(2) and 303(d)(4) of the Clean Water Act provides statutory exceptions to the general prohibition of backsliding contained in CWA section 402(o)(1). One of these exceptions allows backsliding if "information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance" (Section (B)(i)).). A second exception is found in section 303(d)(4)(B) which allows revision of effluent limitations based on a water quality standard, where the quality of the receiving water equals or exceeds levels necessary to protect designated uses, if such revision is subject to and consistent with the antidegradation policy. A third exception found in section 303(d)(4)(A) allows the revision of an effluent limitation based on a total maximum daily load if the cumulative effect of all such revised effluent

limitations based on the total maximum daily load will assure the attainment of the water quality standard. The effluent limitations for discharges from EFF-001 are revised to be consistent with the waste load allocations and water quality standards for discharges to Reach 1 of the San Gabriel River. A concrete apron at the outfall prevents groundwater recharge. As a result, beneficial uses and water quality objectives from Reach 1, which has a concrete lined bottom, were applied to discharges from EFF-001. The previous more stringent limits for nitrate plus nitrite as nitrogen and limits for Total Dissolved Solids, Sulfate, Chloride, and Boron-are no longer justified because there are no applicable water quality objectives for Reach 1 of the San Gabriel River. The previous more stringent limit for MBAS is no longer justified because it protects the groundwater recharge beneficial use. This information would have justified the application of a less stringent effluent limitation at the time the previous permit was issued. The effluent limitations for lead, copper, and selenium are based on a revised interpretation of the San Gabriel River Metals TMDL. The cumulative effect of the revised effluent limitations will assure attainment of the water quality standard, and is therefore consistent with CWA section 303(d)(4)(A). Relaxed effluent limitations for ammonia nitrogen are based on new monitoring information and updated coefficients of variation. This information would have justified the application of a less stringent effluent limitation at the time the previous permit was issued. The removal of effluent limitations for discharges from EFF-001A, EFF-001B, and EFF-003 are based on a revised reasonable potential analysis.

2. Antidegradation

40 CFR § 131.12 requires that state water quality standards include an antidegradation policy consistent with the federal antidegradation policy. On October 28, 1968, the State Water Board established California's antidegradation policy when it adopted Resolution 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 § 131.12. Similarly, CWA section 303(d)(4)(B) and 40 CFR § 131.12 require that all permitting actions be consistent with the federal antidegradation policy. Together, the state and federal antidegradation policies are designed to ensure that a water body will not be degraded resulting from the permitted discharge. The Regional Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies.

San Gabriel River is included on the 303(d) list for many pollutants. The renewal of this NPDES permit is consistent with the anti-degradation policy because it is not expected to allow degradation of receiving water quality. No reduction in the existing level of wastewater treatment is anticipated. Relaxation of the effluent limitations as described in the prior section of this Fact Sheet will continue to assure the attainment of water quality standards where the quality of the receiving water is impaired for that pollutant.

Effluent limitations for discharges from EFF-001, for MBAS, nitrite as nitrogen, and nitrate plus nitrite as nitrogen, TDS, sulfate, chloride, boron, lead, and selenium are based on new information about the outfall construction and are revised to be consistent with the waste load allocations and water quality standards for discharges to Reach 1 of the San Gabriel River. A concrete apron at the outfall prevents groundwater recharge. As a result, beneficial uses and water quality objectives from Reach 1, which has a concrete

lined bottom, were applied to discharges from EFF-001. Application of the water quality standards and waste load allocations for Reach 1 will protect beneficial uses in the receiving water and appropriately reflect the concrete-lined character of the river downstream of the outfall. The relaxation of these effluent limitations are consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than that prescribed by the Basin Plan. The effluent limitations require the best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and the highest quality of water consistent with maximum benefit to the people of the state will be maintained.

The removal of effluent limitations for discharges from EFF-001A, EFF-001B, and EFF-003 for selenium is based on a revised reasonable potential analysis. These discharges are not expected to degrade receiving water quality based on monitoring data acquired over the prior permit term.

The relaxation of the effluent limitation from EFF-002 and EFF-003 for ammonia nitrogen is consistent with maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial uses, and will not result in water quality less than that prescribed by the SSOs The effluent limitation for ammonia nitrogen requires the best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and the highest quality of water consistent with maximum benefit to the people of the state will be maintained. Existing instream uses and the level of water quality necessary to protect the existing uses will be maintained and protected. Any lowering of water quality allowed by this Order is necessary to accommodate important economic and social development in the area, and water quality will continue to protect existing uses fully.

3. Stringency of Requirements for Individual Pollutants

This Order contains both TBELs and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD, TSS, pH, and percent removal of BOD and TSS. Restrictions on BOD, TSS and pH are discussed in section IV.B. of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards.

Water quality-based effluent limitations have been scientifically derived to implement WQOs that protect beneficial uses. Both the beneficial uses and the WQOs have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 CFR § 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations for priority pollutants are based on the CTR-SIP, which was approved by USEPA on May 18, 2000. All beneficial uses and WQOs contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any WQOs and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 CFR § 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-23. Summary of Final Effluent Limitations for Discharge Point EFF-001, EFF-001A and EFF-001B

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Min.	Instan-taneous Max.	
Final Effluent Limitations for Discharge Point No. 001, 001A and 001B							
$BOD_5 20°C$	mg/L	20	30	45	--	--	TBEL
	lbs/day[35]	16,700	25,000	37,500	--	--	
Total Suspended Solids (TSS)	mg/L	15	40	45	--	--	TBEL
	lbs/day	12,500	33,400	37,500	--	--	
pH	standard units	--	--	--	6.5	8.5	TBEL
Removal Efficiency for BOD and TSS	%	85	--	--	--	--	TBEL
Oil and Grease	mg/L	10	--	15	--	--	TBEL
	lbs/day	8,340		12,50	--	--	
Settleable Solids	ml/L	0.1	--	0.3	--	--	TBEL
Total Residual Chlorine	mg/L	--	--	0.1	--	--	Basin Plan
Benzo(k)fluor-anthene	µg/L	0.049	--	0.098	--	--	CTR/ SIP
	lbs/day	0.04	--	0.08	--	--	
Dibenzo(a,h) Anthracene	µg/L	0.049	--	0.098	--	--	CTR/ SIP
	lbs/day	0.04	--	0.08	--	--	
Indeno(1,2,3cd) pyrene	µg/L	0.049	--	0.098	--	--	CTR/ SIP
	lbs/day	0.04	--	0.08	--	--	
Chronic Toxicity[36]	Pass or Fail, % Effect (TST)	Pass[37]	--	Pass or % Effect <50	--	--	TST & USEPA Guidance; Basin Plan
Final Effluent Limitations for Discharge Point No. 001 ONLY							
Ammonia Nitrogen (ELS Present)	mg/L	4.0	--	6.0	--	--	Basin Plan
	lbs/day	3,340	--	5,004	--	--	

[35] The mass emission rates are based on the East and West WRP plant design flow rate of 100 MGD, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

[36] 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."

