

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

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waterboards.ca.gov/sanfranciscobay

**ORDER R2-2024-0006
NPDES PERMIT CA0037559**

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

Discharger **Oro Loma and Castro Valley Sanitary Districts**
Name of Facility **Oro Loma and Castro Valley Sanitary Districts Water Pollution Control Plant – Intermittent Wet Weather Discharge**
Facility Address **2600 Grant Avenue
San Lorenzo, CA 94580
Alameda County**

Table 1. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North-South)	Discharge Point Longitude (East-West)	Receiving Water
001	Advanced Secondary-Treated Municipal Wastewater	37.6654°	-122.1636°	Lower San Francisco Bay

This Order was adopted on: **May 8, 2024**
This Order shall become effective on: **June 1, 2024**
This Order shall expire on: **May 31, 2029**
CIWQS regulatory measure number: **456854**

The Discharger shall file a Report of Waste Discharge as an application for updated 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 **September 1, 2028**. The U.S. Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) have classified this discharge as “**minor**.”

I hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the Regional Water Board on the date indicated above.

Eileen White, Executive Officer

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1. FACILITY INFORMATION

Information describing the Oro Loma and Castro Valley Sanitary Districts Water Pollution Control Plant and the intermittent wet weather discharge from the shallow-water outfall (Facility) is summarized on the cover page and in Fact Sheet (Attachment F) sections 1 and 2. Fact Sheet section 1 also includes information regarding the permit application.

2. FINDINGS

The Regional Water Board finds the following:

- 2.1. Legal Authorities.** This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by U.S. EPA and Water Code chapter 5.5, division 7 (commencing with § 13370). It shall serve as an NPDES permit authorizing the Discharger to discharge into waters of the United States as described in Table 1 subject to the WDRs in this Order.
- 2.2. Background and Rationale for Requirements.** The Regional Water Board developed the requirements in this Order based on information the Discharger submitted as part of its application, information obtained through monitoring and reporting programs, and other available information. The Fact Sheet contains background information and rationale for the requirements in this Order and is hereby incorporated into and constitutes findings for this Order. Attachments A through E, G, and H are also incorporated into this Order.
- 2.3. Notification of Interested Parties.** The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe these WDRs and has provided an opportunity to submit written comments and recommendations. Fact Sheet section 8.1 provides details regarding the notification.
- 2.4. Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Fact Sheet section 8.3 provides details regarding the public hearing.

THEREFORE, IT IS HEREBY ORDERED that Order R2-2018-0010 (previous order), as amended by Orders R2-2021-0028 and R2-2023-0023, is rescinded upon the effective date of this Order, except for enforcement purposes, and, in order to meet the provisions contained in Water Code division 7 (commencing with § 13000) and regulations adopted thereunder and the provisions of the CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Regional Water Board from taking enforcement action for violations of the previous order.

3. DISCHARGE PROHIBITIONS

- 3.1. Discharge of treated or partially-treated wastewater at a location or in a manner different from that described in this Order is prohibited.
- 3.2. Bypass of untreated or partially-treated wastewater to waters of the United States is prohibited, except as provided for in Attachment D section 1.7.
- 3.3. Discharge to Lower San Francisco Bay is prohibited, except (1) during peak wet weather flows that exceed at least 30 million gallons per day (MGD) provided the Discharger optimizes onsite storage and (2) during operational maintenance exercises as described in Prohibition 3.4. Peak wet weather flows shall be evaluated at Monitoring Location EFF-002C as described in the Monitoring and Reporting Program (MRP, Attachment E).
- 3.4. Discharge to Lower San Francisco Bay during operational maintenance exercises more than two days per calendar year or exceeding a total volume of 2.0 million gallons during any particular day is prohibited, with compliance evaluated at Monitoring Location EFF-WW. Maintenance discharges shall occur during the dry season, May 1 through September 30, in advance of the wet season, October 1 through April 30, and shall comply with dry season effluent limitations.

4. EFFLUENT LIMITATIONS

- 4.1. **Effluent Limitations.** The discharge at Discharge Point 001 shall meet the following effluent limitations, with compliance measured at Monitoring Locations EFF-002C or EFF-WW as described in the MRP:

Table 2. Effluent Limitations

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	One-hour Average ^[1]
Wet Season (October 1 through April 30)							
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	-	40	-	-	-	-
Total Suspended Solids	mg/L	-	45	-	-	-	-
Copper, Total Recoverable	µg/L	13	-	18	-	-	-
Cyanide, Total	µg/L	6.3	-	12	-	-	-

Parameter	Units	Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	One-hour Average ^[1]
Dry Season (May 1 through September 30)							
Carbonaceous Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	-	30	-	-	-	-
Total Suspended Solids	mg/L	-	30	-	-	-	-
Year-Round							
pH ^[2]	standard units	-	-	-	6.5	8.5	-
Chlorine, Total Residual	mg/L	-	-	-	-	-	0.013
<i>Enterococcus</i> Bacteria	CFU/100 mL ^[3]	-	-	110	-	-	-

Footnotes:

- ^[1] To evaluate compliance with the one-hour average effluent limitation, the Discharger shall consider all readings recorded within each two-hour period during the discharge event. The monitoring period shall begin within the first hour of the discharge.
- ^[2] If the Discharger monitors pH continuously, pursuant to Code of Federal Regulation, Title 40 (40 C.F.R.), section 401.17 the Discharger shall be in compliance with this pH limitation provided that both of the following conditions are satisfied: (i) the total time during which the pH is outside the required range shall not exceed 7 hours and 26 minutes in any calendar month; and (ii) no individual excursion from the required pH range shall exceed 60 minutes.
- ^[3] Results may be reported as Most Probable Number (MPN)/100 mL if the laboratory method used provides results in MPN/100 mL.

4.2. Total Ammonia. The average dry season total ammonia percent removal shall not be less than 75 percent (i.e., from May 1 through September 30, the arithmetic mean of total ammonia, by concentration, for effluent samples collected at Monitoring Location EFF-002C as described in the MRP, shall not exceed 25 percent of the arithmetic mean of total ammonia, by concentration, for influent samples collected at Monitoring Location INF-002C).

4.3. *Enterococcus* Bacteria. The discharge at Discharge Point 001 shall not exceed 110 colony forming units per 100 milliliters (CFU/100 mL), with compliance measured at Monitoring Location EFF-002C as described in the MRP.

5. RECEIVING WATER LIMITATIONS

5.1. The discharge shall not cause the following conditions at any place in receiving waters:

- 5.1.1. Floating material, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses;
- 5.1.2. Alteration of suspended sediment in such a manner as to cause nuisance or adversely affect beneficial uses or detrimental increase in the concentrations of toxic pollutants in sediments or aquatic life;

- 5.1.3. Suspended material in concentrations that cause nuisance or adversely affect beneficial uses;
- 5.1.4. Bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses;
- 5.1.5. Alteration of temperature beyond present natural background levels unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses;
- 5.1.6. Changes in turbidity that cause nuisance or adversely affect beneficial uses, or increases from normal background light penetration or turbidity greater than 10 percent in areas where natural turbidity is greater than 50 nephelometric turbidity units, or above 55 nephelometric turbidity units in areas where natural turbidity is less than or equal to 50 nephelometric turbidity units;
- 5.1.7. Coloration that causes nuisance or adversely affects beneficial uses;
- 5.1.8. Visible, floating, suspended, or deposited oil or other products of petroleum origin; or
- 5.1.9. Toxic or other deleterious substances in concentrations or quantities that cause deleterious effects on wildlife, waterfowl, or other aquatic biota, or render any of these unfit for human consumption, either at levels created in the receiving waters or as a result of biological concentration.

5.2. The discharge shall not cause the following limitations to be exceeded at any place in receiving waters within one foot of the water surface:

- 5.2.1. Dissolved Oxygen 5.0 mg/L, minimum

The median dissolved oxygen concentration for any three consecutive months shall not be less than 80 percent of the dissolved oxygen content at saturation. When natural factors cause concentrations less than that specified above, the discharge shall not cause further reduction in ambient dissolved oxygen concentrations.
- 5.2.2. Dissolved Sulfide Natural background levels
- 5.2.3. pH The pH shall not be depressed below 6.5 nor raised above 8.5. The discharge shall not cause changes greater than 0.5 pH units in normal ambient pH levels.
- 5.2.4. Nutrients Waters shall not contain biostimulatory substances in concentrations that promote aquatic growths to the extent

that such growths cause nuisance or adversely affect beneficial uses.

- 5.3.** The discharge shall not cause a violation of any water quality standard for receiving waters adopted by the Regional Water Board or State Water Resources Control Board (State Water Board) as required by the CWA and regulations adopted thereunder beyond any mixing zone established through this Order. If more stringent water quality standards are promulgated or approved pursuant to CWA section 303, or amendments thereto, the Regional Water Board may revise or modify this Order in accordance with the more stringent standards.

6. PROVISIONS

6.1. Standard Provisions

- 6.1.1. The Discharger shall comply with all “Standard Provisions” in Attachment D.
- 6.1.2. The Discharger shall comply with all applicable provisions of the “Regional Standard Provisions, and Monitoring and Reporting Requirements for NPDES Wastewater Discharge Permits” in Attachment G. Attachment G Sections 3.1.3.2.1 and 3.1.3.2.2 are not applicable to the discharge covered under this Order.
- 6.1.3. If there is any conflict, duplication, or overlap between provisions in this Order, the more stringent provision shall apply.

6.2. Monitoring and Reporting Provisions

The Discharger shall comply with the MRP, Attachment E, and future revisions thereto, and applicable monitoring and reporting requirements in Attachments D and G.

6.3. Special Provisions

- 6.3.1. **Reopener Provisions.** The Regional Water Board may modify or reopen this Order prior to its expiration date in any of the following circumstances as allowed by law or as otherwise authorized by law. The Discharger may request a permit modification based on any of these circumstances. With any such request, the Discharger shall include antidegradation and anti-backsliding analyses as necessary.
- 6.3.1.1. If present or future investigations demonstrate that the discharges governed by this Order have or will have a reasonable potential to cause or contribute to adverse impacts on water quality or beneficial uses of the receiving waters;

- 6.3.1.2. If new or revised water quality objectives or total maximum daily loads (TMDLs) come into effect for the Pacific Ocean (whether statewide, regional, or site-specific). In such cases, effluent limitations in this Order may be modified as necessary to reflect the updated water quality objectives or wasteload allocations. Adoption of the effluent limitations in this Order does not restrict in any way future modifications based on legally adopted water quality objectives or TMDLs or as otherwise permitted under federal regulations governing NPDES permit modifications;
- 6.3.1.3. If translator, dilution, or other water quality studies provide a basis for determining that a permit condition should be modified;
- 6.3.1.4. If a State Water Board precedential decision, new policy, new law, or new regulation is adopted;
- 6.3.1.5. If an administrative or judicial decision on a separate NPDES permit or WDRs addresses requirements similar to this discharge; or

6.3.2. **Effluent Characterization Study and Report**

- 6.3.2.1. **Study Elements.** The Discharger shall characterize and evaluate the discharge from Discharge Point 001 as required by the MRP to verify that the reasonable potential analysis conclusions of this Order remain valid and to inform the next permit reissuance. If concentrations of any of the priority pollutants listed in Attachment G, Table B, significantly increase over past performance, the Discharger shall investigate the cause of any such increase. The investigation may include, but need not be limited to, an increase in monitoring frequency, monitoring of internal process streams, and monitoring of influent sources. The Discharger shall establish remedial measures addressing any increase resulting in reasonable potential to cause or contribute to an exceedance of applicable water quality objectives. This requirement may be satisfied through identification of the constituent as a “pollutant of concern” in the Discharger’s Pollutant Minimization Program, described in Provision 6.3.3 below.
- 6.3.2.2. **Reporting Requirements.** The Discharger shall summarize the data evaluation and any applicable source investigation in the annual self-monitoring report associated with the year in which samples were collected. The Discharger shall also report the pollutants detected at or above applicable water quality objectives (see Fact Sheet Table F-9 for the objectives) in the report’s transmittal letter. This requirement does not apply to pollutants with effluent limitations (see Table 2 of this Order).

6.3.3. **Pollutant Minimization Program**

- 6.3.3.1. The Discharger shall continue to implement its existing Pollutant Minimization Program as described below when there is evidence that a priority pollutant

is present in the effluent above an effluent limitation (e.g., sample results reported as detected but not quantified [DNQ] when the effluent limitation is less than the method detection limit [MDL], sample results from analytical methods more sensitive than those methods required by this Order, presence of aquatic toxicity, health advisories for fish consumption, or results of benthic or aquatic organism tissue sampling) and either:

- 6.3.3.1.1. A sample result is reported as DNQ and the effluent limitation is less than the Reporting Level (RL); or
- 6.3.3.1.2. A sample result is reported as not detected (ND) and the effluent limitation is less than the MDL, using definitions described in Attachment A and reporting protocols described in the MRP.
- 6.3.3.2. If triggered for a reason set forth in Provision 6.3.3.1, above, the Discharger's Pollutant Minimization Program shall include, but not be limited to, the following actions and submittals:
 - 6.3.3.2.1. An annual review and semi-annual monitoring of potential sources of the reportable priority pollutants, which may include fish tissue monitoring and other bio-uptake sampling, or alternative measures when source monitoring is unlikely to produce useful analytical data;
 - 6.3.3.2.2. Quarterly monitoring for the reportable priority pollutants in the influent to the wastewater treatment system. The Executive Officer may approve alternative measures when influent monitoring is unlikely to produce useful analytical data;
 - 6.3.3.2.3. Submittal of a control strategy designed to proceed toward the goal of maintaining concentrations of the reportable priority pollutants in the effluent at or below the effluent limitation;
 - 6.3.3.2.4. Implementation of appropriate cost-effective control measures for the reportable priority pollutants, consistent with the control strategy; and
 - 6.3.3.2.5. Inclusion of the following specific items within the annual report required by Provision 6.3.3.2, above:
 - 6.3.3.2.5.1. All Pollutant Minimization Program monitoring results for the previous year;
 - 6.3.3.2.5.2. List of potential sources of the reportable priority pollutants;
 - 6.3.3.2.5.3. Summary of all actions undertaken pursuant to the control strategy; and
 - 6.3.3.2.5.4. Description of actions to be taken in the following year.

The Discharger may satisfy this provision by instead including this information in the Pollutant Minimization Program annual report submitted under NPDES Permit CA0037869 (for the EBDA Common Outfall) and referencing this submittal in its annual self-monitoring report (see MRP section 6.2.2).

6.3.4. Special Provisions

- 6.3.4.1. **Chlorine Process Control Plan.** The Discharger shall implement a Chlorine Process Control Plan to ensure that it adds sufficient dechlorinating chemicals to target a chlorine residual of 0.0 mg/L at the discharge point. The Operation and Maintenance Manual shall include the information necessary to implement the Chlorine Process Control Plan.
- 6.3.4.2. **Wet Weather Discharges Annual Technical Report.** In the annual self-monitoring report required in MRP section 6.2.2, the Discharger shall include a detailed summary of all wet weather discharges that occurred during the preceding calendar year, including a description of how the Facility and storage was operated to fully use the maximum allowed hydraulic capacity available in the EBDA pipeline and avoid discharges. If the Discharger violates any discharge prohibitions or effluent limitation, it shall comply with the notification and reporting requirements in section 5.5 of Attachments D and G.
- 6.3.4.3. **Wet Weather Facilities Management Plan.** The discharger shall include a Wet Weather Facilities Management Plan review with the annual self-monitoring report required in MRP section 6.2.2, including a description of strategies to maximize storage and export capacity, and minimize discharge during wet weather events.

ATTACHMENT A – DEFINITIONS AND ABBREVIATIONS

DEFINITIONS

Alternative Hypothesis

Statement used to propose a statistically significant relationship in a set of given observations. Under the TST approach, when the Null Hypothesis is rejected, the Alternative Hypothesis is accepted in its place, indicating a relationship between variables and an acceptable level of toxicity.

Arithmetic Mean (μ)

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

$$\text{Arithmetic mean} = \mu = \Sigma x / n$$

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

Average Monthly Effluent Limitation (AMEL)

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)

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

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

Calendar Month(s)

Period from the first day of a month through the last day of a month (e.g., January 1 to January 31). For toxicity monitoring, the period is from the first day of a routine monitoring test to the day before the corresponding day of the next month (e.g., from June 15 to July 14), or to the last day of the next month if there is no corresponding day (e.g., January 31 to February 28).

Carcinogenic

Known to cause cancer in living organisms.

Coefficient of Variation (CV)

Measure of data variability calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge

Either: (1) the total mass of a constituent discharged over a calendar day (12:00 a.m. through 11:59 p.m.) 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 a constituent over a 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 is considered the result for the calendar day in which the 24-hour period ends.

Detected, but Not Quantified (DNQ)

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

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)

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

Effective Concentration (EC)

The EC is a point estimate of the toxicant concentration that would cause an adverse effect on a quantal, "all or nothing," response (such as death, immobilization, or serious incapacitation) in a given percent of the test organisms. If the effect is death or immobility, the term lethal concentration (LC) may be used. EC values may be calculated using point estimation techniques such as probit, logit, and Spearman-Kärber. EC25 is the concentration of toxicant (in percent effluent) that causes a response in 25 percent of the test organisms.

Enclosed Bays

Indentations along the coast that enclose an area of oceanic water within distinct headlands or harbor works. Enclosed bays include all bays where the narrowest

distance between 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

Concentration that results from the confirmed detection of a substance below the ML by the analytical method.

Estuaries

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 are 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.

Inhibition Concentration (IC)

The IC is a point estimate of the toxicant concentration that would cause a given percent reduction in a nonlethal, nonquantal biological measurement, such as growth. For example, an IC25 is the estimated concentration of toxicant that would cause a 25 percent reduction in average young per female or growth. IC values may be calculated using a linear interpolation method such as U.S. EPA's Bootstrap Procedure.

Inland Surface Waters

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

Instantaneous Maximum Effluent Limitation

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

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).

Instream Waste Concentration (IWC)

Concentration of effluent in the receiving water after any dilution credit is applied. The IWC is the inverse of 1 plus the dilution credit, D, or $IWC = 1/(1+D)$, expressed as a percentage (e.g., if D = 9, the IWC is 10 percent). If no dilution credit is granted, the IWC is 100 percent.

Maximum Daily Effluent Limitation (MDEL)

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 toxicity, the MDEL is based on the outcome of the TST and the percent effect at the IWC (applied to the results of any single bioassay). For pollutants with limitations expressed in other units of measurement, the daily discharge is calculated as the arithmetic mean measurement of the pollutant over the day.

Maximum Daily Effluent Target (MDET)

Target based on a single independent toxicity test using the TST used to determine whether a TRE should be conducted. Not meeting the MDET is not a violation of an effluent limitation. The MDET only applies to discharges with no numeric toxicity limitations.

Median

Middle measurement in a data set. The median of a data set 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 $n/2$ and $n/2+1$).

Median Monthly Effluent Limitation (MMEL)

Highest allowable median of daily discharges over a calendar month, calculated as the median of all daily discharges measured during a calendar month. For aquatic toxicity, the MMEL is an effluent limitation based on a maximum of three independent toxicity tests analyzed using the TST during a calendar month.

Median Monthly Effluent Target (MMET)

Target based on a maximum of three independent toxicity tests using the TST during a calendar month used to determine whether a TRE should be conducted. Not meeting a MMET is not a violation of an effluent limitation.

Method Detection Limit (MDL)

Minimum concentration of a substance that can be reported with 99 percent confidence that the measured concentration is distinguishable from method blank results, as defined in 40 C.F.R. part 136, Appendix B.

Minimum Level (ML)

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

Limited volume of receiving water allocated for mixing with a wastewater discharge

where water quality criteria can be exceeded without causing adverse effects to the overall water body.

MMEL Compliance Test

For chronic toxicity monitoring, one of up to two tests used in addition to a routine monitoring test to determine compliance with the chronic toxicity MMEL and MDEL.

MMET Test

For chronic toxicity monitoring, one of up to two tests used in addition to a routine monitoring test to evaluate if the discharge meets the chronic toxicity MMET and MDET.

No Observed Effect Concentration (NOEC)

The NOEC is the highest tested concentration of an effluent or a toxicant at which no adverse effects are observed on the aquatic test organisms at a specific time of observation. It is determined using hypothesis testing.

No Observed Effect level (NOEL)

For compliance determination, the NOEL is equal to IC25 or EC25. If the IC25 or EC25 cannot be statistically determined, the NOEL shall be equal to the NOEC derived using hypothesis testing.

Not Detected (ND)

Sample results less than the laboratory's MDL.

Null Hypothesis

Statement used in statistical testing that has been put forward either because it is believed to be true or because it is to be used as a basis for argument, but has not been proved.

Percent Effect

Value that denotes the difference in response between a test concentration and a control, divided by the mean control response and multiplied by 100.

Persistent Pollutants

Substances for which degradation or decomposition in the environment is nonexistent or very slow.

Pollutant Minimization Program

Program of 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 a Pollutant Minimization Program is to reduce all potential sources of a priority pollutant 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. Cost effectiveness may be considered when establishing the

requirements of a Pollutant Minimization Program. The completion and implementation of a Pollution Prevention Plan, if required pursuant to Water Code section 13263.3(d), is considered to fulfill the Pollutant Minimization Program requirements.

Pollution Prevention

Any action that causes a net reduction in the use or generation of a hazardous substance or other pollutant 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 or Regional Water Board.

Regulatory Management Decision (RMD)

Decision that represents the maximum allowable error rates and thresholds for toxicity and non-toxicity that would result in an acceptable risk to aquatic life.

Reporting Level (RL)

ML (and its associated analytical method) chosen by the Discharger for reporting and compliance determination from the MLs included in this Order, including an additional factor if applicable as discussed herein. For priority pollutants, 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 State Implementation Plan (SIP) Appendix 4 in accordance with SIP section 2.4.2 or established in accordance with SIP section 2.4.3. 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.

Response

Measured biological effect (e.g., on survival, reproduction, growth) of exposure to a stimulus.

Routine Monitoring

Regular chronic toxicity monitoring required during the permit term. Routine monitoring results may trigger MMEL compliance tests or MMET tests. If a violation of the MDEL or MMEL occurs, or if the discharge does not meet the MDET or MMET, routine monitoring also includes one sample collected during the following month (regardless of the regular monitoring frequency), which is used to determine if a TRE is necessary. Routine monitoring does not include surveillance monitoring.

Source of Drinking Water

Any water designated as municipal or domestic supply (MUN) beneficial use.

Standard Deviation (σ)

Measure of variability calculated as follows:

$$\text{Standard deviation} = \sigma = (\Sigma[(x - \mu)^2]/(n - 1))^{0.5}$$

where: x is the observed value

μ is the arithmetic mean of the observed values

n is the number of samples

Surveillance Monitoring

Chronic toxicity monitoring performed using the most sensitive species at an effluent concentration at least double the IWC. Surveillance monitoring results are not for assessing compliance with the chronic toxicity MMEL or MDEL.

Test of Significant Toxicity (TST)

Statistical approach used to analyze aquatic toxicity test data, as described in section III.B.3 of State Water Board's *State Policy for Water Quality Control: Toxicity Provisions*.

Toxicity Reduction Evaluation (TRE)

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 chemicals responsible for toxicity. These procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.

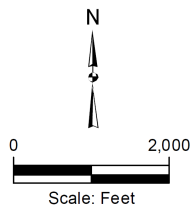
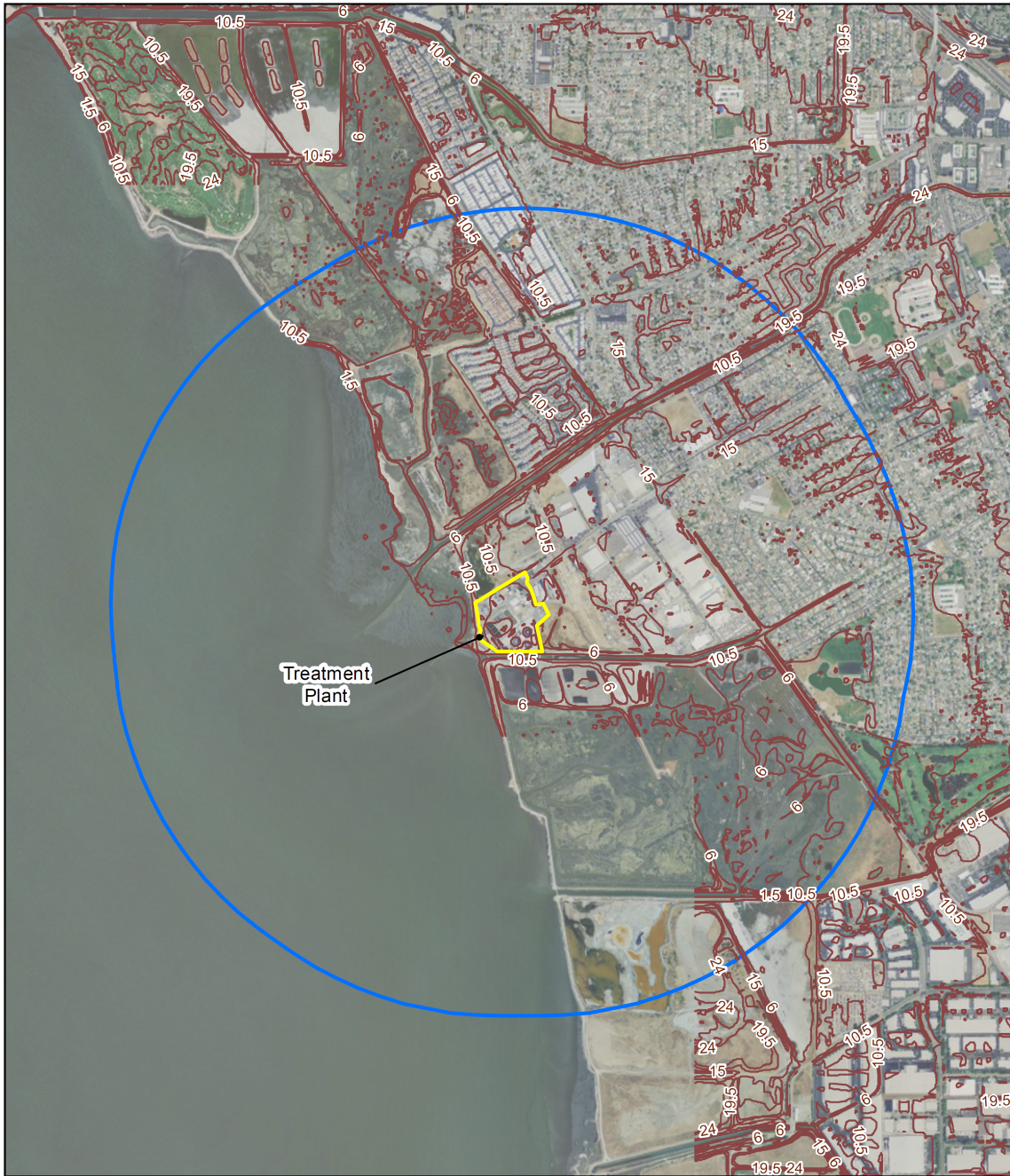
ABBREVIATIONS

°F	degrees Fahrenheit
°C	degrees Celsius
%	Percent
µg/L	Micrograms per liter
µS/cm	Microsiemens per centimeter
1/Blending Event	Once per blending event
1/Discharge	Once per discharge event
1/Day	Once per day
1/Month	Once per month
1/Quarter	Once per quarter
1/Week	Once per week

1/Year	Once per year
2/Month	Two times per month
2/Week	Twice per week
2/Year	Twice per year
3/Week	Three times per week
4/Week	Four times per week
5/Week	Five times per week
AMEL	Average monthly effluent limitation
AWEL	Average weekly effluent limitation
B	Background concentration
C	Water quality criterion or objective
C-24	24-hour composite
CFU/100 mL	Colony forming units per 100 milliliters
CIWQS	California Integrated Water Quality System
Continuous	Measured continuously
Continuous/D	Measured continuously, and recorded and reported daily
Continuous/H	Measured continuously, and recorded and reported hourly
CTR	California Toxics Rule
CV	Coefficient of Variation
DMR	Discharge Monitoring Report
DNQ	Detected, but not quantified
DL	Detection level
ECA	Effluent Concentration Allowance
Grab	Grab sample
IWC	Instream Waste Concentration
MDEL	Maximum Daily Effluent Limitation
MDET	Maximum Daily Effluent Target
MDL	Method detection limit
MEC	Maximum effluent concentration
MG	Million gallons
mg/L	Milligrams per liter
mg/L as N	Milligrams per liter as nitrogen

MGD	Million gallons per day
ML	Minimum level
MMEL	Median Monthly Effluent Limitation
MMET	Median Monthly Effluent Target
MPN/100 mL	Most probable number per 100 milliliters
MRP	Monitoring and Reporting Program (Attachment E)
ND	Not detected
NTR	National Toxics Rule
NTU	Nephelometric turbidity units
ppt	Parts per thousand
RL	Reporting level
RPA	Reasonable potential analysis
SIP	<i>Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy)</i>
SMR	Self-Monitoring Report
s.u.	Standard pH units
TIE	Toxicity identification evaluation
TRE	Toxicity reduction evaluation
TST	Test of Significant Toxicity
TUa	Acute toxicity units
TUc	Chronic toxicity units
WDRs	Waste discharge requirements
WQBEL	Water quality-based effluent limitation

ATTACHMENT B – MAP
Figure B-1. Facility Location



Oro Loma Sanitary District
San Lorenzo, California

Treatment Plant
1 Mile Buffer
Topographic Map

January 2011

Figure B-2. Facility Overview



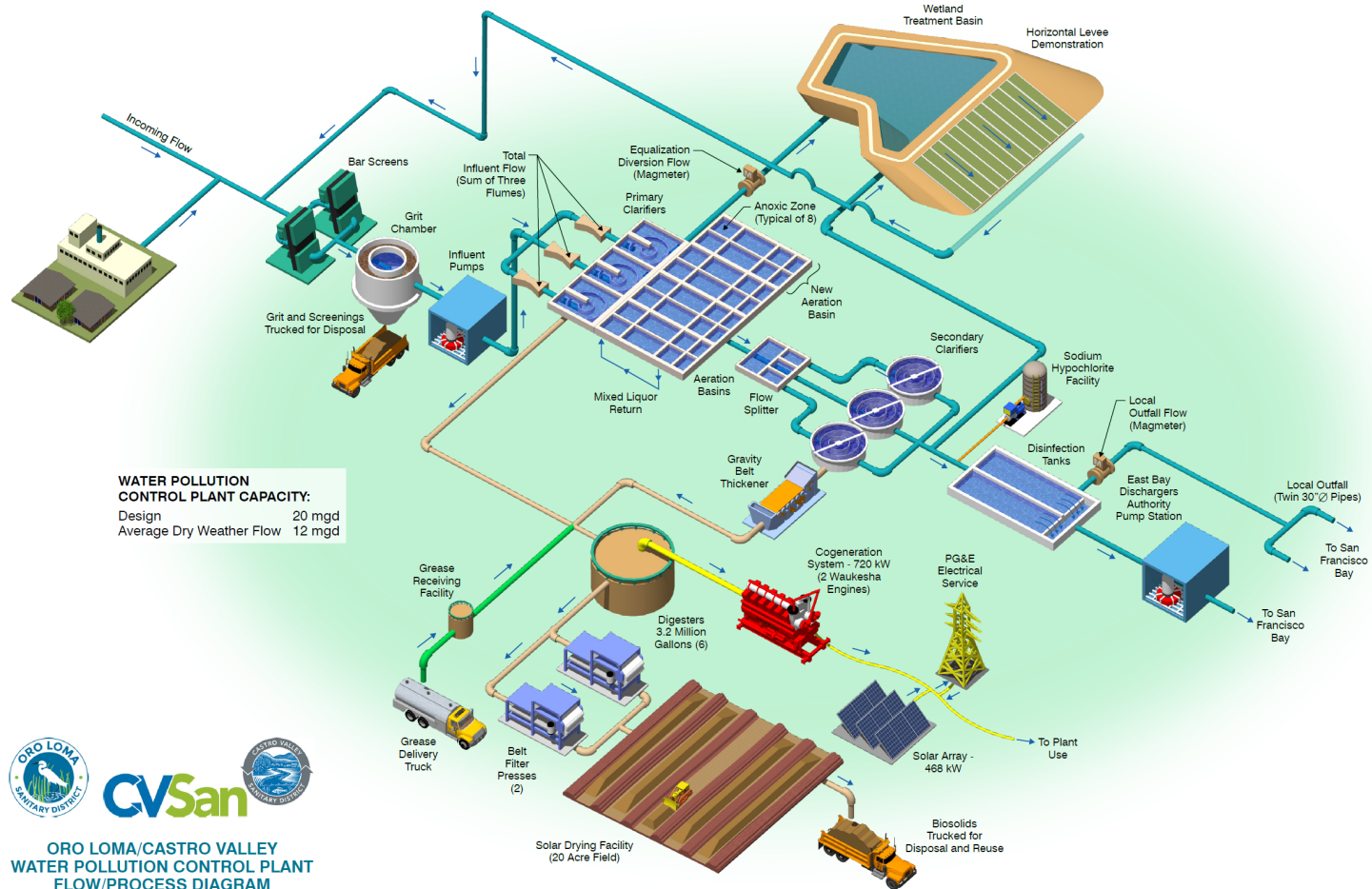
Oro Loma Sanitary District
San Lorenzo, California