[37] This is a Median Monthly Effluent Limitation.

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Min.	Instan-taneous Max.	
Ammonia Nitrogen (ELS Absent)	mg/L	4.9	--	6.8	--	--	Basin Plan
	lbs/day	4,087	--	5,670	--	--	
Copper (Dry weather)	µg/L	17	--	22	--	--	TMDL
Final Effluent Limitations for Discharge Point No. 001A and 001B ONLY							
Total dissolved solids	mg/L	750	--	--	--	--	Basin Plan
	lbs/day	625,500	--	--	--	--	
Sulfate	mg/L	300	--	--	--	--	Basin Plan
	lbs/day	250,200	--	--	--	--	
Chloride	mg/L	180	--	--	--	--	Basin Plan
	lbs/day	150,100	--	--	--	--	
Boron	mg/L	1.0	--	--	--	--	Basin Plan
	lbs/day	830					
MBAS	mg/L	0.5	--	--	--	--	Basin Plan
	lbs/day	417	--	--	--	--	
Ammonia Nitrogen (ELS Present)	mg/L	4.0	--	6.0	--	--	Basin Plan
	lbs/day	3,340	--	5,004	--	--	
Ammonia Nitrogen (ELS Absent)	mg/L	4.9	--	6.8	--	--	Basin Plan
	lbs/day	4,090	--	5,670	--	--	
Nitrate + Nitrite as Nitrogen	mg/L	8	--	--	--	--	Basin Plan
	lbs/day	6,670	--	--	--	--	
Nitrite (as N)	mg/L	1.0	--	--	--	--	Basin Plan
	lbs/day	830	--	--	--	--	
Lead (Wet weather)	µg/L	--	--	166[38]	--	--	TMDL
Copper	µg/L	18	--	24	--	--	CTR/ SIP
	lbs/day	15	--	20	--	--	
Total Trihalomethanes	µg/L	80	--	--	--	--	TSD & USEPA Guidance; Basin Plan
	lbs/day	66.7	--	--	--	--	

[38] This final effluent limitation for lead is derived from the wet weather final waste load allocation, as set forth in the *Total Maximum Daily Loads for Metals and Selenium for the San Gabriel River and Impaired Tributaries (SGR Metals TMDL)*, promulgated by USEPA Region IX, on March 26, 2007. Consistent with the Implementation Recommendations of the *SGR Metals TMDL*, the wet weather waste load allocation was translated into effluent limitations by applying the SIP procedures. This effluent limitation applies only during wet weather, when the flow in the San Gabriel River is greater than or equal to 260 cubic feet per second (cfs), measured at USGS flow gauging station 11087020, located above the Whittier Narrows dam.

Table F-24. Summary of Final Effluent Limitations for Discharge Point EFF-002,

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Min.	Instan-taneous Max.	
$BOD_5 20°C$	mg/L	20	30	45	--	--	Basin Plan
	lbs/day[39]	10,400	15,600	23,500	--	--	
Total Suspended Solids (TSS)	mg/L	15	40	45	--	--	Basin Plan
	lbs/day	7,820	20,900	23,500	--	--	
pH	standard units	--	--	--	6.5	8.5	Basin Plan
Removal Efficiency for BOD and TSS	%	85	--	--	--	--	Basin Plan
Oil and Grease	mg/L	10	--	15	--	--	Basin Plan
	lbs/day	5,210		7,820	--	--	
Settleable Solids	ml/L	0.1	--	0.3	--	--	Basin Plan
Total Residual Chlorine	mg/L	--	--	0.1	--	--	Basin Plan
Total dissolved solids	mg/L	750	--	--	--	--	Basin Plan
	lbs/day	391,000	--	--	--	--	
Sulfate	mg/L	300	--	--	--	--	Basin Plan
	mg/L	156,000	--	--	--	--	
Chloride	mg/L	180	--	--	--	--	Basin Plan
	lbs/day	93,800	--	--	--	--	
Boron	mg/L	1.0	--	--	--	--	Basin Plan
	lbs/day	521	--	--	--	--	
MBAS	mg/L	0.5	--	--	--	--	Basin Plan
	lbs/day	261	--	--	--	--	
Ammonia Nitrogen (ELS Present)	mg/L	4.2	--	6.1	--	--	Basin Plan
	lbs/day	2,190		3,180	--	--	
Ammonia Nitrogen (ELS Absent)	mg/L	5.4	--	7.8	--	--	Basin Plan
	lbs/day	2,800		4,070	--	--	
Nitrate plus nitrite as nitrogen	mg/L	8	--	--	--	--	Basin Plan
	lbs/day	4,170	--	--	--	--	
Nitrite (as N)	mg/L	1	--	--	--	--	Basin Plan
	lbs/day	521	--	--	--	--	
Lead [Wet weather]	µg/L	--	--	166[40]	--	--	TMDL

[39] The mass emission rates are based on the plant flow rate of 62.5 MGD, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

[40] This final effluent limitation for lead is derived from the wet weather final waste load allocation, as set forth in the *Total Maximum Daily Loads for Metals and Selenium for the San Gabriel River and Impaired Tributaries (SGR Metals TMDL)*, promulgated by USEPA Region IX, on March 26, 2007. Consistent with the Implementation Recommendations of the *SGR Metals TMDL*, the wet weather waste load allocation was translated into effluent limitations by applying the SIP procedures. This effluent limitation applies only during wet weather, when the flow in the San Gabriel River is greater

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instan-taneous Min.	Instan-taneous Max.	
Selenium [Dry weather]	µg/L	4.6	--	6.5	--	--	TMDL
	lbs/day	2.4	--	3.4	--	--	
Chrysene	µg/L	.049	--	.098	--	--	CTR/ SIP
	lbs/day	0.026	--	0.051	--	--	
Dibenzo(a,h)anthracene	µg/L	.049	--	.098	--	--	CTR/ SIP
	lbs/day	0.026	--	0.051	--	--	
Indeno(1,2,3cd) pyrene	µg/L	.049	--	.098	--	--	CTR/ SIP
	lbs/day	0.026	--	0.051	--	--	
Benzo(k) fluoranthene	µg/L	.049	--	.098	--	--	CTR/ SIP
	lbs/day	0.026	--	0.051	--	--	
Total Trihalomethanes	µg/L	80	--	--	--	--	TST & USEPA Guidance; Basin Plan
	lbs/day	41.7	--	--	--	--	
Chronic Toxicity[41]	Pass or Fail, %Effect (TST)	Pass[42]	--	Pass or %Effect <50	--	--	TST & USEPA Guidance; Basin Plan

Table F-25. Summary of Final Effluent Limitations for Discharge Point EFF-003, EFF-004, and EFF-005

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instant-aneous Min.	Instant-aneous Max.	
Final Effluent Limitations or Discharge Point EFF-003, EFF-004 and EFF-005.							
$BOD_5 20^oC$	mg/L	20	30	45	--	--	Basin Plan
	lbs/day[43]	6,250	9,380	14,100	--	--	

than or equal to 260 cubic feet per second (cfs), measured at USGS flow gauging station 11087020, located above the Whittier Narrows dam.