Treatment Plant
Site Location Map

January 2016

ATTACHMENT C- PROCESS FLOW DIAGRAM

Figure C-1. Flow Schematic



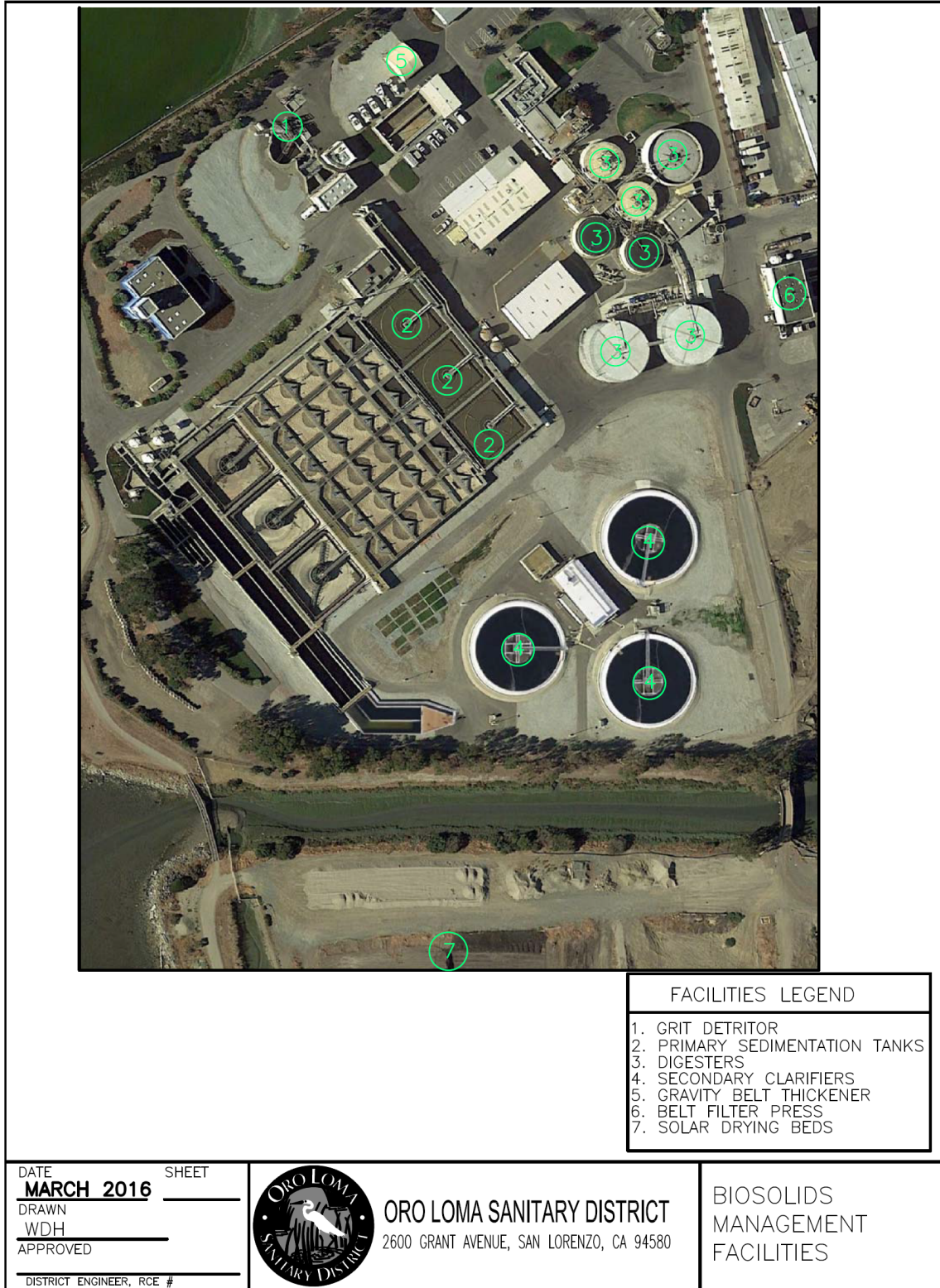
WATER POLLUTION CONTROL PLANT CAPACITY:
 Design 20 mgd
 Average Dry Weather Flow 12 mgd



ORO LOMA/CASTRO VALLEY
 WATER POLLUTION CONTROL PLANT
 FLOW/PROCESS DIAGRAM

Graphic Design by
 carollo

Figure C-2. Facility Legend



ATTACHMENT D – STANDARD PROVISIONS

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ATTACHMENT D – STANDARD PROVISIONS

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply

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

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

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

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

1.5. Property Rights

- 1.5.1. This Order does not convey any property rights of any sort or any exclusive privileges. (40 C.F.R. § 122.41(g).)
- 1.5.2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of state or local law or regulations. (40 C.F.R. § 122.5(c).)

1.6. Inspection and Entry. The Discharger 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):

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

1.7. Bypass

1.7.1. Definitions

- 1.7.1.1. “Bypass” means the intentional diversion of waste streams from any portion of a treatment facility. (40 C.F.R. § 122.41(m)(1)(i).)
- 1.7.1.2. “Severe property damage” means substantial physical damage to property; damage to the treatment facilities, which causes them to become inoperable; or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production. (40 C.F.R. § 122.41(m)(1)(ii).)
- 1.7.2. **Bypass not exceeding limitations.** The Discharger may allow any bypass to occur that does not cause exceedances of effluent limitations, but only if it is for essential maintenance to ensure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance sections 1.7.3, 1.7.4, and 1.7.5 below. (40 C.F.R. § 122.41(m)(2).)

- 1.7.3. **Prohibition of bypass.** Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless (40 C.F.R. § 122.41(m)(4)(i)):
- 1.7.3.1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage (40 C.F.R. § 122.41(m)(4)(i)(A));
 - 1.7.3.2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance (40 C.F.R. § 122.41(m)(4)(i)(B)); and
 - 1.7.3.3. The Discharger submitted notice to the Regional Water Board as required under Standard Provisions – Permit Compliance section 1.7.5 below. (40 C.F.R. § 122.41(m)(4)(i)(C).)
- 1.7.4. **Approval.** 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 section 1.7.3 above. (40 C.F.R. § 122.41(m)(4)(ii).)
- 1.7.5. **Notice**
- 1.7.5.1. **Anticipated bypass.** If the Discharger knows in advance of the need for a bypass, it shall submit prior notice, if possible, at least 10 days before the date of the bypass. The notice shall be sent to the Regional Water Board. As of December 21, 2025, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting section 5.10 below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(i).)
 - 1.7.5.2. **Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions – Reporting section 5.5 below (24-hour notice). The notice shall be sent to the Regional Water Board. As of December 21, 2025, a notice shall also be submitted electronically to the initial recipient defined in Standard Provisions – Reporting section 5.10 below. Notices shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(m)(3)(ii).)
- 1.8. **Upset.** Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error,

improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation. (40 C.F.R. § 122.41(n)(1).)

- 1.8.1. **Effect of an upset.** An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Standard Provisions – Permit Compliance section 1.8.2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. (40 C.F.R. § 122.41(n)(2).)
- 1.8.2. **Conditions necessary for a demonstration of upset.** A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that (40 C.F.R. § 122.41(n)(3)):
 - 1.8.2.1. An upset occurred and that the Discharger can identify the cause(s) of the upset (40 C.F.R. § 122.41(n)(3)(i));
 - 1.8.2.2. The permitted facility was, at the time, being properly operated (40 C.F.R. § 122.41(n)(3)(ii));
 - 1.8.2.3. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting section 5.5.2.2 below (24-hour notice) (40 C.F.R. § 122.41(n)(3)(iii)); and
 - 1.8.2.4. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance section 1.3 above. (40 C.F.R. § 122.41(n)(3)(iv).)
- 1.8.3. **Burden of proof.** In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof. (40 C.F.R. § 122.41(n)(4).)

2. STANDARD PROVISIONS – PERMIT ACTION

- 2.1. **General.** This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition. (40 C.F.R. § 122.41(f).)
- 2.2. **Duty to Reapply.** If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit. (40 C.F.R. § 122.41(b).)

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

3. STANDARD PROVISIONS – MONITORING

- 3.1.** Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. (40 C.F.R. § 122.41(j)(1).)
- 3.2.** Monitoring 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. chapter 1, subchapter N. Monitoring must be conducted according to sufficiently sensitive test methods approved under 40 C.F.R. part 136 for the analysis of pollutants or pollutant parameters or as required under 40 C.F.R. chapter 1, subchapter N. For the purposes of this paragraph, a method is sufficiently sensitive when:
- 3.2.1. The method minimum level (ML) is at or below the level of the most stringent effluent limitation established in the permit for the measured pollutant or pollutant parameter, and either the method ML is at or below the level of the most stringent applicable water quality criterion for the measured pollutant or pollutant parameter or the method ML is above the applicable water quality criterion but the amount of the pollutant or pollutant parameter in the facility's discharge is high enough that the method detects and quantifies the level of the pollutant or pollutant parameter in the discharge; or
- 3.2.2. The method has the lowest ML of the analytical methods approved under 40 C.F.R. part 136 or required under 40 C.F.R. chapter 1, subchapter N, for the measured pollutant or pollutant parameter.

In the case of pollutants or pollutant parameters for which there are no approved methods under 40 C.F.R. part 136 or otherwise required under 40 C.F.R. chapter 1, subchapter N, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. §§ 122.21(e)(3), 122.41(j)(4), 122.44(i)(1)(iv).)

4. STANDARD PROVISIONS – RECORDS

- 4.1.** The Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report, or application. This period may be extended by request of the Regional Water Board Executive Officer at any time. (40 C.F.R. § 122.41(j)(2).)

4.2. Records of monitoring information shall include:

- 4.2.1. The date, exact place, and time of sampling or measurements (40 C.F.R. § 122.41(j)(3)(i));
- 4.2.2. The individual(s) who performed the sampling or measurements (40 C.F.R. § 122.41(j)(3)(ii));
- 4.2.3. The date(s) analyses were performed (40 C.F.R. § 122.41(j)(3)(iii));
- 4.2.4. The individual(s) who performed the analyses (40 C.F.R. § 122.41(j)(3)(iv));
- 4.2.5. The analytical techniques or methods used (40 C.F.R. § 122.41(j)(3)(v)); and
- 4.2.6. The results of such analyses. (40 C.F.R. § 122.41(j)(3)(vi).)

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

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

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information. The Discharger shall furnish to the Regional Water Board, State Water Board, or U.S. EPA within a reasonable time, any information that 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 Discharger 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.)

5.2. Signatory and Certification Requirements

- 5.2.1. 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 sections 5.2.2, 5.2.3, 5.2.4, 5.2.5, and 5.2.6 below. (40 C.F.R. § 122.41(k).)
- 5.2.2. For a corporation, all permit applications shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (1) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (2) the

manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to make management decisions that govern the operation of the regulated facility, including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to ensure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. § 122.22(a)(1).)

For a partnership or sole proprietorship, all permit applications shall be signed by a general partner or the proprietor, respectively. (40 C.F.R. § 122.22(a)(2).)

For a municipal, state, federal, or other public agency, 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 (1) the chief executive officer of the agency, or (2) 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).)

- 5.2.3. 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 section 5.2.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - 5.2.3.1. The authorization is made in writing by a person described in Standard Provisions – Reporting section 5.2.2 above (40 C.F.R. § 122.22(b)(1));
 - 5.2.3.2. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. § 122.22(b)(2)); and
 - 5.2.3.3. The written authorization is submitted to the Regional Water Board and State Water Board. (40 C.F.R. § 122.22(b)(3).)
- 5.2.4. If an authorization under Standard Provisions – Reporting section 5.2.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting section 5.2.3 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).)

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

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.” (40 C.F.R. § 122.22(d).)

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

5.3. Monitoring Reports

- 5.3.1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. § 122.41(l)(4).)
- 5.3.2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or State Water Board. All reports and forms must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting section 5.10 and comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. (40 C.F.R. § 122.41(l)(4)(i).)
- 5.3.3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. chapter 1, subchapter N, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or reporting form specified by the Regional Water Board or State Water Board. (40 C.F.R. § 122.41(l)(4)(ii).)

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

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

5.5. Twenty-Four Hour Reporting

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

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

As of December 21, 2025, all reports related to combined sewer spills, sanitary sewer spills, or bypass events must be submitted to the Regional Water Board and must be submitted electronically to the initial recipient defined in Standard Provisions – Reporting section 5.10. The reports shall comply with 40 C.F.R. part 3, 40 C.F.R. section 122.22, and 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer spills, sanitary sewer spills, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i).)

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

5.5.2.1. Any unanticipated bypass that exceeds any effluent limitation in this Order. (40 C.F.R. § 122.41(l)(6)(ii)(A).)

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

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

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

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

5.6.2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order unless the discharge is an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 C.F.R. section 122.42(a). (40 C.F.R. § 122.41(l)(1)(ii).) If the discharge is an existing manufacturing, commercial, mining, or silvicultural discharge as referenced in 40 C.F.R. section 122.42(a), this notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under 40 C.F.R. section 122.42(a)(1) (see Additional Provisions – Notification Levels section 7.1.1). (40 C.F.R. § 122.41(l)(1)(ii).)

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

5.8. Other Noncompliance. The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting sections 5.3, 5.4, and 5.5 above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting section 5.5 above. For noncompliance related to combined sewer spills, sanitary sewer spills, or bypass events, these reports shall contain the information described in Standard Provision – Reporting section 5.5 and the applicable required data in appendix A to 40 C.F.R. part 127. The Regional Water Board may also require the Discharger to electronically submit reports not related to combined sewer spills, sanitary sewer spills, or bypass events under this section. (40 C.F.R. § 122.41(l)(7).)

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

5.10. Initial Recipient for Electronic Reporting Data. The owner, operator, or duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the initial recipient defined in 40 C.F.R. § 7.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. § 127.2(c)]. U.S. EPA will update and maintain this list. (40 C.F.R. § 122.41(l)(9).)

6. STANDARD PROVISIONS – ENFORCEMENT

6.1. 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, Water Code sections 13268, 13385, 13386, and 13387.

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

7.1. Non-Municipal Facilities. Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Regional Water Board as soon as they know or have reason to believe (40 C.F.R. § 122.42(a)):

7.1.1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels” (40 C.F.R. § 122.42(a)(1)):

7.1.1.1. 100 micrograms per liter ($\mu\text{g/L}$) (40 C.F.R. § 122.42(a)(1)(i));

7.1.1.2. 200 $\mu\text{g/L}$ for acrolein and acrylonitrile; 500 $\mu\text{g/L}$ for 2,4 dinitrophenol and 2-methyl 4,6 dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(1)(ii));

7.1.1.3. Five (5) times the maximum concentration reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(1)(iii)); or

7.1.1.4. The level established by the Regional Water Board in accordance with 40 C.F.R. section 122.44(f). (40 C.F.R. § 122.42(a)(1)(iv).)

7.1.2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following “notification levels” (40 C.F.R. § 122.42(a)(2)):

7.1.2.1. 500 micrograms per liter ($\mu\text{g/L}$) (40 C.F.R. § 122.42(a)(2)(i));

7.1.2.2. 1 milligram per liter (mg/L) for antimony (40 C.F.R. § 122.42(a)(2)(ii));

- 7.1.2.3. Ten (10) times the maximum concentration reported for that pollutant in the Report of Waste Discharge (40 C.F.R. § 122.42(a)(2)(iii)); or
- 7.1.2.4. The level established by the Regional Water Board in accordance with 40 C.F.R. section 122.44(f). (40 C.F.R. § 122.42(a)(2)(iv).)

7.2 Publicly Owned Treatment Works (POTWs)

- 7.2.1. All POTWs shall provide adequate notice to the Regional Water Board of any new introduction of pollutants into the POTW from an indirect discharger that would be subject to CWA sections 301 or 306 if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)).
- 7.2.2. All POTWs shall provide adequate notice to the Regional Water Board of 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 this Order. (40 C.F.R. § 122.42(b)(2).)
- 7.2.3. 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

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

Clean Water Act (CWA) section 308 and Code of Federal Regulations, Title 40 (40 C.F.R.), sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code section 13383 also authorizes the Regional Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This Monitoring and Reporting Program (MRP) establishes monitoring, reporting, and recordkeeping requirements that implement the federal and State laws and regulations.

1. GENERAL MONITORING PROVISIONS

- 1.1. The Discharger shall comply with this MRP. The Executive Officer may amend this MRP pursuant to 40 C.F.R. section 122.63. If any discrepancies exist between this MRP and the “Regional Standard Provisions, and Monitoring and Reporting Requirements (Supplement to Attachment D) for NPDES Wastewater Discharge Permits” (Attachment G), this MRP shall prevail.
- 1.2. The Discharger shall conduct all monitoring in accordance with Attachment D section 3, as supplemented by Attachment G. Equivalent test methods must be more sensitive than those specified in 40 C.F.R. section 136 and must be specified in this Order.
- 1.3. For the analysis of monitoring samples, the Discharger shall use laboratories certified by the State Water Resources Control Board (State Water Board) in accordance with Water Code section 13176 and shall obtain quality assurance/quality control data with laboratory reports. For any onsite field tests (e.g., turbidity, pH, temperature, dissolved oxygen, conductivity, disinfectant residual) analyzed by a noncertified laboratory, the Discharger shall implement a Quality Assurance-Quality Control Program. The Discharger shall keep a manual onsite containing the steps followed in this program and shall demonstrate sufficient capability to adequately perform these field tests (e.g., qualified and trained employees, properly calibrated and maintained field instruments). The program shall conform to United States Environmental Protection Agency (U.S. EPA) guidelines or other approved procedures.
- 1.4. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

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

2. MONITORING LOCATIONS

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

Table E-1. Monitoring Locations

Discharge Point	Monitoring Location	Monitoring Location Description
Influent	INF-002C	A point in the treatment plant headworks where all waste tributary to the treatment system is present and preceding any phase of treatment.
Effluent	EFF-002C	A point at which adequate disinfection has occurred and just prior to where the Discharger transfers control of the effluent to the EBDA pipeline.
Effluent	EFF-WW	A point where all phases of treatment are complete (including dechlorination) just prior to discharge through Discharge Point 001.

3. INFLUENT MONITORING

The Discharger shall monitor treatment plant influent at Monitoring Location INF-002C as follows:

Table E-2. Influent Dry Season Monitoring

Parameter	Unit	Sample Type	Minimum Sampling Frequency
Ammonia, Total	mg/L as N	C-24	1/Month
Kjeldahl Nitrogen, Total	mg/L as N	C-24	1/Month
Nitrate-Nitrite	mg/L as N	C-24	1/Month
Nitrogen, Total	mg/L as N	Calculated	1/Month

4. EFFLUENT MONITORING

4.1. Wet Season Discharges

During wet weather, when discharging from Discharge Point 001, the Discharger shall monitor treatment plant effluent at Monitoring Location EFF-002C or EFF-WW as follows:

Table E-3. Effluent Monitoring—Wet Weather

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Monitoring Location
CBOD	mg/L	Grab or C-24 ^[1]	1/Discharge ^[2]	EFF-002C
TSS	mg/L	Grab or C-24 ^[1]	1/Discharge ^[2]	EFF-002C

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Monitoring Location
pH	standard units	Continuous or Grab	1/Discharge ^[2]	EFF-002C
<i>Enterococcus</i> Bacteria ^[3]	CFU/100mL ^[4]	Grab	1/Discharge ^{[2],[5]}	EFF-002C
Copper, Total Recoverable	µg/L	Grab or C-24 ^[1]	1/Year ^[6]	EFF-002C
Cyanide, Total Recoverable ^[7]	µg/L	Grab	1/Year ^[6]	EFF-002C
Chlorine, Total Residual	mg/L	Continuous or Grab	Continuous/D or Once every two hours during discharge ^{[8],[9]}	EFF-WW
Flow ^[10]	MGD	Calculated	Calculated	EFF-WW
Discharge Duration	hours or minutes	Continuous	1/Discharge ^[2]	EFF-WW
Discharge Volume	gallons or million gallons	Continuous	1/Discharge ^[2]	EFF-WW

Footnotes:

- ^[1] If the discharge event is expected to last less than 24 hours, the Discharger may take a grab sample or a composite sample by manually or mechanically compositing samples once every two hours for the discharge duration.
- ^[2] 1/Discharge is defined as once per discharge event. For purposes of this Order, a discharge event extends from the time a discharge commences to the time the discharge ceases for greater than or equal to 24 hours.
- ^[3] U.S. EPA Method 1600 or an equivalent method is suggested to measure culturable enterococci.
- ^[4] Results may be reported as Most Probable Number (MPN)/100 mL if the laboratory method used provides results in MPN/100 mL.
- ^[5] If more than one sample is collected in a day, the Discharger shall report the geometric mean.
- ^[6] If a TSS sample collected on the same day exceeds 45 mg/L, sample(s) shall also be analyzed for this constituent.
- ^[7] The Discharger may, at its option, analyze for cyanide as weak acid dissociable cyanide using protocols specified in Standard Method Part 4500-CN-I, U.S. EPA Method OI 1677, or an equivalent method in the latest Standard Method edition.
- ^[8] The Discharger shall monitor continuously or by grab samples. If monitoring continuously, total residual chlorine concentrations shall be recorded at a frequency of not less than every 5 minutes. The minimum level for total residual chlorine analysis shall be no greater than 0.05 mg/L. To document compliance with the minimum level, the Discharger shall calibrate continuous total residual chlorine analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If monitoring by grab samples, the Discharger shall collect at least one sample per discharge event and continue sampling at least once every two hours for longer duration discharges.
- ^[9] To evaluate compliance with the one-hour average effluent limitation, the Discharger shall consider all readings recorded within each two-hour period during the discharge. The monitoring period shall begin within the first hour of the discharge. The Discharger shall calculate arithmetic means for each complete two-hour discharge period using all the readings during that period. The Discharger shall report through data upload to CIWQS the maximum two-hour arithmetic mean for each calendar day and any other two-hour arithmetic mean values that exceed the effluent limit. The Discharger shall retain documentation of chlorine results for at least three years.
- The Discharger may elect to use a continuous on-line monitoring system for measuring or determining that a residual dechlorinating agent (e.g., sodium bisulfite) is present. Such a monitoring system may be used to prove that anomalous residual chlorine exceedances are false positives and are not valid total residual chlorine detections because it is chemically improbable to have chlorine present in the presence of a dechlorinating agent. If convincing evidence exists to demonstrate that chlorine residual exceedances are false positives, the exceedances shall not be violations of this Order's total residual chlorine effluent limit.
- ^[10] Flow shall be the calculated average of a discharge event.

4.2. Dry Season Monitoring

During the dry season, when discharging from Discharge Point 001, the Discharger shall monitor treatment plant effluent at Monitoring Location EFF-002C or EFF-WW as follows:

Table E-4. Effluent Monitoring—Discharge Exercises

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Monitoring Location
CBOD	mg/L	Grab or C-24 ^[1]	1/Discharge ^[2]	EFF-002C
TSS	mg/L	Grab or C-24 ^[1]	1/Discharge ^[2]	EFF-002C
pH	standard units	Continuous or Grab	1/Discharge ^[2]	EFF-002C
<i>Enterococcus</i> Bacteria ^[3]	CFU/100 mL ^[4]	Grab	1/Discharge ^{[2],[5]}	EFF-002C
Flow ^[6]	MGD	Calculated	Calculated	EFF-WW
Chlorine, Total Residual	mg/L	Continuous or Grab	Continuous/D or Once every two hours during discharge ^{[7],[8]}	EFF-WW
Discharge Duration	hours or minutes	Continuous	1/Discharge ^[2]	EFF-WW
Discharge Volume	gallons or million gallons	Continuous	1/Discharge ^[2]	EFF-WW

Footnotes:

- ^[1] If the discharge is expected to last less than 24 hours, the Discharger may take a composite sample by mechanically or manually compositing samples once every two hours for the discharge duration.
- ^[2] 1/Discharge is defined as once per discharge event. For purposes of this Order, a discharge event extends from the time a discharge commences to the time the discharge ceases for greater than or equal to 24 hours.
- ^[3] U.S. EPA Method 1600 or an equivalent method is suggested to measure culturable *Enterococcus* bacteria.
- ^[4] Results may be reported as Most Probable Number (MPN)/100 mL if the laboratory method used provides results in MPN/100 mL.
- ^[5] If more than one sample is collected in a day, the Discharger shall report the geometric mean.
- ^[6] Flow shall be the calculated average of a discharge event.
- ^[7] The Discharger shall monitor continuously or by grab samples. If monitoring continuously, total residual chlorine concentrations shall be recorded at a frequency of not less than every 5 minutes. The minimum level for total residual chlorine analysis shall be no greater than 0.05 mg/L. To document compliance with the minimum level, the Discharger shall calibrate continuous total residual chlorine analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If monitoring by grab samples, the Discharger shall collect at least one sample per discharge event and continue sampling at least once every two hours for longer duration discharges.
- ^[8] To evaluate compliance with the one-hour average effluent limitation, the Discharger shall consider all readings recorded within each two-hour period during the discharge. The monitoring period shall begin within the first hour of the discharge. The Discharger shall calculate arithmetic means for each complete two-hour discharge period using all the readings during that period. The Discharger shall report through data upload to CIWQS the maximum two-hour arithmetic mean for each calendar day and any other two-hour arithmetic mean values that exceed the effluent limit. The Discharger shall retain documentation of chlorine results for at least three years.
- The Discharger may elect to use a continuous on-line monitoring system for measuring or determining that a residual dechlorinating agent (e.g., sodium bisulfite) is present. Such a monitoring system may be used to prove that anomalous residual chlorine exceedances are false positives and are not valid total residual chlorine detections because it is chemically improbable to have chlorine present in the presence of a dechlorinating agent. If convincing evidence exists to demonstrate that chlorine residual exceedances are false positives, the exceedances shall not be violations of this Order's total residual chlorine effluent limit.

During the dry season, regardless of whether the Discharger is discharging from Discharge Point 001, the Discharger shall monitor treatment plant effluent at Monitoring Location EFF-002C as follows:

Table E-5. Effluent Monitoring

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Monitoring Location
Ammonia, Total ^[1]	mg/L as N	C-24	1/Month	EFF-002C
Nitrate-Nitrite	mg/L as N	C-24	1/Month	EFF-002C
Nitrogen, Total Inorganic	mg/L as N	Calculated	1/Month	EFF-002C

Footnote:

^[1] Total ammonia samples shall be collected concurrently with influent samples. Total ammonia percent removal shall be reported in accordance with section 4.2 of the Order. Samples collected at greater than the minimum sampling frequency do not need to be collected concurrently with influent samples.

4.3. Effluent Characterization Study

During the wet season, regardless of whether the Discharger is discharging from Discharge Point 001, the Discharger shall monitor treatment plant effluent at Monitoring Location EFF-002C as follows:

Table E-6. Effluent Monitoring—Characterization Study

Parameter	Unit	Sample Type	Minimum Sampling Frequency	Monitoring Location
pH	standard units	Continuous or Grab	1/Year ^[1]	EFF-002C ^[2]
Temperature	°C	Grab	1/Year ^[1]	EFF-002C ^[2]
Ammonia, Total	mg/L as N	Continuous or Grab	1/Year ^[1]	EFF-002C ^[2]
Priority Pollutants ^[3]	µg/L	Grab or C-24 ^[4]	Once	EFF-002C ^[2]

Footnotes:

^[1] pH, temperature, and ammonia sampling shall occur on the same day to allow for the calculation of the un-ionized ammonia fraction. Monitoring pursuant to MRP Table E-3 may be used to satisfy these sampling requirements.

^[2] Monitoring and reporting conducted at Monitoring Location EFF-002C in accordance with NPDES Permit CA0037869 (for the EBDA Common Outfall) may be used to satisfy these sampling requirements.

^[3] The Discharger shall monitor for the pollutants listed in Attachment G, Table B, except for those pollutants for which there are no water quality criteria (see Fact Sheet Table F-8).

^[4] The Discharger shall collect C-24 samples for metals.

5. RECEIVING WATER MONITORING

The Discharger shall continue to participate in the Regional Monitoring Program (RMP), which collects data on pollutants and toxicity in San Francisco Bay water, sediment, and biota. The Discharger shall also provide supplemental funding to the RMP to support additional studies for constituents of emerging concern. The Discharger shall, either individually or in collaboration with other dischargers, submit or cause to submit a report each year that indicates the status of its RMP payment. The report shall be due on the same day as the letters certifying the Discharger's annual payment in support of RMP receiving water monitoring (currently February 1 each year).

6. REPORTING REQUIREMENTS

6.1. General Monitoring and Reporting Requirements. The Discharger shall comply with all Standard Provisions (Attachments D and G) related to monitoring, reporting, and recordkeeping.

6.2. Self-Monitoring Reports (SMRs)

6.2.1. SMR Format. The Discharger shall electronically submit SMRs using the State Water Board’s [California Integrated Water Quality System \(CIWQS\) Program website](http://waterboards.ca.gov/water_issues/programs/ciwqs) (waterboards.ca.gov/water_issues/programs/ciwqs). The CIWQS website will provide additional information for SMR submittal in the event of a planned service interruption for electronic submittal.

6.2.2. Annual SMR — Annual SMRs shall be due February 1 each year, covering the preceding calendar year (January 1 through December 31). They shall also address the preceding dry season (May 1 through September 30) to verify compliance with the total ammonia effluent limitation in section 4.2 of the Order. The annual SMR shall contain the applicable items described in Provisions 6.3.2 (Effluent Characterization Study and Report) of the Order and Attachment G section 5.3.1.6.

6.2.3. Specifications for Submitting SMRs to CIWQS. The Discharger shall submit analytical results and other information using one of the following methods:

Table E-7. CIWQS Reporting

Parameter	Method of Reporting: EDF/CDF data upload	Attached File
All parameters identified in influent, effluent, and receiving water monitoring tables (except Dissolved Oxygen and Temperature)	Required for all results	-
Dissolved Oxygen, Temperature	Required for monthly maximum and minimum results only ^[1]	Discharger may use this method for all results or keep records
Antimony, Arsenic, Beryllium, Cadmium, Chromium, Copper, Cyanide, Lead, Mercury, Nickel, Selenium, Silver, Thallium, Zinc, Dioxins & Furans (by U.S. EPA Method 1613), Other Pollutants (by U.S. EPA Methods 601, 602, 608, 610, 614, 624, and 625)	Required for all results ^[2]	-
Analytical Method	Not required (Discharger may select “data unavailable”) ^[1]	-
Collection Time, Analysis Time	Not required	-

Footnotes:

- ^[1] The Discharger shall continue to monitor at the minimum frequency specified in this MRP, keep records of the measurements, and make the records available upon request.
- ^[2] These parameters require EDF/CDF data upload or manual entry regardless of whether monitoring is required by this MRP or other provisions of this Order (except for biosolids, sludge, or ash provisions).

The Discharger shall arrange all reported data in a tabular format and summarize data to clearly illustrate whether the Facility is operating in compliance with effluent limitations. The Discharger is not required to duplicate the submittal of data 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, the Discharger shall electronically submit the data in a tabular format as an attachment.

6.2.4. **Monitoring Periods.** Monitoring periods for all required monitoring shall be as set forth below unless otherwise specified:

Table E-8. Monitoring Periods

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period
Once every two hours	Order effective date	Once every two-hour period, beginning at first moment of discharge
1/Month	First day of calendar month following or on Order effective date ^[2]	First day of calendar month through last day of calendar month
1/Discharge	First moment of discharge	Anytime during discharge event from beginning to end of discharge flow
1/Year	Closest January 1 before or after Order effective date ^[1]	January 1 through December 31
Once	Order effective date	Once during the permit term during a discharge event

Footnotes:

^[1] Monitoring performed during the previous order term may be used to satisfy monitoring required by this Order.

6.2.5. **RL and MDL Reporting.** The Discharger shall report with each sample result the Reporting Level (RL) and Method Detection Limit (MDL) as determined by the procedure in 40 C.F.R. part 136. The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- 6.2.5.1. 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).
- 6.2.5.2. 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 purposes of data collection, the Discharger shall require the laboratory to write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be

percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means the laboratory considers appropriate.

- 6.2.5.3. Sample results less than the laboratory's MDL shall be reported as "Not Detected", or ND.
- 6.2.5.4. The Discharger shall instruct laboratories to establish calibration standards so that the minimum level (ML) value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.
- 6.2.6. **Compliance Determination.** Compliance with effluent limitations shall be determined using sample reporting protocols defined above, in the Fact Sheet, and in Attachments A, D, and G. For purposes of reporting and administrative enforcement by the Regional Water Board and State Water Board, the Discharger shall be deemed out of compliance with effluent limitations if the concentration of the pollutant in the monitoring sample is greater than the effluent limitation and, if applicable, greater than or equal to the RL.
- 6.3. Discharge Monitoring Reports (DMRs).** DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or the latest upgraded version. Electronic DMR submittal shall be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the [DMR website](https://waterboards.ca.gov/water_issues/programs/discharge_monitoring) (waterboards.ca.gov/water_issues/programs/discharge_monitoring).