[41] 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."

[42] This is a Median Monthly Effluent Limitation.

[43] The mass emission rates are based on the plant design flow rate of 37.5 MGD, and are calculated as follows: Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor) = lbs/day.

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instant-aneous Min.	Instant-aneous Max.	
Total Suspended Solids (TSS)	mg/L	15	40	45	--	--	Basin Plan
	lbs/day	4,690	12,500	14,074	--	--	
pH	standard units	--	--	--	6.5	8.5	Basin Plan
Removal Efficiency for BOD and TSS	%	85	--	--	--	--	Basin Plan
Oil and Grease	mg/L	10	--	15	--	--	Basin Plan
	lbs/day	3,130		4,690	--	--	
Settleable Solids	ml/L	0.1	--	--	--	--	Basin Plan
Total Residual Chlorine	mg/L	--	--	0.1	--	--	Basin Plan
	lbs/day			31.3			
MBAS	mg/L	0.5	--	--	--	--	Basin Plan
	lbs/day	157	--	--	--	--	
Nitrate plus Nitrite as Nitrogen	mg/L	8	--	--	--	--	Basin Plan
	lbs/day	2,500	--	--	--	--	
Nitrite as Nitrogen	mg/L	1	--		--	--	Basin Plan
	lbs/day	312	--		--	--	
Lead (wet weather)	µg/L	--	--	166	--	--	TMDL
Dibenzo(a,h) Anthracene	µg/L	0.049	--	0.098	--	--	CTR/ SIP
	lbs/day	0.015	--	0.031	--	--	
Total Trihalomethanes	µg/L	80[44]	--	--	--	--	TSD & USEPA Guidance; Basin Plan
	lbs/day	25.0	--	--	--	--	
Chronic Toxicity[45]	Pass or Fail, %Effect (TST)	Pass[46]	--	Pass or %Effect <50	--	--	TST & USEPA Guidance; Basin Plan
Final Effluent Limitations or Discharge Point EFF-003 ONLY.							
Ammonia Nitrogen (ELS Present)	mg/L	4.0	--	6.3	--	--	Basin Plan
	lbs/day	1,250	--	1,970	--	--	

[44] This limitation is derived from Basin Plan water quality objective.

[45] 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."

[46] This is a Median Monthly Effluent Limitation.

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instant-aneous Min.	Instant-aneous Max.	
Ammonia Nitrogen (ELS Absent)	mg/L	5.0	--	7.8	--	--	Basin Plan
	lbs/day	1,560	--	2,440	--	--	
Total dissolved solid	mg/L	750	--	--	--	--	Basin Plan
	lbs/day	235,000	--	--	--	--	
Sulfate	mg/L	300	--	--	--	--	Basin Plan
	lbs/day	93,800	--	--	--	--	
Chloride	mg/L	180	--	--	--	--	Basin Plan
	lbs/day	56,300	--	--	--	--	
Boron	mg/L	1.0	--	--	--	--	Basin Plan
	lbs/day	312					
Final Effluent Limitations or Discharge Point EFF-004 and EFF-005 ONLY.							
Ammonia Nitrogen (ELS Absent)	mg/L	4.4	--	2.8	--	--	Basin Plan
	lbs/day	1380	--	880	--	--	
Arsenic	µg/L	10	--	--	--	--	TSD & USEPA Guidance; Basin Plan
	lbs/day	3.13	--	--	--	--	
Selenium	µg/L	4.5	--	6.86	--	--	CTR/ SIP
	lbs/day	1.4	--	2.15	--	--	
Copper	µg/L	20.29	--	25.99	--	--	CTR/ SIP
	lbs/day	6.34	--	8.13	--	--	
Total dissolved solids	mg/L	450	--	--	--	--	Basin Plan
	lbs/day	140,700	--	--	--	--	
Sulfate	mg/L	100	--	--	--	--	Basin Plan
	lbs/day	31,130	--	--	--	--	
Chloride	mg/L	100	--	--	--	--	Basin Plan
	lbs/day	31,130	--	--	--	--	
Boron	mg/L	.5	--	--	--	--	Basin Plan
	lbs/day	151	--	--	--	--	

E. Recycling Specifications

1. Current Reclaimed Project for Irrigation & Industrial Use.

The production, distribution, and reuse of recycled water are presently regulated under Water Reclamation Requirements (WRRs Order No. 87-51, adopted by this Board on April 27, 1987.) Pursuant to California Water Code section 13523, these WRRs were reviewed in 1997 and were readopted without change in Board Order No. 97-072, adopted on May 12, 1997. No irrigation takes place under this Order.

2. Water Recycling Requirements for Groundwater Recharge.

The Los Angeles County of Public Works, County Sanitation Districts of Los Angeles County, and Water Replenishment District of Southern California, collectively referred to as the Reclaimer, recharge the Rio Hondo and San Gabriel Spreading Grounds, located in the Montebello Forebay, with water purchased from JOS's Whittier Narrows, Pomona, and San Jose Creek WRPs, under Order No. 91-100, adopted by the Board on September 9, 1991, CI-5728, as amended by Order No. R4-2009-0048, adopted April 2, 2009, and by a June 4, 2013 letter from the Executive Officer to the Permittees and as amended by Order R4-2009-0048-A01 on April 10, 2014 for the Montebello Forebay.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

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

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. Sections of South Fork San Jose Creek and San Gabriel River, near the San Jose WRP discharge points, are designated as GWR beneficial use. Surface water from South Fork San Jose Creek percolates into the San Gabriel Valley Groundwater Basin with MUN beneficial use specified in the Basin Plan. Since groundwater from the Basin is used to provide drinking water to the community, the groundwater aquifers must be protected.

The issue of using MCLs as the basis for establishing final effluent limitations in an NPDES permit, to protect the GWR beneficial use of surface waters and the MUN beneficial use of the groundwater basins, has been addressed by the State Board in its WQO No. 2003-0009, in the Matter of the Petitions of County Sanitation District No. 2 of Los Angeles and Bill Robinson for Review of Waste Discharge Requirements Order No. R4-2002-0142 and Time Schedule Order No. R4-2002-0143 for the Whittier Narrows Water Reclamation Plant. The groundwater recharge (GWR) beneficial use is premised on a hydrologic connection between surface waters and groundwater, where the groundwater in this case is designated with an existing MUN beneficial use. Since there are no criteria or objectives specific to the GWR beneficial use, the Los Angeles Regional Water Board's Basin Plan, staff based effluent limitations for the GWR use on the groundwater MUN objectives. By doing so, the Regional Water Board ensures that the use of surface waters to recharge groundwater used as an existing drinking water source is protected. The fact that there are no criteria or objectives specific to the GWR beneficial use does not deprive the Regional Water Board of the ability to protect the use. The CWA contemplates enforcement of both beneficial uses as well as criteria in state water quality standards. In California, an NPDES permit also serves as waste discharge requirements under state law.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The Permittee must comply with

all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state-issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

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. **Constituent of Emerging Concern (CEC).** In recent years, the Los Angeles Regional Water Board has incorporated monitoring of a select group of man-made chemicals, particularly pesticides, pharmaceuticals and personal care products, known collectively as CECs, into permits issued to POTWs to better understand the propensity, persistence and effects of CECs in our environment. The Permittee has completed annual CEC monitoring for two years. The Regional Water Board has determined that two years is an appropriate time period to determine those CECs that are present in POTW effluent. Analysis under this section is for monitoring purposes only. Analytical results obtained for this study will not be used for compliance determination purposes, since the methods have not been incorporated into 40 CFR Part 136. A review of the data will determine if additional sampling is required.

b. **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. 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.