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

This Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order. As described in section 2.2 of the Order, the Regional Water Board incorporates this Fact Sheet as findings supporting the issuance of the Order.

1. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

Table F-1. Facility Information

WDID	2 019032001
CIWQS Place ID	246217
Discharger	Oro Loma Sanitary District Castro Valley Sanitary District
Facility Name	Oro Loma and Castro Valley Sanitary Districts Water Pollution Control Plant – Intermittent Wet Weather Discharge
Facility Address	2600 Grant Avenue San Lorenzo, CA 94580 Alameda County
Facility Contact, Title, Phone, and Email	Jimmy Dang, General Manager (510) 481-6981, jdang@oroloma.org
Authorized Person to Sign and Submit Reports	Same as Facility Contact
Mailing Address	Same as facility address
Billing Address	Same as mailing address
Facility Type	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Minor
Water Quality Threat	2
Complexity	B
Pretreatment Program	No
Reclamation Requirements	None
Mercury and PCBs Requirements	NPDES Permit CA0038849 Monitoring for these requirements is conducted by the East Bay Dischargers Authority at its deepwater outfall.
Nutrients Requirements	NPDES Permit CA0038873 Monitoring for these requirements is conducted by the East Bay Dischargers Authority at its deepwater outfall.
Maintenance Exercise Discharge Permitted Flow	2.0 million gallons total per discharge exercise
Facility Design Flow	20.0 MGD – average daily dry weather design flow
Expected Intermittent Maximum Discharge Rate	42.0 MGD to Lower San Francisco Bay
Watershed	San Lorenzo Creek
Receiving Water	Lower San Francisco Bay

Receiving Water Type	Marine
Date of Last Inspection	June 5, 2023

1.1. The Oro Loma Sanitary District and the Castro Valley Sanitary District (jointly, the Discharger) jointly own the Water Pollution Control Plant. The Oro Loma Sanitary District operates the plant. The Oro Loma Sanitary District and the Castro Valley Sanitary District individually own and operate their own sanitary sewer systems. The plant and the Oro Loma and Castro Valley Sanitary Districts' respective sanitary sewer systems (collectively, the Facility) provide advanced secondary-treated wastewater collected from the plant's service areas. During wet weather, the plant discharges treated effluent from a shallow-water outfall to Lower San Francisco Bay. The discharge location is indicated in Table 1 of this Order and shown in Attachment B.

The Discharger is a member of the East Bay Dischargers Authority (EBDA). EBDA operates under a Joint Exercise of Powers Agreement among the City of Hayward, City of San Leandro, Union Sanitary District, Oro Loma Sanitary District, and Castro Valley Sanitary District that specifies the terms and conditions of discharges through the EBDA system. EBDA transports treated wastewater from its member agencies, including the Discharger, to the EBDA dechlorination station near the San Leandro Marina before discharging it via a deepwater outfall to Lower San Francisco Bay. The discharge through the deepwater outfall is regulated under NPDES Permit CA0037869.

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

1.2. The Discharger's wet weather discharge is regulated pursuant to NPDES Permit CA0037559. The Discharger is authorized to discharge subject to the Waste Discharge Requirements (WDRs) in this Order at the discharge location described in Table 1 of this Order.

1.3. The Discharger was previously subject to Order R2-2018-0010 (previous order) as amended by R2-2021-0028 and R2-2023-0023.

- Order R2-2021-0028 amended the previous order to provide updated monitoring requirements and require supplemental funding for the Regional Monitoring Program (RMP).
- Order R2-2023-0023 amended the previous order to update effluent limitations and monitoring requirements for total residual chlorine and remove effluent limitations and monitoring requirements for oil and grease.

Provisions of these orders have been incorporated into this Order.

- 1.4. The Discharger filed a Report of Waste Discharge and submitted an application for reissuance of its WDRs and NPDES permit on March 30, 2023.
- 1.5. Regulations in the Code of Federal Regulation, title 40 (40 C.F.R.), section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, this Order limits the effective period for the discharge authorization. Pursuant to 40 C.F.R. section 122.6(d) and California Code of Regulations, title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all requirements for continuation of expired permits.
- 1.6. The Discharger is also regulated under NPDES Permits CA0038849 and CA0038873, which establish requirements on mercury and polychlorinated biphenyls (PCBs) and nutrients from wastewater discharges to San Francisco Bay. Monitoring for these requirements is conducted by EBDA at its deepwater outfall. This Order does not affect those permits.
- 1.7. When applicable, State law requires dischargers to file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights, and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of a watercourse. The State Water Board retains separate jurisdictional authority to enforce such requirements under Water Code section 1211. This is not an NPDES permit requirement.

2. FACILITY DESCRIPTION

2.1. Sanitary Sewer System and Treatment

- 2.1.1. **Location and Service Area.** The Facility is located at 2600 Grant Avenue in San Lorenzo. It provides secondary treatment and disinfection of domestic and commercial wastewater from the communities of Castro Valley (served by Castro Valley Sanitary District), San Lorenzo, Ashland, Cherryland, and Fairview, and portions of the cities of San Leandro and Hayward. The estimated service area population is about 192,000.

Attachment B provides maps of the area around the plant.

- 2.1.2. **Wastewater Treatment.** The plant provides advanced-secondary treatment for an average dry weather design flow of 20.0 MGD. The wastewater treatment process consists of screening, grit removal, primary sedimentation, activated sludge modified Ludzack-Ettigner nitrification and denitrification, secondary clarification, and sodium hypochlorite disinfection. Prior to any wet weather or maintenance exercise discharge, the Discharger will also dechlorinate the wastewater.

Attachment C provides flow schematics for the treatment plant.

Effluent ammonia concentrations may be higher during lower temperature winter conditions because nitrification (conversion of ammonia to nitrate) is mediated by specific bacteria that convert ammonia to nitrate less efficiently at lower temperatures. Effluent ammonia concentrations may also be higher during peak wet weather events when the nitrifying bacteria are more susceptible to hydraulic washout. During such events, the plant may not provide adequate resident time for nitrification and denitrification (i.e., the conversion of nitrate to nitrogen gas, which is released to the atmosphere). The Discharger uses available basins to store solids containing the necessary microorganisms and reduce the potential for washout.

2.1.3. **Stormwater Management.** The Discharger captures all stormwater at the plant and directs it to the plant headworks for treatment. Therefore, no additional stormwater requirements are necessary.

2.2. **Discharge Point and Receiving Waters.** This Order covers intermittent discharges of secondary-treated, disinfected, and dechlorinated municipal wastewater to the Discharger's wet weather outfall. These discharges occur in Lower San Francisco Bay (Discharge Point 001). During the dry season, the Discharger provides advanced-secondary treatment and discharges effluent through the EBDA deepwater outfall.

The wet weather outfall is a shallow-water outfall without a diffuser. The discharge location is approximately 920 feet offshore. There are two types of discharges from the shallow-water outfall: (1) discharges during peak wet weather events, and (2) discharges from maintenance exercises to ensure outfall operability.

The Joint Exercise of Powers Agreement among EBDA and its member agencies allots 30.0 MGD of flow capacity in the EBDA pipeline to the Discharger. If the plant effluent flow exceeds the 30.0MGD maximum capacity and available equalization basin storage, the Discharger discharges to the shallow-water outfall. The Discharger stops discharging to the shallow-water outfall when the plant's effluent flow drops below approximately 30.0 MGD.

The Discharger conducts maintenance exercise discharges to ensure that the shallow-water outfall line is flushed of accumulated sediment and that control valves and dechlorination equipment are operational in advance of the wet season (November 1 to April 30) when it may be necessary to discharge during peak wet weather events. The maintenance exercise discharges are conducted for up to two days per year during the dry season (May 1 to October 31) and do not exceed a total volume of 2.0 million gallons during any particular day.

Wet weather discharges are infrequent. The Discharger minimizes discharges to Lower San Francisco Bay by using its 8.0-million-gallon (MG) Ecotone Project equalization basin to store peak flows. When the equalization basin is full (or projected to be full given peak flows), effluent flows above the Discharger's contractual flow of 30.0 MGD are discharged to the shallow-water outfall. At the

end of each storm, water stored in the equalization basin is routed back to the plant headworks. Wet weather discharges are only expected during peak wet weather events when natural flows in adjacent San Lorenzo Creek and Bockman Canal are high.

2.3. Previous Requirements and Monitoring Data. The table below presents the previous order’s effluent limitations and representative monitoring data from January 2019 through October 2023:

Table F-2. Previous Effluent Limitations and Monitoring Data

Parameter	Unit	Average Monthly Limitation	Average Weekly Limitation	Maximum Daily Limitation	Other Limitation	Long-Term Average	Highest Daily Value
Wet Season (November 1 through April 30)							
Carbonaceous Biochemical Oxygen Demand (5 day @ 20°C) (CBOD)	mg/L	25	40	-	-	19	52 ^[1]
Total Suspended Solids (TSS)	mg/L	30	45	-	-	28	44
Oil and Grease	mg/L	10	-	20	-	2.9 DNQ	2.9 DNQ
Dry Season (May 1 through October 31)							
Carbonaceous Biochemical Oxygen Demand (5 day @ 20°C) (CBOD)	mg/L	15	30	-	-	<2	<2
Total Suspended Solids (TSS)	mg/L	15	30	-	-	3.3	3.3
Oil and Grease	mg/L	5	-	10	-	<1.4	<1.4
Year-Round							
pH	s.u.	-	-	-	6.5 – 8.5 ^[2]	-	6.6 – 7.5 ^[3]
Copper, Total	µg/L	13	-	18	-	12	23
Cyanide, Total	µg/L	6.3	-	13	-	<2.4	4.3
Benzo(a)Anthracene	µg/L	0.18	-	0.36	-	<0.02	<0.05
Bis(2-Ethylhexyl) Phthalate	µg/L	11	-	23	-	<1.7	2.6 DNQ
Fecal Coliform Bacteria	MPN/100 mL	-	-	130	^[4]	370	2400 ^[5]
Chlorine, Total Residual	mg/L	-	-	-	0.0 ^[6]	0.0	0.0
Total Ammonia	% removal				Annual average removal of 70%	85 ^[7]	79 ^[8]

Footnotes:

^[1] Despite this individual daily value, the Discharger did not violate the previous order’s average weekly CBOD effluent limitation.

- ^[2] The limitation was expressed as an instantaneous minimum and instantaneous maximum.
- ^[3] The range is the lowest and highest pH values.
- ^[4] The limitation was a daily maximum.
- ^[5] The Discharger violated the previous order's fecal coliform bacteria effluent limitations. See Fact Sheet Table F-3.
- ^[6] The limitation was an instantaneous maximum.
- ^[7] The value was calculated using monitoring data from September 2020 to October 2023 because the Discharger completed its plant upgrades (nitrification and partial denitrification) in September 2020.
- ^[8] This value is the lowest annual average percent removal beginning when the Discharger completed its plant upgrades in September 2020.

2.4. Compliance Summary

2.4.1. **Effluent Limitation Violations.** The Discharger violated its effluent limitations seven times during the period from January 1, 2019, through November 30, 2023.

Table F-3. Effluent Limitation Violations

Date of Violation	Violation	Units	Effluent Limitation	Reported Value
12/31/2022	CBOD, Monthly Average	mg/L	25	26
12/31/2022	Copper, Total Monthly Average	µg/L	13	23
12/31/2022	Copper, Total Maximum Daily	µg/L	18	23
12/31/2022	Fecal Coliform, Maximum Daily	MPN/mL	130	165
12/31/2022	TSS, Monthly Average	mg/L	30	44
01/09/2023	Fecal Coliform, Maximum Daily	MPN/mL	130	2420
01/16/2023	Fecal Coliform, Maximum Daily	MPN/mL	130	261

On December 31, 2022, the Discharger exceeded the monthly average limitations for CBOD, TSS, and copper, and the maximum daily limitations for copper and fecal coliform due to a series of storms that brought record-breaking rainfall to the area. The rain flooded the plant and overwhelmed its treatment units. Similarly, on January 9 and 16, 2023, the Discharger exceeded the maximum daily effluent limitation for fecal coliform. The January violations occurred as the plant was recovering from flooding on December 31, 2022. The Discharger has since implemented corrective measures, such as more proactive flow management (i.e., directing high influent flows to its equalization basin earlier in anticipation of large storms) and minimizing use of the shallow-water outfall.

The Regional Water Board assessed a mandatory minimum penalty of \$15,000 for these violations (Order R2-2024-1017). Since January 2023, the Discharger has complied with all effluent limitations.

2.5. **Planned Changes.** The Discharger is not planning significant changes for this Order term.

2.6. Sea Level Rise. Based on the *National Research Council 2012 Projections – Sea-level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future*, the Discharger has begun planning for 12-inches of sea-level rise by 2050 and 36-inches by 2100. The Discharger is currently protected by a perimeter levee, and critical structures are built at or above an elevation of 8 feet. The Discharger has been and plans to continue working with the Hayward Area Shoreline Protection Agency (HASPA) to plan sea-level rise mitigation strategies, such as a horizontal levee. HASPA membership consists of the City of Hayward, Hayward Area Recreation and Park District, and East Bay Regional Park District.

3. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

3.1. Legal Authorities. This Order serves as WDRs pursuant to California Water Code article 4, chapter 4, division 7 (commencing with § 13260). This Order is also issued pursuant to federal Clean Water Act (CWA) section 402 and implementing regulations adopted by the U.S. EPA, and Water Code chapter 5.5, division 7 (commencing with § 13370). It serves as an NPDES permit authorizing the Discharger to discharge into waters of the United States at the discharge location described in Table 1 subject to the WDRs in this Order.

3.2. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of the California Environmental Quality Act (CEQA), Public Resources Code division 13, chapter 3 (commencing with § 21100).

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

3.3.1. Water Quality Control Plan. The Regional Water Board adopted the *Water Quality Control Plan for the San Francisco Bay Basin* (Basin Plan), which designates beneficial uses, establishes water quality objectives, 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, this Order 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. Because of the marine influence on Lower San Francisco Bay, total dissolved solids levels exceed 3,000 mg/L; therefore, Lower San Francisco Bay meets an exception to State Water Board Resolution 88-63. The beneficial uses applicable to Lower San Francisco Bay are as follows:

Table F-4. Beneficial Uses

Discharge Point	Receiving Water	Beneficial Uses
001	Lower San Francisco Bay	Industrial Service Supply (IND) Commercial and Sport Fishing (COMM) Estuarine Habitat (EST) Fish Migration (MIGR) Preservation of Rare and Endangered Species (RARE) Shellfish Harvesting (SHELL) Fish Spawning (SPWN) Wildlife Habitat (WILD) Water Contact Recreation (REC1) Non-Contact Water Recreation (REC2) Navigation (NAV)

3.3.2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** The NTR and CTR contain federal water quality criteria for priority pollutants. U.S. EPA adopted the NTR on December 22, 1992, and amended it on May 4, 1995, and November 9, 1999. About 40 NTR criteria apply in California. U.S. EPA adopted the CTR on May 18, 2000. The CTR promulgated new toxics criteria for California and incorporated the NTR criteria that applied in the State. U.S. EPA amended the CTR on February 13, 2001.

3.3.3. **State Implementation Policy.** 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) on March 2, 2000. The SIP establishes implementation provisions for priority pollutant criteria and objectives, and provisions for chronic toxicity control. The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated for California through the NTR and the priority pollutant objectives the Regional Water Board established through the Basin Plan. The SIP became effective on May 18, 2000, with respect to the priority pollutant criteria U.S. EPA promulgated through the CTR. The State Water Board adopted amendments to the SIP on February 24, 2005, that became effective on July 13, 2005. Requirements of this Order implement the SIP.

3.3.4. **Bacteria Objectives.** The State Water Board adopted the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy* on August 7, 2018, and it became effective on March 22, 2019. This plan establishes *Enterococcus* bacteria water quality objectives and related implementation provisions for discharges to marine and estuarine waters that support the water contact recreation (REC1) beneficial use.

3.3.5. **Toxicity Provisions.** The State Water Board adopted the *State Policy for Water Quality Control: Toxicity Provisions* (Toxicity Provisions) on October 5, 2021. The Toxicity Provisions were approved by U.S. EPA on

May 1, 2023. Toxicity Provisions sections II.C.1 and II.C.2 establish numeric chronic and acute toxicity objectives that apply to all inland surface waters, enclosed bays, and estuaries in the State with aquatic life beneficial uses. The Toxicity Provisions include related implementation provisions and require that compliance with the chronic toxicity water quality objectives be assessed using U.S. EPA's Test of Significant Toxicity (TST) (U.S. EPA, *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* [EPA/833-R-10-003], June 2010).

- 3.3.6. **Sediment Quality.** The State Water Board adopted the *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* on September 16, 2008, and it became effective on August 25, 2009. The State Water Board adopted amendments to the plan on June 5, 2018, that became effective on March 11, 2019. This plan establishes sediment quality objectives and related implementation provisions for specifically defined sediments in most bays and estuaries.
- 3.3.7. **Antidegradation Policy.** Federal regulations at 40 C.F.R. section 131.12 require that state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy through State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, which incorporates 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 Basin Plan implements, and incorporates by reference, both the State and federal antidegradation policies. Permitted discharges must be consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16.
- 3.3.8. **Anti-Backsliding Requirements.** CWA sections 402(o) and 303(d)(4) and 40 C.F.R. section 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.
- 3.3.9. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code §§ 2050 to 2097) or Federal Endangered Species Act (16 U.S.C. §§ 1531 to 1544). This Order requires compliance with effluent limitations, receiving water limitations, and other requirements to protect the beneficial uses of waters of the State, including protecting rare, threatened, or endangered species. The Discharger is responsible for meeting all applicable Endangered Species Act requirements.

3.3.10. **Sewage Sludge and Biosolids.** U.S. EPA administers 40 C.F.R. part 503, Standards for the Use or Disposal of Sewage Sludge, which regulates the final use or disposal of sewage sludge generated during the treatment of domestic sewage in a municipal wastewater treatment facility. This Order does not authorize any act that violates those requirements. The Discharger is responsible for meeting applicable requirements of 40 C.F.R. part 503.

3.4. Impaired Water Bodies on CWA section 303(d) List. On May 11, 2022, U.S. EPA approved a revised list of impaired waters pursuant to CWA section 303(d), which requires identification of specific water bodies where it is expected that water quality standards will not be met after implementation of technology-based effluent limitations on point sources. Where it has not done so already, the Regional Water Board plans to adopt Total Maximum Daily Loads (TMDLs) for pollutants on the 303(d) list. TMDLs establish wasteload allocations for point sources and load allocations for nonpoint sources and are established to achieve water quality standards.

Lower San Francisco Bay is listed as impaired by mercury, PCBs, dioxin-like PCBs, chlordane, DDT, dieldrin, invasive species, trash, dioxin compounds (including 2,3,7,8-TCDD), and furan compounds. On February 12, 2008, U.S. EPA approved a TMDL for mercury in San Francisco Bay. On March 29, 2010, U.S. EPA approved a TMDL for PCBs in San Francisco Bay. The TMDLs for mercury and PCBs apply to this discharge and are implemented through NPDES Permit CA0038849.

As shown in Fact Sheet section 4.3.3, the discharge is not a significant source of chlordane, DDT, or dieldrin because these pollutants have not been detected in the discharge. The discharge is not a source of invasive species because it is disinfected. It is also not a source of trash because it is screened and treated to secondary treatment standards (see Fact Sheet Table F-5). Based on monitoring data the Discharger collected in the previous order term, the discharge is an insignificant source of dioxin and furan compounds.

4. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants discharged into waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations: 40 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 receiving waters.

4.1. Discharge Prohibitions

4.1.1. Prohibitions in this Order

- 4.1.1.1. **Discharge Prohibition 3.1 (No discharge other than as described):** This prohibition is based on 40 C.F.R. section 122.21(a) and Water Code section 13260, which require filing an application and Report of Waste Discharge before a discharge can occur. Discharges not described in the application and Report of Waste Discharge, and subsequently in this Order, are prohibited.
- 4.1.1.2. **Discharge Prohibition 3.2 (Discharge to Lower San Francisco Bay, except during peak wet weather):** This prohibition ensures that discharges to Lower San Francisco Bay occur only during peak wet weather when the maximum hydraulic capacity in the EBDA pipeline of 30.0 MGD is fully utilized or when discharging during maintenance exercise discharges. Peak wet weather discharges are expected to exceed the available capacity in the EBDA pipeline about eight times per calendar year.
- 4.1.1.3. **Discharge Prohibition 3.3 (Bypass):** This prohibition is based on 40 C.F.R. section 122.31(m) (see Attachment D section 1.7)
- 4.1.1.4. **Discharge Prohibition 3.4 (Discharge for operational maintenance more than two days per year):** This prohibition restricts potential water quality impacts to Lower San Francisco Bay resulting from maintenance exercise discharges by limiting such discharges to a total volume of 2.0 million gallons during any particular day in advance of the wet season. Maintenance exercise discharges in advance of the wet season are needed to ensure the operability of the wet weather outfall when wet weather discharges are necessary. The total discharge volume limitation of 2.0 million gallons each day is based on the volume discharged during the maintenance exercise the Discharger conducted during the previous Order term.

4.1.2. Basin Plan Discharge Prohibition 1

The shallow-water discharges will not receive an initial dilution of at least 10:1 as they enter Lower San Francisco Bay. Basin Plan Table 4-1, Discharge Prohibition 1, prohibits wastewater discharges that have particular characteristics of concern to beneficial uses if they do not receive a minimum initial dilution of at least 10:1 or if they flow to a non-tidal water, a dead-end slough, a similar confined water, or immediate tributaries thereof. The purpose of Discharge Prohibition 1 is to protect against the following:

- continuous effects of waste discharge;
- effects of abnormal discharges caused by temporary plant upsets or malfunctions;
- public contact with undiluted waste; and

- visual impacts.
- 4.1.2.1. Treated sewage and other discharges subject to treatment process upsets are assumed to have particular characteristics of concern unless the discharge of inadequately treated waste will be reliably prevented. In this case, discharge of inadequately treated waste is reliably prevented, and the discharges do not have particular characteristics of concern to the beneficial uses of Lower San Francisco Bay for the following reasons:
- 4.1.2.1.1. The discharges are infrequent and not continuous. Wet weather discharges will occur approximately eight times per year and up to 12 hours per event at a flow of approximately 42 MGD. During the dry season, maintenance exercise discharges occur no more than two days per calendar year and do not exceed a volume of 2.0 million gallons during any particular day. Dry season discharges undergo advanced-secondary treatment, including nitrification and partial denitrification. During the dry season, the Discharger is also held to more stringent CBOD and TSS effluent limitations. For these reasons, the discharges will not have continuous effects on Lower San Francisco Bay.
- 4.1.2.1.2. There is little risk that the treatment plant would result in an abnormal discharge. The discharge of inadequately treated waste is reliably prevented because, if an upset were to occur at the plant, effluent would likely flow to the EBDA deepwater outfall. Discharge to the shallow-water outfall would require an intermittent peak wet weather discharge. Moreover, the Discharger has a good compliance record. The Discharger's effluent limitation violations were confined to an unprecedented storm event during the previous order term, and were also the first time on record that the Discharger exceeded effluent limitations. The Discharger has taken corrective action to prevent similar occurrences (see Fact Sheet section 2.4).
- 4.1.2.1.3. There is little potential for public contact with undiluted waste. Discharges occur 920 feet offshore, and only during wet weather when the discharges are flushed and diluted by increased flows from the adjacent San Lorenzo Creek.
- 4.1.2.1.4. The discharges do not cause visual impacts. The discharges are treated to secondary treatment standards (see Fact Sheet Table F-5), which address objectionable color and turbidity.
- 4.1.2.2. Basin Plan section 4.2 also provides exceptions to the Discharge Prohibition under certain circumstances:
- An inordinate burden would be placed on the Discharger relative to the beneficial uses protected, and an equivalent level of environmental protection can be achieved by alternate means;

- A discharge is approved as part of a reclamation project;
- Net environmental benefits will be derived as a result of the discharge; or
- A discharge is approved as part of a groundwater cleanup project.

The Basin Plan further states:

Significant factor to be considered by the Regional Water Board in reviewing requests for exceptions will be the reliability of the discharger's system in preventing inadequately treated wastewater from being discharged to the receiving water and the environmental consequence of such discharges.

The discharge qualifies for an exception to Discharge Prohibition 1 based on the following:

- 4.1.2.2.1. Conveying all discharges, including intermittent peak wet-weather flows, to the EBDA deepwater outfall (e.g., by purchasing additional contract capacity in the EBDA pipeline or constructing additional onsite storage capacity) would constitute an inordinate burden on the Discharger because it would be unreasonably costly to purchase additional daily EBDA pipeline capacity or construct onsite storage capacity for discharges that occur at most approximately eight times per year.
- 4.1.2.2.2. The Discharger provides an equivalent level of environmental protection by preventing nearly all discharges from its shallow-water outfall. During intermittent peak wet weather, shallow-water discharges are projected to occur approximately eight times per year for up to 12 hours. During the previous order term, wet weather discharges occurred only twice, which were during record-breaking storms on December 31, 2022, and January 1, 2023. Dry season maintenance exercise discharges are infrequent, occurring no more than two times per year. Moreover, the Discharger reliably prevents inadequately-treated wastewater from being discharged because, under most possible upset conditions, effluent would flow to the EBDA deepwater outfall, not the shallow waters of Lower San Francisco Bay. Furthermore, the Discharger provides an equivalent level of environmental protection by providing advanced-secondary treatment during the dry season (May 1 through September 30) (i.e., by complying with more stringent CBOD and TSS effluent limitations). The Discharger also removes significant ammonia and total inorganic nitrogen through nitrification and partial denitrification year-round, thereby reducing the potential for eutrophication impacts to Lower San Francisco Bay.

4.2. Technology-Based Effluent Limitations

4.2.1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44 require that permits include conditions meeting technology-based requirements, at a minimum, and any more stringent effluent limitations necessary to meet water quality standards. The discharges authorized by this Order must meet minimum federal technology-based requirements based on the secondary treatment standards at 40 C.F.R. section 133 as summarized below. Basin Plan Table 4-2 contains additional requirements for certain pollutants.

Table F-5. Secondary Treatment Standards

Parameter	Monthly Average	Weekly Average
Biochemical Oxygen Demand (BOD) ^[1]	30 mg/L	45 mg/L
Carbonaceous Biochemical Oxygen Demand (CBOD) ^[1]	25 mg/L	40 mg/L
Total Suspended Solids (TSS)	30 mg/L	45 mg/L
pH	6.5 – 8.5 standard units	

Footnote:

^[1] CBOD effluent limitations may be substituted for BOD limitations.

4.2.2. Technology-Based Effluent Limitations

4.2.2.1. **CBOD and TSS.** During wet weather months (November 1 through April 30), the weekly CBOD and TSS effluent limitations are based on the secondary treatment standards and Basin Plan Table 4-2. During the dry season (May 1 through October 31), more stringent limitations apply. Effluent data show the more stringent limitations are technologically feasible. They are required to demonstrate a level of water quality protection equivalent to complying with Basin Plan Discharge Prohibition 1 (see Fact Sheet section 4.1.2).

Due to the brief and infrequent nature of the discharge, this Order contains only weekly average limitations, not monthly average limitations. NPDES Permit CA0037869 (for the EBDA Common Outfall) ensures that the Facility's effluent satisfies the monthly average effluent limitations in accordance with the secondary treatment standards.

4.2.2.2. **pH.** The pH effluent limitations are based on the secondary treatment standards and Basin Plan Table 4-2.

4.2.2.3. **Chlorine.** Basin Plan Table 4-2 contains an instantaneous limitation for total residual chlorine of 0.0 mg/L. This Order continues to replace the instantaneous limitation in the Basin Plan with a higher water quality-based effluent limitation (see Fact Sheet section 4.3.4.5) imposed in the previous order, as amended by Order R2-2023-0023, because Basin Plan section 4.5.3 allows less stringent effluent limitations when certain conditions are

met. It states, “The Water Board will consider establishing less stringent limitations, consistent with state and federal laws, for any discharge where it can be conclusively demonstrated through a comprehensive program approved by the Water Board that such limitations will not result in unacceptable adverse impacts on the beneficial uses of the receiving water.” These conditions are met. The less stringent water quality-based effluent limitation is consistent with state and federal anti-backsliding (CWA sections 402(o), 303(d)(4), and 40 C.F.R. section 122.44(l)) and antidegradation (Resolution 68-16 and 40 C.F.R. 131.12) laws. In terms of anti-backsliding, the water quality-based effluent limitation is not less stringent than the limitation imposed in the previous order. In terms of antidegradation, any decrease in water quality resulting from this limitation is consistent with the maximum benefit of the people of the state, does not unreasonably affect any current or anticipated beneficial uses, and does not result in lower water quality than that prescribed in applicable policies. Additionally, this Order requires the Discharger to implement a control plan to demonstrate that these limitations will not result in unacceptable adverse impacts on beneficial uses.

The removal of the 0.0 mg/L chlorine limitation addresses the over-application of sodium bisulfite that results in extra operational cost and can decrease dissolved oxygen concentrations and depress pH in the effluent and receiving water. Municipal wastewater treatment plants that use chlorine to disinfect must apply a dechlorinating chemical, typically liquid sodium bisulfite, to remove residual chlorine and comply with the residual chlorine effluent limitation. Because wastewater is a complex mixture and the 0.0 mg/L effluent limitation is an instantaneous maximum (i.e., no amount may be discharged, ever), wastewater treatment plant operators routinely add sodium bisulfite in amounts well beyond what would theoretically neutralize residual chlorine. The excess use of dechlorination chemicals costs dischargers up to \$2 million per year (Bay Area Clean Water Agencies, September 29, 2023). These funds could be better invested in other important water quality projects. Therefore, the less stringent water quality-based effluent limitations are consistent with the maximum benefit of the people of the state.

Compliance with the less stringent effluent limitations will not unreasonably affect current or anticipated beneficial uses because the chlorine water quality criteria implemented in this Order are protective of most aquatic life.¹

¹ U.S. EPA’s *Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses* (EPA 822-R-85-100) indicates that aquatic organisms and their uses should not be affected unacceptably by the 304(a) numeric criteria except possibly where a locally important species is very sensitive.

To ensure that any migration corridors for threatened and endangered species will not be compromised, this Order does not establish a mixing zone for the water quality-based effluent limitation. This revised approach for establishing chlorine effluent limitations thus reflects the updated understanding that overdosing with dechlorination chemicals is no longer the best practicable treatment or control of chlorine because of its adverse impacts to water quality.

Since the imposition of the 0.0 mg/L instantaneous chlorine limitation, there have been significant improvements in chlorine process control. For example, instead of collecting periodic grab samples to evaluate compliance, continuous monitoring devices that evaluate chlorine residual levels at least every five minutes are now commonplace. Additionally, this Order requires the Discharger to implement a Chlorine Process Control Plan to target a chlorine residual of 0.0 mg/L at Discharge Point 001. This will ensure that chlorine will typically not be present in the discharges and, if chlorine is detected, the duration of such discharges will be relatively short.

- 4.2.2.4. **Total Ammonia.** The dry season average percent removal effluent limitation for total ammonia is based on the treatment plant's technological feasibility. This limitation is required to demonstrate that the plant will perform as described and that a level of water quality protection equivalent to complying with Basin Plan Discharge Prohibition 1 is met (see Fact Sheet section 4.1.2).

4.3. Water Quality-Based Effluent Limitations

4.3.1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44(d) require permits to include limitations more stringent than federal technology-based requirements where necessary to achieve water quality standards. According to 40 C.F.R. section 122.44(d)(1)(i), permits must include effluent limitations for all pollutants that are or may be discharged at levels that have a 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, water quality-based effluent limitations (WQBELs) must be established using (1) U.S. EPA 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 a narrative criterion, supplemented with relevant information. The process for determining reasonable potential and calculating WQBELs when necessary is intended to achieve applicable water quality objectives and criteria, and thereby protect designated beneficial uses of receiving waters.

4.3.2. Beneficial Uses and Water Quality Criteria and Objectives

Discharge Point 001 discharges to Lower San Francisco Bay. Fact Sheet section 3.3.1 identifies the beneficial uses of Lower San Francisco Bay. Water quality criteria and objectives to protect these beneficial uses are described below.

4.3.2.1. **Basin Plan Objectives.** The Basin Plan specifies numerous water quality objectives, including numeric objectives for 10 priority pollutants and un-ionized ammonia, and narrative objectives for other pollutants, such as toxicity.

4.3.2.1.1. **Un-ionized Ammonia.** Basin Plan section 3.3.20 contains water quality objectives for un-ionized ammonia of 0.025 mg/L (as nitrogen) as an annual median and 0.4 mg/L (as nitrogen) as a maximum for Lower San Francisco Bay and upstream waters. The annual median, however, is not meaningful for intermittent wet weather discharges because they cannot affect annual median concentrations in Lower San Francisco Bay. Effluent and receiving water data are available for total ammonia, but not un-ionized ammonia, because sampling and laboratory methods are unavailable to analyze for un-ionized ammonia. However, the fraction of total ammonia that exists in the un-ionized form can be calculated from the pH, salinity, and temperature of the receiving water as described in Fact Sheet section 4.3.3.3.2, below.