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

d. **Treatment Plant Capacity.**

The treatment plant capacity study required by 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

The requirement for a Pollutant Minimization Program (PMP)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 § 122.41(e) and the previous Order.

5. Special Provisions for Municipal Facilities (POTWs Only)

a. **Biosolids Requirements.** To implement CWA section 405(d), on February 19, 1993, USEPA promulgated 40 CFR Part 503 to regulate the use and disposal of municipal sewage sludge. This regulation was amended on September 3, 1999. The regulation requires that producers of sewage sludge meet certain reporting, 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. **Spill Reporting Requirements.** This Order established a reporting protocol for how different types of spills, overflow or bypasses of raw or partially treated sewage from its collection system or treatment plant covered by this Order shall be reported to regulatory agencies.

The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on May 2, 2006. The Monitoring and Reporting Requirements for the General Order were amended by Water Quality Order WQ 2008-0002-EXEC on February 20, 2008. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll

for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

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

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

6. **Other Special Provisions** -- Not Applicable

7. **Compliance Schedules** -- Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 308(a) of the federal Clean Water Act and sections 122.41(h), (j)-(l), 122,44(i), and 122.48 of Title 40 of the Code of Federal Regulations (40 CFR) require that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorizes the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The MRP establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the MRP for this Facility.

A. Influent Monitoring

Influent monitoring is required to determine compliance with the permit conditions for BOD5 20°C and suspended solids removal rates; to assess treatment plant performance; to assess the effectiveness of the Pretreatment Program; and, as a requirement of the PMP

B. Effluent Monitoring

The Permittee is required to conduct monitoring of the permitted discharges in order to evaluate compliance with permit conditions. Monitoring requirements are given in the MRP Attachment E. This provision requires compliance with the MRP, and is based on 40 CFR 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.

Monitoring frequency for constituents is based upon historic monitoring frequency, Best Professional Judgment and the following criteria

Criteria 1: Monitoring frequency will be monthly, for those pollutants with reasonable potential to exceed water quality objectives (monitoring has shown an exceedance of the objectives); or,

Criteria 2: Monitoring frequency will be quarterly for those pollutants in which some or all of the historic effluent monitoring data detected the pollutants, but without reasonable potential to exceed water quality objectives; or,

Criteria 3: Monitoring frequency will be semiannually, for those pollutants in which all of the historic effluent monitoring data have had non-detected concentrations of the pollutants and without current reasonable potential to exceed water quality objectives.

Table F-26. Effluent Monitoring Frequency Comparison

Parameter	Monitoring Frequency (2009 Permit)	Monitoring Frequency (2015 Permit)
Total waste flow	Continuous	No change
Total residual chlorine	Continuous	No change
Turbidity	Continuous	No change
Temperature	Daily	Weekly
pH	Daily	Weekly
Settleable solids	Daily	Weekly
Total suspended solids	Daily	Weekly
Oil and grease	Monthly	Quarterly
BOD	Weekly	No change
Dissolved oxygen	Monthly	No change
Total coliform	Daily	No change
Fecal Coliform	Daily	Weekly
E.coli	Daily	Weekly
Total Dissolved Solids	Monthly	No change
Sulfate	Monthly	No change
Chloride	Monthly	No change
Boron	Monthly	No change
MBAS	Monthly	Quarterly
CTAS	Monthly	No change
Ammonia nitrogen	Monthly	No change
Nitrate plus nitrite as nitrogen	Monthly	No change
Nitrite nitrogen	Monthly	No change
Total Nitrogen	Monthly	Quarterly

Parameter	Monitoring Frequency (2009 Permit)	Monitoring Frequency (2015 Permit)
Organic Nitrogen	Monthly	No change
Total Phosphorus	Monthly	No change
Orthophosphate-P	Monthly	No change
Surfactants (MBAS)	Monthly	No change
Surfactants (CTAS)	Monthly	No change
Total Hardness ($CaCO_3$)	Monthly	No change
Chronic toxicity	Monthly	No change
Bis(2-ethylhexyl)phthalate	Monthly	Semiannually
Iron	Quarterly	Semiannually
Fluoride	Quarterly	Semiannually
Antimony	Quarterly	Semiannually
Arsenic	Quarterly	Monthly
Cadmium	Quarterly	Semiannually
Chromium III	Quarterly	Semiannually
Chromium VI	Quarterly	Semiannually
Copper	Monthly	No change
Lead	Monthly	No change
Mercury	Quarterly	Semiannually
Nickel	Quarterly	Semiannually
Selenium	Monthly	No change
Silver	Quarterly	Semiannually
Thallium	Quarterly	Semiannually
Zinc	Quarterly	Semiannually
Cyanide	Quarterly	Semiannually
2,3,7,8-TCDD (Dioxin)	Semiannually	Semiannually
Benzo(a)pyrene	Semiannually	No change
Benzo(k)fluoranthene	Semiannually	Monthly
Chrysene	Semiannually	Monthly
Dibenzo(a,h)anthracene	Semiannually	Monthly
Indeno(1,2,3 cd)pyrene	Semiannually	Monthly
N-nitrosodimethylamine	Semiannually	Annually
Diazinon	Semiannually	Annually
Remaining USEPA priority pollutants excluding asbestos	Semiannually	No change
Radioactivity	Semiannually	No change
Perchlorate	Semiannually	Annually
1,4-Dioxane	Semiannually	Annually
1,2,3-Trichloropropane	Semiannually	Annually
MTBE	Semiannually	Annually

C. Whole Effluent Toxicity Testing Requirements

Whole effluent toxicity (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" and "Percent Effect" for the median monthly summary results and "Pass" or :"Fail" and "Percent Effect" for each individual chronic toxicity result. The chronic toxicity effluent limitations protect the narrative water quality objective in the Basin Plan. The rationale for WET testing has been discussed extensively in section IV.C.5. of this fact sheet.

D. Receiving Water Monitoring

1. Surface Water

Receiving water monitoring is required to determine compliance with receiving water limitations and to characterize the water quality of the receiving water.

2. Groundwater (Not Applicable)

E. Other Monitoring Requirements

1. Watershed Monitoring and Bioassessment Monitoring

The goals of the Watershed-wide Monitoring Program including the bioassessment monitoring for the South Fork San Jose Creek Watershed are to determine compliance with receiving water limits; monitor trends in surface water quality; ensure protection of beneficial uses; provide data for modeling contaminants of concern; characterize water quality including seasonal variation of surface waters within the watershed; assess the health of the biological community; and, determine mixing dynamics of effluent and receiving waters in the estuary.

VIII. Nuisance and California Water Code 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

Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto, are discussed in the Region's Watershed Management Initiative Chapter, and are also 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.

D. Water quality conditions

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

E. Economic considerations

The Permittee did not present any evidence regarding economic considerations related to this Order. However, the Regional Water Board has considered the economic impact of requiring certain provisions pursuant to state law. The 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.

IX. PUBLIC PARTICIPATION

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

A. Notification of Interested Parties

The Regional Water Board notified the Permittee and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the Whittier Daily News on December 17, 2014.

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

B. Written Comments

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

To be fully responded to by staff and considered by the Regional Water Board, the written comments are due at the Regional Water Board office by 5:00 p.m. on January 19, 2015.

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:	April 9, 2015
Time:	9:00 a.m.
Location:	Metropolitan Water District of Southern California, Board Room 700 North Alameda Street

Los Angeles, California

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

D. Reconsideration of Waste Discharge Requirements

Any aggrieved person may petition the State Water Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be received by the State 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, including but not limited to the administrative record for the JOS Pomona and Whittier Narrows WRPs which were used as reference in the preparation of the San Jose Creek WRP NPDES permit, and the Saugus and Valencia WRPs, which were adopted simultaneously, 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 Elizabeth Erickson at (213) 576 6665.

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

D. EP toxicity

1. Toxicity Characteristic Leaching Procedure (TCLP)

2. Chemical analysis

E. 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

ATTACHMENT H – PRETREATMENT REPORTING REQUIREMENTS

The Joint Outfall System (Permittee or District) is required to submit annual Pretreatment Program Compliance Report (Report) to the Regional Water Board and United States Environmental Protection Agency, Region 9 (USEPA). This Attachment outlines the minimum reporting requirements of the Report. If there is any conflict between requirements stated in this attachment and provisions stated in the Waste Discharge Requirements (WDR), those contained in the WDR will prevail.

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 § 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 § 403.8(f)(2); and

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

4. The Permittee shall submit annually a report to USEPA Pacific Southwest Region, and the State describing its pretreatment activities over the previous year. In the event the District is not in compliance with any conditions or requirements of this permit, then the District shall also include the reasons for noncompliance and state how and when the District shall comply with such conditions and requirements. This annual report shall cover operations from January 1 through December 31 and is due on April 15 of each year. The report shall contain, but not be limited to, the following information:

    a. A summary of analytical results from representative, flow proportioned, 24-hour composite sampling of the publicly-owned treatment works (POTW) influent and

effluent for those pollutants USEPA has identified under section 307(a) of the Act which are known or suspected to be discharged by nondomestic users. This will consist of an annual full priority pollutant scan, with quarterly samples analyzed only for those pollutants detected in the full scan. The District is not required to sample and analyze for asbestos. Sludge sampling and analysis are covered in the sludge section of this permit. The District shall also provide any influent or effluent monitoring data for nonpriority pollutants which the District believes may be causing or contributing to interference or pass through. Sampling and analysis shall be performed with the techniques prescribed in 40 CFR part 136;

b. A discussion of Upset, Interference or Pass Through incidents, if any, at the treatment plant which the District knows or suspects were caused by nondomestic users of the POTW system. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of the nondomestic user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent pass through or interference;

c. An updated list of the District's significant industrial users (SIUs) including their names and addresses, and a list of deletions, additions and SIU name changes keyed to the previously submitted list. The District shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall also indicate which SIUs are subject to local limitations;

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

i. Name of the SIU;
ii. Category, if subject to federal categorical standards;
iii. The type of wastewater treatment or control processes in place;
iv. The number of samples taken by the POTW during the year;
v. The number of samples taken by the SIU during the year;
vi. For an SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;
vii. A list of the standards violated during the year. Identify whether the violations were for categorical standards or local limits;
viii. Whether the facility is in significant noncompliance (SNC) as defined at 40 CFR § 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 § 403.8(f)(2)(viii).

B. LOCAL LIMITS EVALUATION

1. In accordance with 40 CFR § 122.44(j)(2)(ii), the POTW shall provide a written technical evaluation of the need to revise local limits under 40 CFR § 403.5(c)(1) within 180 days of issuance or reissuance of the Joint Water Pollution Control Plant (JWPCP) NPDES permit.

C. SIGNATORY REQUIREMENTS AND REPORT SUBMITTAL

1. Signatory Requirements.

   The annual report must be signed by a principal executive officer, ranking elected official or other duly authorized employee if such employee is responsible for the overall operation of the POTW. Any person signing these reports must make the following certification [40 CFR § 403.6(a)(2)(ii)]:

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

2. Report Submittal.

   The Annual Pretreatment Report shall be submitted electronically using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/ciwqs/index.html). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.

   A copy of the Annual Report must be sent to USEPA electronically to the following address: R9Pretreatment@epa.gov.

EXHIBIT B

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

586th Regular Board Meeting
Thursday, April 9, 2015, 9:00 a.m.

ITEM 15

ORDER NO. R4-2015-xxx
WASTE DISCHARGE REQUIREMENT RENEWAL
FOR
SAN JOSE CREEK WATER RECLAMATION PLANT

CHANGE SHEET
(Additions are underlined, deletions are lined over)

1. Tentative Order page 1. Agenda page 15-122.

This Order was adopted on:	~~March 12~~ April 9, 2015
This Order shall become effective on:	~~April 1~~ June 1, 2015
This Order shall expire on:	~~March 31~~ May 31, 2020
The Permittee 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 U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Los Angeles Region have classified this discharge as follows:	Major

2. Tentative Order Footnote page 11/Agenda page 15-132, Attachment E Footnote page E-13/15-189, page E-17/15-193, page E-21/15-197, page E-25/15-201, Attachment F page 86/15-105, page F-89/15-108, and page F-90/15-109.

"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 ~~of~~ 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."

3. Attachment F page F-80 Agenda page 15-099.

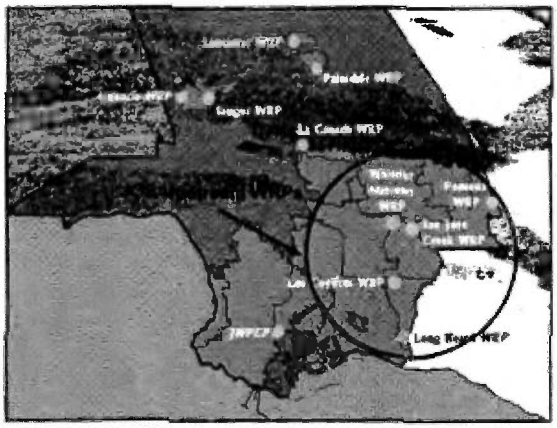
"The 2009 permit contained final effluent limitations for both acute toxicity and chronic toxicity, but the ~~2014~~ 2015 permit only contains final effluent limitations for chronic toxicity, expressed as a median monthly and a maximum daily, since chronic toxicity is a more stringent requirement than acute toxicity....."