4.3.2.1.2. **Toxicity and Total Residual Chlorine.** The narrative toxicity objective in Basin Plan section 3.3.18 states: “All waters shall be maintained free of toxic substances in concentrations that are lethal to or that produce other detrimental responses in aquatic organisms. ... There shall be no acute toxicity in ambient waters.”

For this Order, U.S. EPA criteria guidance under CWA section 304(a), specifically U.S. EPA’s *Ambient Water Quality Criteria for Chlorine – 1984* (EPA 440/5-84-030), is used to translate this narrative objective. These criteria are shown below:

Table F-6. Ambient Water Quality Criteria for Chlorine

Receiving Water Type	4-Day Average (mg/L)	1-Hour Average (mg/L)
Marine or Estuarine	0.0075	0.013
Freshwater	0.011	0.019

4.3.2.2. **CTR Criteria.** The CTR specifies numeric aquatic life and human health criteria for numerous priority pollutants. These criteria apply to inland surface waters and enclosed bays and estuaries. Some human health criteria are for consumption of “water and organisms” and others are for consumption of

“organisms only.” The criteria applicable to “organisms only” apply to Lower San Francisco Bay because it is not a source of drinking water.

- 4.3.2.3. **NTR Criteria.** The NTR establishes numeric aquatic life and human health criteria for a number of toxic pollutants for San Francisco Bay waters upstream to and including Suisun Bay and the Sacramento-San Joaquin Delta. The NTR criteria apply to Lower San Francisco Bay.
- 4.3.2.4. **Bacteria Objectives.** The *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy* establishes *Enterococcus* bacteria water quality objectives to limit cases of gastrointestinal illness from water contact recreation. The *Enterococcus* bacteria objectives apply to marine and estuarine waters.
- 4.3.2.5. **Toxicity Provisions.** The Toxicity Provisions establish numeric chronic and acute toxicity objectives that apply to all inland surface waters, enclosed bays, and estuaries in the State with aquatic life beneficial uses. The chronic toxicity water quality objective is as follows:
- H₀:
mean response (ambient water) \leq 0.75 x mean response (control water)
- H_a:
mean response (ambient water) $>$ 0.75 x mean response (control water)
- Where:
- H₀ = null hypothesis
H_a = alternative hypothesis,
0.75 = regulatory management decision criterion (i.e., 75 percent)
- H₀ means the ambient water is toxic when the test organism response in a bioassay is less than or equal to 75 percent of the control response;
H_a means the ambient water is not toxic when the test organism response is greater than 75 percent of the control response. For example, if an average of 75 percent of bioassay test organisms or fewer survive when exposed to ambient water relative to the average number that survive when exposed to control water, the ambient water is toxic (i.e., the test result is “fail”). Conversely, if an average of more than 75 percent of bioassay test organisms survive relative to those exposed to control water, the ambient water is not toxic (i.e., the test result is “pass”).
- 4.3.2.6. **Sediment Quality Objectives.** The *Water Quality Control Plan for Enclosed Bays and Estuaries – Part 1, Sediment Quality* contains the following narrative water quality objectives:

- 4.3.2.6.1. “Pollutants in sediments shall not be present in quantities that, alone or in combination, are toxic to benthic communities in bays and estuaries of California.” This objective is to be implemented by integrating three lines of evidence: sediment toxicity, benthic community condition, and sediment chemistry. The policy requires that if the Regional Water Board determines that a discharge has reasonable potential to cause or contribute to an exceedance of this objective, it is to impose the objective as a receiving water limitation.
- 4.3.2.6.2. “Pollutants shall not be present in sediments at levels that will bioaccumulate in aquatic life to levels that are harmful to human health in bays and estuaries of California.” This objective is to be implemented by a three-tiered procedure based on pollutant concentrations in sediment and fish tissue.
- 4.3.2.6.3. “Pollutants shall not be present in sediment at levels that alone or in combination are toxic to wildlife and resident finfish by direct exposure or bioaccumulate in aquatic life at levels that are harmful to wildlife or resident finfish by indirect exposure in bays and estuaries of California.” This objective is to be implemented on a case-by-case basis, based upon an ecological risk assessment.
- 4.3.2.7. **Receiving Water Salinity.** Basin Plan section 4.6.2 (like the CTR and NTR) states that the salinity characteristics (i.e., freshwater vs. saltwater) of the receiving water are to be considered in determining the applicable water quality objectives. Freshwater criteria apply to discharges to waters with salinities equal to or less than one part per thousand (ppt) at least 95 percent of the time. Saltwater criteria apply to discharges to waters with salinities equal to or greater than 10 ppt at least 95 percent of the time in a normal water year. For discharges to water with salinities in between these two categories, or tidally-influenced freshwaters that support estuarine beneficial uses, the water quality objectives are the lower of the salt or freshwater criteria (the latter calculated based on ambient hardness) for each substance.
- The receiving water for the Facility’s discharge to Lower San Francisco Bay is a saltwater environment based on salinity data collected through the RMP at the Yerba Buena monitoring station (BB10) between 1993 and 2013. During that period, the receiving water’s average salinity was 25 pp, with a range from 12 to 33 ppt. Because the salinity was greater than 10 ppt in 100 percent of the samples, the reasonable potential analysis and effluent limitations in this Order are based on saltwater water quality objectives.
- 4.3.2.8. **Metals Translators.** Regulations at 40 C.F.R. section 122.45(c) require effluent limitations for metals to be expressed as total recoverable metal. Since the water quality objectives for metals are typically expressed as

dissolved metal, translators must be used to convert metals concentrations from dissolved to total recoverable and vice versa. The CTR contains default translators; however, site-specific conditions, such as water temperature, pH, total suspended solids, and organic carbon may affect the form of metal (dissolved, non-filterable, or otherwise) present and therefore available to cause toxicity. In general, dissolved metals are more available and more toxic to aquatic life than other forms. Site-specific translators can account for site-specific conditions, thereby preventing overly stringent or under-protective water quality objectives.

For the discharge to Lower San Francisco Bay, CTR default translators were used for all metals other than copper, nickel, and zinc. Basin Plan Table 7.2.1-2 sets forth site-specific copper translators. The Clean Estuary Partnership's *North of the Dumbarton Bridge Copper and Nickel Development and Selection of Final Translators* (March 2005) contains site-specific nickel translators. Additionally, this Order includes site-specific zinc translators calculated using RMP data collected between 1993 and 2003 at Alameda RMP monitoring station (BB70) and two other sampling stations near the EBDA deepwater outfall (CB004W and CB006W). These site-specific translators are listed in the table below:

Table F-7 Site-Specific Translators

Parameter	Chronic Translator	Acute Translator
Copper	0.73	0.87
Nickel	0.65	0.85
Zinc	0.30	0.46

4.3.3. Reasonable Potential Analysis

4.3.3.1. **Available Information.** The reasonable potential analysis for this Order is based on effluent data the Discharger collected from January 2019 through October 2023 and ambient background data summarized in the RMP's *San Francisco Bay California Toxics Rule Priority Pollutant Ambient Water Monitoring Report* (2017), which includes data collected through the RMP at the Yerba Buena RMP station (BC10) from 1993 through 2017, supplemented by additional Bay Area Clean Water Agencies data from *San Francisco Bay Ambient Water Monitoring Interim Report* (2003) and *Ambient Water Monitoring: Final CTR Sampling Update* (2004).

SIP section 1.4.3 requires that background water quality data be representative of the ambient receiving water that will mix with the discharge. For priority pollutants, the Yerba Buena RMP monitoring station (BC10), relative to other RMP stations best fits SIP guidance for establishing background conditions at Discharge Point 001. For ammonia, the nearby Oyster Point RMP monitoring station (BB30), relative to other RMP locations, best fits SIP guidance for establishing background conditions because the

ammonia WQBELs are based on actual dilution at the edge of the initial mixing zone and data from monitoring station BB30 best represents water quality at the edge of the initial mixing zone.

This Order does not contain WQBELs for constituents that do not demonstrate reasonable potential; however, the MRP still requires monitoring for those pollutants. If effluent concentrations are found to have increased significantly, Provision 6.3.2 of the Order requires the Discharger to investigate the sources of the increases and implement remedial measures if the increases pose a threat to receiving water quality.

4.3.3.2. **Priority Pollutants.** SIP section 1.3 sets forth the methodology used to assess whether a priority pollutant has reasonable potential to exceed a water quality objective. SIP section 1.3 applies to priority pollutants. The analysis begins with identifying the maximum effluent concentration (MEC) observed for each pollutant based on available effluent concentration data and the ambient background concentrations (B). SIP section 1.4.3 states that ambient background concentrations are either the maximum ambient concentration observed or, for water quality objectives intended to protect human health, the arithmetic mean of observed concentrations. There are three triggers in determining reasonable potential:

- **Trigger 1** is activated if the maximum effluent concentration is greater than or equal to the lowest applicable water quality objective ($MEC \geq$ water quality objective).
- **Trigger 2** is activated if the ambient background concentration observed in the receiving water is greater than the lowest applicable water quality objective ($B >$ water quality objective) and the pollutant is detected in any effluent sample.
- **Trigger 3** is activated if a review of other information indicates that a WQBEL is needed to protect beneficial uses.

The maximum effluent concentrations, most stringent applicable water quality criteria and objectives, and ambient background concentrations used in the analysis are presented below, along with the reasonable potential analysis results (yes, no, or unknown) for each pollutant. Based on this analysis, copper and cyanide exhibit reasonable potential by Trigger 1. Additionally, Basin Plan sections 7.2.1.2 and 4.7.2.2 require copper and cyanide WQBELs for all individual NPDES permits for municipal wastewater treatment facilities.

Table F-8. Reasonable Potential Analysis

CTR No.	Priority Pollutants	C or Governing criterion or objective (µg/L)	MEC or minimum MDL (µg/L) ^{[1][2]}	B or MDL (µg/L) ^{[1][2]}	RPA Results ^[3]
1	Antimony	4,300	0.51	1.8	No
2	Arsenic	36	3.2	2.8	No
3	Beryllium	No Criteria	<0.09	0.22	U
4	Cadmium	9.4	<0.05	0.13	No
5a	Chromium (III) ^[4]	No Criteria	Unavailable	4.4	No
5b	Chromium (VI) ^[4]	50	0.6	4.4	No
6	Copper	8.2	10	2.5	Yes ^[5]
7	Lead	8.5	0.57	0.80	No
8	Mercury	0.025	0.0045	0.0086	^[6]
9	Nickel	13	2.9	3.7	No
10	Selenium	5.0	1	0.39	No
11	Silver	2.2	0.060	0.052	No
12	Thallium	6.3	0.07	0.021	No
13	Zinc	196	58	<0.4	No
14	Cyanide	2.9	4.7	0.52	Yes ^[5]
15	Asbestos	No Criteria	Unavailable ^[7]	-	U
16	2,3,7,8-TCDD	1.4 x 10 ⁻⁸	<9.45 x 10 ⁻⁷	8.20 x 10 ⁻⁹	U
17	Acrolein	780	<0.8	<0.50	No
18	Acrylonitrile	0.66	<0.75	0.030	U
19	Benzene	71	<0.18	<0.050	No
20	Bromoform	360	<0.15	<0.50	No
21	Carbon Tetrachloride	4.4	<0.16	0.060	No
22	Chlorobenzene	21,000	<0.18	<0.50	No
23	Chlorodibromomethane	34	<0.17	<0.050	No
24	Chloroethane	No Criteria	<0.15	<0.50	U
25	2-Chloroethylvinyl ether	No Criteria	<0.28	<0.50	U
26	Chloroform	No Criteria	4.8	<0.50	U
27	Dichlorobromomethane	46	1.3	<0.050	No
28	1,1-Dichloroethane	No Criteria	<0.15	<0.050	U
29	1,2-Dichloroethane	99	<0.17	0.040	No
30	1,1-Dichloroethylene	3.2	<0.21	<0.50	No
31	1,2-Dichloropropane	39	<0.15	<0.050	No
32	1,3-Dichloropropylene	1,700	<0.09	<0.50	No
33	Ethylbenzene	29,000	<0.1	<0.50	No
34	Methyl Bromide	4,000	<0.13	<0.50	No
35	Methyl Chloride	No Criteria	<0.13	<0.50	U
36	Methylene Chloride	1,600	<0.12	22	No
37	1,1,2,2-Tetrachloroethane	11	<0.15	<0.050	No
38	Tetrachloroethylene	8.85	<0.19	<0.050	No

CTR No.	Priority Pollutants	C or Governing criterion or objective (µg/L)	MEC or minimum MDL (µg/L) ^{[1][2]}	B or MDL (µg/L) ^{[1][2]}	RPA Results ^[3]
39	Toluene	200,000	0.35	<0.30	No
40	1,2-Trans-Dichloroethylene	140,000	<0.1	<0.50	No
41	1,1,1-Trichloroethane	No Criteria	<0.19	<0.50	U
42	1,1,2-Trichloroethane	42	<0.16	<0.050	No
43	Trichloroethylene	81	<0.20	<0.50	No
44	Vinyl Chloride	525	<0.25	<0.50	No
45	2-Chlorophenol	400	<0.90	<1.20	No
46	2,4-Dichlorophenol	790	<0.90	<1.30	No
47	2,4-Dimethylphenol	2,300	<0.40	<1.30	No
48	2-Methyl- 4,6-Dinitrophenol	765	<2.0	<1.20	No
49	2,4-Dinitrophenol	14,000	<2.0	<0.70	No
50	2-Nitrophenol	No Criteria	<0.50	<1.30	U
51	4-Nitrophenol	No Criteria	<1.0	<1.60	U
52	3-Methyl 4-Chlorophenol	No Criteria	<0.60	<1.10	U
53	Pentachlorophenol	7.9	<0.40	<1.0	No
54	Phenol	4,600,000	<0.30	<1.30	No
55	2,4,6-Trichlorophenol	6.5	<0.40	<1.30	No
56	Acenaphthene	2,700	<0.020	0.0019	No
57	Acenaphthylene	No Criteria	<0.020	0.0013	U
58	Anthracene	110,000	<0.030	0.00059	No
59	Benzidine	0.00054	<4.0	<0.0015	U
60	Benzo(a)Anthracene	0.049	<0.020	0.0053	No
61	Benzo(a)Pyrene	0.049	<0.040	0.0033	No
62	Benzo(b)Fluoranthene	0.049	<0.020	0.0046	No
63	Benzo(ghi)Perylene	No Criteria	<0.050	0.0045	U
64	Benzo(k)Fluoranthene	0.049	<0.020	0.0018	No
65	Bis(2-Chloroethoxy)Methane	No Criteria	<0.50	<0.30	U
66	Bis(2-Chloroethyl)Ether	1.4	<0.90	<0.00015	No
67	Bis(2-Chloroisopropyl)Ether	170,000	<0.90	<0.60	No
68	Bis(2-Ethylhexyl)Phthalate	5.9	<0.50	<0.70	No
69	4-Bromophenyl Phenyl Ether	No Criteria	<0.50	<0.23	U
70	Butylbenzyl Phthalate	5,200	<2.0	0.0056	No
71	2-Chloronaphthalene	4,300	<1.0	<0.30	No
72	4-Chlorophenyl Phenyl Ether	No Criteria	<0.60	<0.30	U
73	Chrysene	0.049	<0.020	0.0028	No
74	Dibenzo(a,h)Anthracene	0.049	<0.020	0.00064	No
75	1,2-Dichlorobenzene	17,000	<0.27	<0.30	No
76	1,3-Dichlorobenzene	2,600	<0.18	<0.30	No