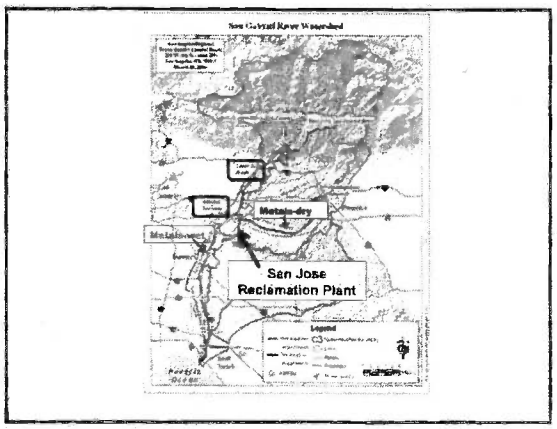
4. **Attachment F page F-83 Agenda page 15-102, insert at the end of IV.C.5 Whole Effluent Toxicity (WET).**

"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 Board or Executive Officer will consider the following factors among other relevant considerations: the facility's history of compliance with effluent limitations for chronic toxicity, including the magnitude and duration of any exceedances; history of and information acquired from past TIEs or TREs conducted for the facility; and the efforts of the Permittee to achieve compliance with effluent limitations for chronic toxicity."

EXHIBIT C

NPDES PERMIT RENEWAL
JOS- SAN JOSE CREEK WRP (ITEM 15)





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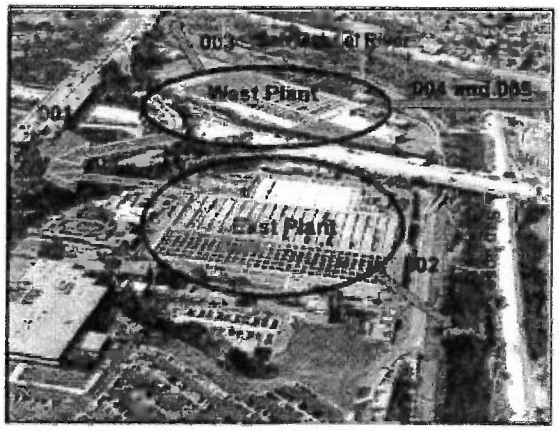
Summary of POTWs

	Service Population	Operating Capacity (MGD)	% Recycled
San Jose Creek Water Reclamation Plant [a]	992,000	68	• 63% for GW recharge and irrigation
Pomona Water Reclamation Plant	149,058	8	• 22% for irrigation • 78% for GW recharge
Whittier Narrows Water Reclamation Plant	107,000	8	• 1% for irrigation • 99% for GW recharge

Notes:
a) Includes nitrification/denitrification for ammonia and nitrates removal, with chloramination for trihalomethane control and disinfection



Permit Updates, Part 1

- Conducted Reasonable Potential Analysis (RPA)
- Deleted Limits with no Reasonable Potential
- Included Updated Limits
  - California Toxics Rule (CTR)
  - Maximum Contaminant Level (MCL)/Title 22
  - Implemented TMDL-based Limits
- Numeric Chronic Toxicity Effluent Limits
- Revised statistical approach for chronic toxicity to TST
- Revised Monitoring & Reporting Program

Permit Updates, Part 2

• Staff Working Drafts	December 16, 2014
• Draft Tentative Order	December 19, 2014
• Close of Comments	January 20, 2015
• Withdrawal of Limited Use ATP Approval	February 11, 2015
• Revised Tentative Permit	March 4, 2015

Toxicity Reasonable Potential & Compliance

Individual Tests > 1 TUc

East Plant	Date	Receiving	Date
> 5.0	11/10/2009	1.0	11/2009
1.0	8/10/2011	> 5 [c]	8/10/2011
Invalid tests[a]	9/2011	Invalid tests[a]	9/2011
1.3	3/6/2012	No sample	3/2012
4.0	9/16/2013	No sample	9-10/2013
2.0[b]	11/4/2013	4	11/4/2013
1.3	2/24/2014	1.3	11/2014

West Plant	Date
1.3	10/15/2009
2.5	8/12/2010
1.3	5/10/2011

Notes

a: Three tests concluded to be "invalid" due to failure to meet internal QA/QC requirements per monthly report.

b: Corresponding 4 TUc in San Jose Creek on 11/4/2013.

c: Monthly median of 4 samples. Effluent sample was from same day but no subsequent effluent sampling taken even though 3 additional receiving water samples taken. Monthly report identified an upgradient culvert. Sampling point relocated.

Timeline - Toxicity

2002	WET Test Method Rulemaking
2003	State WQO No. 2003-0012
2005	State WB Resolution to Amend SIP
2010	USEPA Test of Significant Toxicity (TST) Guidance
11/2010	Test Drive Requested at Public Workshop
12/2011	State WB Updated Test Drive Results
6/2012	Draft of State WB Policy for Toxicity Assessment
8/2012	3rd State WB Workshop
Fall 2013	Incorporated TST Statistical Approach into Region 4 Industrial NPDES permits.
3/17/2014	USEPA Approved an Alternate Test Procedure (ATP) for the use of Limited Use ATP for NPDES effluents.
11/6/2014	Pomona and Whittier Narrows NPDES approval with TST
2/11/2015	USEPA withdraws Limited Use ATP for non-technical reasons

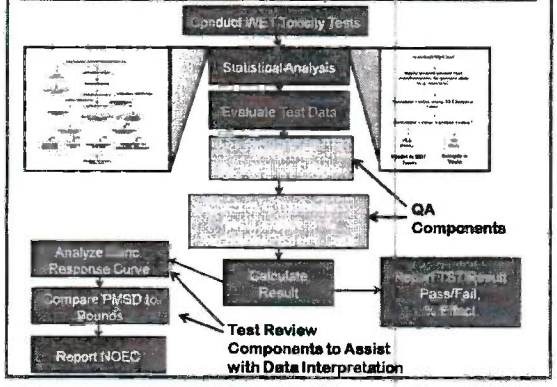
Toxicity – Old vs New

	Old Approach - 2008	New Approach - 2018
Test Objective	Estimate highest "safe" or "no-effect" (NOEC) concentration	Is the 100 % sample toxic or not?
Results reported	TUc = 100/NOEC	TST Pass or Fail % Effect
Test Procedure/ Method	40 CFR 136 Same biological test method	40 CFR 136 Same biological test method
Statistical Analysis	Common Example: Wilcoxon Rank Sum Test • More complex • Classical hypothesis test for statistical endpoints approach • Concentration response review required	Welch's T Test • Less complex • Bioequivalence hypothesis test approach • Concentration response review not applicable

QA and Data Interpretation Test Review – Old vs New

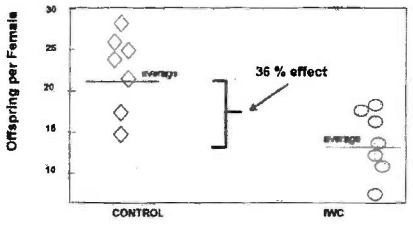
	Old Approach - 2008	New Approach - 2018
QA Components Checked during and after Test	• Test Acceptability Criteria (TAC) • Review of Test Conditions • Reference Toxicant Testing • Review of organism health and performance	**Included in QA Step** • Test Acceptability Criteria (TAC) • Review of Test Conditions • Reference Toxicant Testing • Review of organism health and performance
Test Review Components to Assist with Data Interpretation (aka Concentration-Response Review)	Check for Test Condition or Procedural Errors Evaluate Control Response Evaluate Dilution Water Consider Pathogen Effect • Evaluate Concentration Range of Test Concentrations • Compare NOEC≥IC25 • Evaluate Within Test Variability • Evaluate Test Sensitivity	• Check for Test Condition or Procedural Errors • Evaluate Control Response • Evaluate Dilution Water • Consider Pathogen Effect **Needed for NOEC Verification, not TST**
Regulatory Decision	Can be Difficult to Interpret and Generate a valid NOEC result Less Effective	Simpler, Clearer, & More Effective & allows the use of testing laboratories

NOEC using Multi-Conc. | TST Statistical Approach



Current NOEC Analysis Approach Rewards Poor Quality Test Data:

Effluent declared <u>not</u> toxic



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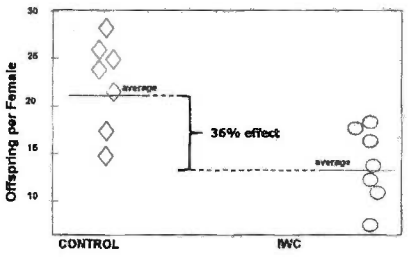
TST does not Reward Poor Quality Data:

Effect ≥ 25%, effluent declared toxic



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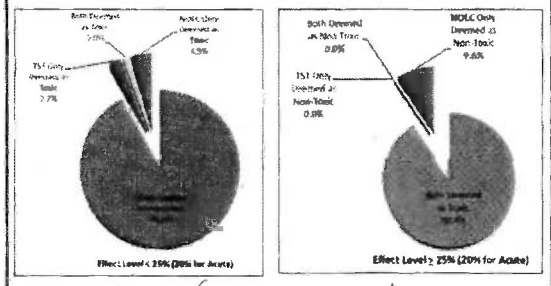
CA State Board Effluent Test Drive Results

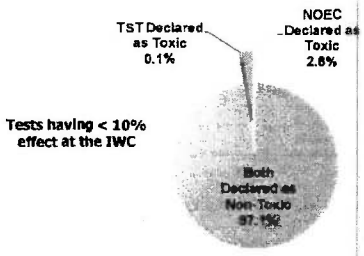
Results of effluent chronic toxicity endpoint analysis, n = 890



Non-Toxic

Toxic

Effluents that Demonstrate Biologically Negligible Effects are Rarely Declared Toxic using TST



Summary of State Board Test Drive

- TST and NOEC test results were very similar.
- Supports Edison Electric conclusion that EPA's reported method population rate of identifying truly non-toxic samples toxic is correct and is not excessive.
- Samples having biologically negligible effects were declared non-toxic more often using TST than the current approach.
- Samples exhibiting significant toxicity effects at the IWC were declared toxic more often using TST than the current approach.
- For samples exhibiting toxic effects in the "gray area" (10-20% effect), addition of a few extra replicates to these tests would likely result in the sample being declared non-toxic.

Benefits of TST Statistical Approach

- Positive incentives to generate higher quality WET data
- Better confidence in toxicity test results, including identifying samples that exhibit significant toxicity
- Probability of calling a non-toxic sample toxic:
  - Is lower using TST than NOEC for IWC with negligible effects (<10%)
  - Is equivalent between TST and NOEC approach for IWC between 10 & 25 % effect but can be reduced with additional replicates and better than average in-test variability
- Streamlines interpretation process:
  - No decisions to make during the statistical analysis
  - Review of Concentration Response Curves and PMSD are not needed
- Improves the transparency of decisions

NPDES Permit Effluent Limitations

- Maximum Daily Effluent Limitation (MDEL)
  - Out of compliance with "FAIL" and ≥50% effect
- Median Monthly Effluent Limitation (MMEL)
  - Out of compliance with "FAIL" – 2 Tests

Note: Mandatory Minimum Penalties (MMPs) will not apply to violations of these limits, so any penalty would be discretionary by the Regional Board.

Average Monthly & Maximum Daily WQBELS vs. Only Average WQBELs

- If reasonable potential exists, WQBELs are as stringent as necessary to meet water quality.
- POTW effluent limits must be expressed as average monthly and weekly limits, unless impracticable.
- For discharges to effluent dominated waters, aquatic organisms are exposed to both average and peak toxic conditions
- Average only limits are not practicable to protect toxicity standards
- Chronic toxicity monthly and daily WQBELs protect both acute and chronic toxicity standards

Commenters

- Permittee: Joint Outfall System (JOS) formerly referred to as County Sanitation Districts of LA Co.
- California Association of Sanitation Agencies (CASA)
- National Association of Clean Water Agencies (NACWA)
- Heal the Bay
- EPA

Permittee/ NACWA/ CASA Issues

- Chronic toxicity limits are premature until the State Water Board adopts its statewide policy.
  - State-wide Policy/Plan
  - Narrative vs. Numeric
- Permit must not limit or restrict 40 CFR 136
  - Use of multi-concentration tests and concentration-response relationship (CRR) evaluations. (Permittee calls it "dose-response")
  - Two-concentration test with TST is not a promulgated method

Permittee/ NACWA/ CASA Issues (continued)

- Maximum daily effluent limit is impracticable, unlawful, and inappropriate.
- Numeric limits based on TST are highly problematic.
- Compliance monitoring and chronic toxicity effluent limitations shall not apply during TRE testing

Statewide Policy/Plan

- Comment:

  The Permittee commented that the chronic toxicity limits are premature until the State Water Board adopts a statewide toxicity policy.
- Staff Response:
  - USEPA objection of toxicity triggers in Tentative for the Pomona and Whittier Narrows addressed.
  - Not premature (see Toxicity Timeline).
  - Reopener in NPDES permits to make them consistent with any Toxicity Plan that is subsequently adopted by the State Water Board- promptly after USEPA-approval of such a Plan.

Chronic Toxicity Limit (Narrative vs. Numeric)

- Comment:

  Numeric Effluent Limits for chronic toxicity should be deleted and replaced with a narrative limit and trigger.

- Staff Response:
  - Toxicity trigger is not a Clean Water Act WQBEL.
  - For these permits, the Regional Board staff determination is that the narrative limit does not regulate toxicity and does not result in adequate protection of aquatic resources.
  - Numeric limits are feasible and used nationally for WET.
  - Numeric is consistent with USEPA objection that focused on this issue.

Restrictions on Test Method

- Comment:

  The Permittee commented that the conditions of the permit must not limit or restrict 40 CFR 136 required and recommended data evaluation procedures.

- Staff Response:
  - As it relates to the TST, the permit does not restrict the proper application of the 40 CFR 136 required and recommended data evaluation procedures.
  - Regional Board staff have selected the TST statistical approach to define the narrative toxicity objective in the basin plan.
  - Revisions made to the permit to not specify a Two-Concentration test.

Concentration-Response Curve (CRC)

- Comment: Permittee requested use of concentration-response curves prior to applying the TST.
- Staff Response:
  - Per EPA test method, CRC evaluation is conducted after statistics.
  - CRCs are reviewed as a data interpretation test review step to verify multi-concentration test NOEC results, not the TST statistical analysis.
  - Regional Board will review "**appropriate**" CRC evaluations of multi-concentration test results.

Appropriate	Not Appropriate
Check for test conditions and procedures	Evaluate Within Test Variability
Evaluate control response	Evaluate Test Sensitivity
Evaluate dilution water and pathogenic effect	Compare NOEC to IC25

Two-Concentration Test using TST

- Comment:

  The Dischargers and supporters believe that the Test of Significant Toxicity (TST) is not an approved method and is inconsistent with existing policies and regulations.

Staff Response:

- The TST is a statistical analytical tool not a test method.
- Regional Board has selected the TST statistics per 9.4.1.2 of *Short Term Chronic Toxicity Methods*, October 2002.

Partial List of Adopted NPDES Permits with TST

- RB-4 LA Region
  - Freeport-McMoran Oil & Gas
  - Nano H20
  - Calleguas MWD
  - USC, Wrigley Marine Center
  - Cemex Construction Material Pacific
  - Northrop Grumman – Hawthorne Site
  - Camarillo SD – Camarillo WRP
  - City of Thousand Oaks - Hill Canyon WWTP
  - City of Simi Valley – Simi Valley WQCP
  - Camrosa Water District – Camrosa WRF
  - JOS – Pomona WRP
  - JOS – Whittier Narrows WRP

Partial List of Adopted NPDES Permits with TST (cont.)

- State Water Board
  - Caltrans MS4 Permit
- RB-1 North Coast Region
  - Industrial permit, ocean discharge
- RB-8 Riverside Region
  - POTW ocean discharge (co-issued with USEPA)
  - MS4 permit (proposed)
- RB-9 San Diego Region
  - Naval Base San Diego
  - Boatyard General Permit
  - MS4 Permit
  - Naval Base Point Loma
- USEPA's Offshore Oil and Gas General Permit
- Hawaii: U.S. Department of the Navy, Pearl Harbor Naval Shipyard

Summary of Toxicity Effluent Limits in Other 49 States

Toxicity Effluent Limits	Number of States (not including California)	State
None	1	Nevada
Acute toxicity. No chronic toxicity.	3	Nevada, Iowa, Delaware
Acute toxicity. Chronic toxicity (only lethal statistical endpoint).	2	Texas, Oklahoma
Acute toxicity. Chronic toxicity (both lethal and sub-lethal statistical endpoints).	43	

Daily Maximum Limit

- Permittee Comment:

  A Maximum Daily effluent limitation for chronic toxicity is impracticable, unlawful, and inappropriate.
- Staff Response:
  - Protective against lethal & sub-lethal effects on aquatic life that result from high levels of toxicants.
  - Consistent with USEPA regulations, current guidance & comment letters.
  - Average Weekly not practicable & mainly for technology-based limits.

Issues with TST

- Permittee Comment:

  The Permittee and supporters believe that Numeric limits based on a Two-concentration TST are highly problematic because the TST detects toxicity more frequently than NOEC and a 2001 study indicated that TST "detects" toxicity in blank samples up to three times more than NOEC.
- Staff Response:
  - The population error rate of finding a truly non-toxic sample toxic has been externally peer-reviewed and supported in the Edison U.S. Court of Appeal decision in 2004.
  - The 2010 TST statistical approach did not change the error rate of EPA's WET method.
  - The TST is a more rigorous tool than the NOEC.
  - The TST out performed the NOEC statistical approach in the State Water Board's 2011 Test Drive.

Compliance Monitoring

- Permittee Comment:
  - No compliance monitoring during:
    - Accelerated monitoring
    - Toxicity Reduction Evaluation (TRE) testing
- Staff Response:
  - Compliance monitoring required throughout testing.
  - Public has the right to know whether the effluent discharges are toxic.

TRE/TIE Test Periods

Facility	Start Date	Duration
Long Beach	5/14/2013	183 days
	5/2/2014	122 days
Los Coyotes	1/3/2013	396 days
Pomona	10/3/2013	231 days
Saugus	9/5/2013	294 days
Valencia	10/8/2013	256 days
	3/9/2007	152 days

Toxicity Summary/Conclusion

- San Jose plants show reasonable potential for Chronic Toxicity.
- Numeric Chronic Toxicity Limits are necessary and feasible.
- Use of the TST statistics in NPDES permits is allowed by the EPA Test Methods and is consistent with their guidance.
- Claim about the statistical error rate of identifying truly non-toxic samples as toxic is inaccurate:
  - Edison case in 2004 / State Water Board's Test Drive in 2011.
- Multi-concentration tests are allowed per the test method but concentration response review is limited in the Revised Tentative to steps appropriate to TST and not NOEC.
- Additional replicates and improved QA/QC effectively addresses the potential for identifying truly non-toxic samples as toxic.

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Monitoring Frequency

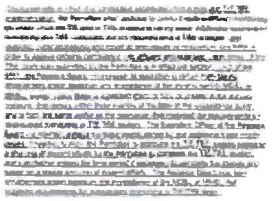
- Comment:
  - Monitoring frequency should not be reduced.
- Staff Response:
  - Regional Water Board staff evaluated past plant performance and weighed costs in revising monitoring frequency.

Change Sheet

3. **Tentative Order VII.J. Page 31, Agenda page 15-152.**

"The Regional Water Board will make a final determination as to whether a toxicity test result is valid, and may consult with the Permittee, USEPA, the State Water Board's Quality Assurance Officer, or the State Water Board's Environmental Laboratory Accreditation Program as needed. The Permittee retains the right to challenge the Regional Board's determination in any subsequent enforcement action. The Board may consider results of any TIE/TRE studies in an enforcement action."

4. **Attachment E page E-12 Agenda page 15-304.**



Recommendation

Adopt the revised tentative permit with the changes for:

- Item 15 – San Jose Creek WRP

Questions?