CTR No.	Priority Pollutants	C or Governing criterion or objective (µg/L)	MEC or minimum MDL (µg/L) ^{[1][2]}	B or MDL (µg/L) ^{[1][2]}	RPA Results ^[3]
77	1,4-Dichlorobenzene	2,600	<0.18	<0.30	No
78	3,3-Dichlorobenzidine	0.077	<5.0	<0.001	U
79	Diethyl Phthalate	120,000	<0.50	<0.21	No
80	Dimethyl Phthalate	2,900,000	<0.50	<0.21	No
81	Di-n-Butyl Phthalate	12000	<0.40	0.016	No
82	2,4-Dinitrotoluene	9.1	<0.90	<0.27	No
83	2,6-Dinitrotoluene	No Criteria	<0.40	<0.29	U
84	Di-n-Octyl Phthalate	No Criteria	<0.40	<0.38	U
85	1,2-Diphenylhydrazine	0.54	<0.5	0.0037	No
86	Fluoranthene	370	<0.020	0.011	No
87	Fluorene	14,000	<0.020	0.0021	No
88	Hexachlorobenzene	0.00077	<1.0	0.000022	U
89	Hexachlorobutadiene	50	<0.4	<0.30	No
90	Hexachlorocyclopentadiene	17,000	<0.90	<0.30	No
91	Hexachloroethane	8.9	<0.40	<0.20	No
92	Indeno(1,2,3-cd)Pyrene	0.049	<0.020	0.0040	No
93	Isophorone	600	<0.50	<0.30	No
94	Naphthalene	No Criteria	<0.020	0.0013	U
95	Nitrobenzene	1,900	<0.50	<0.25	No
96	N-Nitrosodimethylamine	8.1	<0.7	<0.30	No
97	N-Nitrosodi-n-Propylamine	1.4	<0.50	<0.0010	No
98	N-Nitrosodiphenylamine	16	<0.70	<0.0010	No
99	Phenanthrene	No Criteria	<0.020	0.0095	U
100	Pyrene	11,000	<0.020	0.019	No
101	1,2,4-Trichlorobenzene	No Criteria	<0.40	<0.30	U
102	Aldrin	0.00014	<0.0030	<0.0000028	U
103	Alpha-BHC	0.013	<0.0040	0.00050	No
104	Beta-BHC	0.046	<0.0040	0.00041	No
105	Gamma-BHC	0.063	<0.0030	0.00070	No
106	Delta-BHC	No Criteria	Unavailable	0.000053	U
107	Chlordane	0.00059	<0.0070	0.000018	U
108	4,4'-DDT	0.00059	<0.0040	0.00017	U
109	4,4'-DDE (linked to DDT)	0.00059	<0.0040	0.00069	U
110	4,4'-DDD	0.00084	<0.0030	0.00031	U
111	Dieldrin	0.00014	<0.0040	0.00026	U
112	Alpha-Endosulfan	0.0087	<0.0040	0.000031	No
113	Beta-Endosulfan	0.0087	<0.0040	0.000069	No
114	Endosulfan Sulfate	240	<0.0030	0.000082	No
115	Endrin	0.0023	<0.0030	0.000040	U
116	Endrin Aldehyde	0.81	<0.0040	<0.0050	No

CTR No.	Priority Pollutants	C or Governing criterion or objective (µg/L)	MEC or minimum MDL (µg/L) ^{[1][2]}	B or MDL (µg/L) ^{[1][2]}	RPA Results ^[3]
117	Heptachlor	0.00021	<0.0040	0.000019	U
118	Heptachlor Epoxide	0.00011	<0.0040	0.000094	U
119-125	PCBs sum	-	-	-	^[6]
126	Toxaphene	0.00020	<0.00086	<0.30	U

Footnotes:

- ^[1] The MEC and ambient background concentration are the actual detected concentrations unless preceded by a "<" sign, in which case the value shown is the minimum method detection limit (MDL).
- ^[2] The MEC or ambient background concentration is "Unavailable" when there are no monitoring data for the constituent.
- ^[3] RPA Results = Yes, if MEC ≥ WQC, B > WQC and MEC is detected, or Trigger 3
 = No, if MEC and B are < WQC or all effluent data are undetected
 = Unknown (U) if no criteria have been promulgated, data are insufficient, or all effluent data are undetected
 effluent MDL > WQC.
- ^[4] The MEC and maximum ambient background concentrations are the total chromium concentration. The chromium (III) and chromium (VI) concentrations are unknown but less than these values.
- ^[5] Reasonable potential is based in whole or part on Basin Plan sections 7.2.1.2 and 4.7.2.2.
- ^[6] Mercury and PCBs from wastewater discharges are regulated by NPDES Permit CA0038849, which implements the San Francisco Bay Mercury and PCBs TMDLs.
- ^[7] Asbestos sampling is only required for discharges to waters with the municipal or domestic supply (MUN) beneficial use. Lower San Francisco Bay does not have the MUN beneficial use.

4.3.3.3. Ammonia

4.3.3.3.1. **Methodology.** Ammonia is a toxic pollutant but not a priority pollutant as defined by the CTR; therefore, the procedure outlined in the *Technical Support document for Water Quality-Based Toxics Control* (Technical Support Document) (EPA/505/2-90-001, March 1991) was used to determine if ammonia in the discharge has reasonable potential to cause a water quality objective to be exceeded in the receiving water. According to the Technical Support Document, the reasonable potential analyses can be performed based on the receiving water concentrations projected using effluent data or measured receiving water concentrations. Both values may be compared directly to the Basin Plan un-ionized ammonia objectives (see Fact Sheet section 4.3.2.1.1). Measured receiving water concentrations do not yet reflect the discharge, so receiving water concentrations must be projected from effluent data to perform the reasonable potential analysis.

The following steps summarize the process for determining reasonable potential for a pollutant using the Technical Support Document method:

- **Step 1.** Determine the total number of samples (n) and the maximum effluent concentration (MEC) in the dataset.

- **Step 2.** Determine the coefficient of variation (CV). For a data set where $n < 10$, the CV is estimated to equal 0.6. For a dataset where $n \geq 10$, the CV is calculated as the standard deviation divided by the mean.
- **Step 3.** Determine a ratio (R) for projecting the upper bound concentration based on a selected confidence interval (e.g., 95th or 99th percentile) and assuming a lognormal distribution as follows:

Calculate the percentile (P_n) represented by the MEC in the data set of n samples based on the selected confidence level.

$$P_n = (1 - \text{confidence interval})^{1/n}$$

Calculate the concentration-multiplying factors (C_P) for the MEC percentile (P_n) and the chosen upper bound percentile ($P_{\text{upper bound}}$), typically the 99th percentile, using the following equation:

$$C_P = \exp(Z_P\sigma - 0.5\sigma^2)$$

Where: $\sigma^2 = \ln(\text{CV}^2 + 1)$

P is the percentile (either P_n or the selected $P_{\text{upper bound}}$)

Z_p is the standard normal distribution value for the percentile P (available from statistical references)

Finally, calculate R as:

$$R = C_{\text{upper bound}} / C_{P_n}$$

- **Step 4.** Calculate the projected maximum receiving water concentration (RWC) as follows:

$$\text{RWC} = (\text{MEC} \times R) / \text{dilution ratio}$$

The dilution ratio can be defined as:

$$\text{Dilution ratio} = (D + [1 \text{ part effluent}]) / (1 \text{ part effluent})$$

Where D is the parts receiving water available to dilute 1 part effluent

Therefore:

$$\text{RWC} = (\text{MEC} \times R) / (D + 1)$$

- **Step 5.** Compare the RWC to the most stringent water quality objective for the pollutant. There is reasonable potential if the RWC is greater than or equal to the lowest applicable water quality objective.

- 4.3.3.3.2. **Data Translation.** Effluent data are available for total ammonia, but not un-ionized ammonia because (1) sampling and laboratory methods are unavailable to analyze for un-ionized ammonia, and (2) the fraction of total ammonia that exists in the toxic un-ionized form depends on pH, salinity, and temperature of the receiving water. Total ammonia concentrations (as nitrogen) were translated into un-ionized ammonia concentrations for comparison with the Basin Plan un-ionized ammonia objectives (see Fact Sheet section 4.3.2.1.1) based on the following equations (U.S. EPA, 1989, Ambient Water Quality Criteria for Ammonia (Saltwater)–1989, EPA Publication 440/5-88-004, 1989):

$$\text{Fraction of un-ionized ammonia} = (1 + 10^{[\text{pK} - \text{pH}]})^{-1}$$

Where, for salinity less than 1 ppt:

$$\text{pK} = 0.09018 + 2729.92/T$$

T = temperature in Kelvin

Where, for salinity greater than 10 ppt:

$$\text{pK} = 9.245 + 0.116*(I) + 0.0324*(298-T) + 0.0415*(P)/T$$

I = molal ionic strength of saltwater = $19.9273*(S)/(1000-1.005109*S)$
S = salinity (parts per thousand)
T = temperature in Kelvin
P = pressure (one atmosphere)

- 4.3.3.3.3. **Mixing Zone.** This Order establishes an ammonia mixing zone no larger than 39 acres as explained in Fact Sheet section 4.3.4. This mixing zone provides for a dilution ratio of 4:1 (D=3) (1 part effluent for every 3 parts receiving water after mixing).
- 4.3.3.3.4. **Analysis.** The Discharger has not collected any coincident total ammonia, pH, and temperature data. Total ammonia effluent data (representing plant discharges to the EBDA pipeline) collected from January 2019 through October 2023 were used to evaluate reasonable potential for ammonia. The total ammonia data were then translated to un-ionized ammonia values. Most effluent pH data did not coincide with the total ammonia data to translate the data; therefore, for total ammonia data without coincident pH data, the pH result for the sample collected closest to the date of the total ammonia sample was used. Temperature samples were not taken during the previous permit term, but the Discharger collected 637 temperature samples between March 2008 and March 2011. The highest temperature of 26 degrees Celsius from this data was paired with the total ammonia data because this results in the highest (i.e., most conservative) un-ionized ammonia estimate.

Based on the data set of $n = 81$ with a calculated un-ionized ammonia MEC of 0.18 mg/L, P_n at a 95% confidence interval is 0.96, indicating that the MEC represents the 95th percentile of all ammonia effluent data. With the upper bound set at the 99th percentile, R is 0.93 (C_{P_n} is 1.8 and C_{upper} bound is 1.7) and the projected RWC is 0.042 mg/L.

- 4.3.3.3.5. **Conclusion.** The projected RWC at the edge of the mixing zone is at most 0.042 mg/L, which is less than the Basin Plan's acute un-ionized ammonia water quality objective of 0.4 mg/L. Therefore, there is no reasonable potential for ammonia and WQBELs are not necessary.
- 4.3.3.4. **Enterococcus Bacteria.** The *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy* requires *Enterococcus* bacteria effluent limitations for discharges to marine and estuarine receiving waters that support the water contact recreation (REC1) beneficial use.
- 4.3.3.5. **Acute and Chronic Toxicity.** Toxicity Provisions section III.C.11 exempts insignificant non-stormwater dischargers from acute and chronic toxicity requirements if they do not have reasonable potential to cause or contribute to the exceedance of toxicity water quality objectives. This Order finds the Discharger insignificant. Toxicity effluent limitations are unwarranted due to the short-term and infrequent nature of the discharge. Wet weather discharges will be rare (projected to occur approximately eight times per year) and of short duration (up to 12 hours per event); during the previous order term, wet weather discharges occurred only twice, which were due to record-breaking storms on December 31, 2022, and January 1, 2023, and consistent rainfall in the weeks following the storms. Dry season maintenance exercise discharges will also be rare (occurring no more than two days per calendar year). Moreover, in accordance with NPDES Permit CA0037869, toxicity is indirectly limited as part of the Discharger's requirements for discharges to the EBDA Common Outfall.
- 4.3.3.6. **Sediment Quality.** Pollutants in some receiving water sediments may be present in quantities that alone or in combination are toxic to benthic communities. The Sediment Quality Plan states that effluent limitations to protect sediment quality are to be developed when: (1) a direct relationship between the discharge and degraded sediment has been established; (2) the pollutants causing degradation have been identified; and (3) the reductions in pollutant loading needed to restore sediment quality have been estimated.

However, to date there is no evidence directly linking compromised sediment conditions to the discharges subject to this Order; therefore, the Regional Water Board does not find reasonable potential for these discharges to cause or contribute to exceedances of the sediment quality objectives.

Nevertheless, the Discharger continues to participate in the Regional Monitoring Program, which routinely monitors San Francisco Bay sediment and seeks to identify stressors responsible for degraded sediment quality.

- 4.3.3.7. **Total Residual Chlorine.** There is reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective because the plant disinfects its effluent with chlorine and, without sufficient dechlorination, the discharge could contain chlorine in concentrations that are acutely toxic to aquatic organisms.

4.3.4. **Water Quality-Based Effluent Limitations**

WQBELs were developed for the pollutants determined to have reasonable potential to cause or contribute to exceedances of water quality objectives. With the exception of those for *Enterococcus* bacteria and chlorine (discussed below), the WQBEL calculations are based on the procedures in SIP section 1.4.

- 4.3.4.1. **WQBEL Expression.** NPDES regulations at 40 C.F.R. section 122.45(d) require that permit limitations for publicly owned treatment works be expressed as average weekly and average monthly limitations, unless impracticable. This Order contains daily limitations instead of weekly limitations because daily limitations better protect against acute water quality effects and are necessary to prevent fish kills or mortality to aquatic organisms.
- 4.3.4.2. **Mixing Zones and Dilution Credits.** SIP section 1.4.2 and Basin Plan section 4.5.1 allow mixing zones and dilution credits under certain circumstances. This Order establishes mixing zones for ammonia, copper, and cyanide in accordance with SIP section 1.4.2.2 and the Technical Support Document. The Discharger completed a mixing zone study (July 2017) as part of its permit application. The Discharger also completed a dilution study, *Dilution Analysis of OLSD Proposed Discharge to South San Francisco Bay — Phase 2, Technical Memorandum* (January 2018), using the RMA Bay-Delta model and the Discharger's effluent flow on March 27, 2011. This study evaluated a period of high discharge and low dilution in the receiving water to simulate a year-long continuous discharge through the shallow-water outfall. This study evaluated discharge interactions with Lower San Francisco Bay, nearby San Lorenzo Creek (and its adjacent marsh), and Bockman Canal. The study demonstrated that a mixing zone of 39 acres corresponds to a dilution ratio of at least 4:1 ($D=3$). The dilution is likely to be considerably greater during periods of wet weather discharge, when higher discharge flows and increased flows from San Lorenzo Creek would cause more flushing and mixing.

For ammonia, copper, and cyanide, mixing zones as large as 39 acres meet the requirements of SIP section 1.4.2.2 and Technical Support document guidance because they do the following:

- 4.3.4.2.1. **Maintain the integrity of the water body.** The mixing zones will not compromise the integrity of Lower San Francisco Bay because they are small relative to the size of the bay. The mixing zones would be no greater than 0.04 percent of Lower San Francisco Bay.
- 4.3.4.2.2. **Prevent acute toxicity to aquatic life passing through the mixing zones.** Acutely toxic conditions will not exist inside the mixing zones for copper and cyanide because the maximum effluent concentration for each of these pollutants does not exceed their respective acute criteria. The mixing zones for copper and cyanide are based on chronic criteria. For ammonia, it is unlikely that aquatic organisms passing through the mixing zone would be exposed for more than one-hour to acutely toxic conditions due to the rapidly attenuating nature of un-ionized ammonia. Furthermore, the Discharger's effluent is subject to toxicity requirements in accordance with NPDES Permit CA0037869 for the EBDA Common Outfall. Bioassay monitoring conducted for that permit has demonstrated full compliance with acute toxicity effluent limitations since March 2012, indicating that organisms passing through the mixing zone are unlikely to experience acute toxicity.
- 4.3.4.2.3. **Allow the passage of aquatic life.** The mixing zones will not interfere with the movement of aquatic species or restrict the passage of aquatic life because of their relatively small size compared to Lower San Francisco Bay. The mixing zones would be no greater than 0.04 percent of Lower San Francisco Bay. Moreover, Lower San Francisco Bay is not a river or stream through which organisms must pass.
- 4.3.4.2.4. **Protect biologically sensitive or critical habitats, including, but not limited to, habitats of species under federal or State endangered species laws.** The area surrounding the shallow-water outfall consists primarily of intertidal mudflats and low vegetated riverine banks that do not provide critical habitat to federal or state-listed sensitive species.
- 4.3.4.2.5. **Prevent undesirable or nuisance aquatic life.** The mixing zones will not produce undesirable or nuisance aquatic life because intermittent ammonia discharges during peak wet weather events or intermittent dry season discharge exercises cannot support or sustain algal growth or other nuisance aquatic life due to their brief and infrequent nature. Furthermore, dry season discharges will undergo nitrification and partial denitrification, which will reduce nitrogen loads when algal growth is more likely due to warmer temperatures. Additionally, this Order imposes receiving water limitations that prohibit bottom deposits or aquatic growths

to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses. Copper and cyanide are not nutrients capable of contributing to undesirable or nuisance aquatic life.

- 4.3.4.2.6. **Prevent floating debris, oil, or scum.** The mixing zones will not result in floating debris, oil, or scum because the treatment plant removes debris, oil, and scum. In addition, this Order imposes receiving water limitations that prohibit floating debris, oil, or scum at any place and at any time.
- 4.3.4.2.7. **Prevent objectionable color, odor, taste, or turbidity.** The mixing zones will not produce objectionable color, odor, taste, or turbidity because all effluent discharged through the shallow-water outfall receives secondary treatment. Secondary treatment generally addresses objectionable color, odor, taste, and turbidity through the biological degradation of organic compounds and clarification. In addition, this Order imposes receiving water limitations that prohibit alteration of color or turbidity in receiving waters beyond natural background levels. The Discharger has not observed objectionable color, odor, or turbidity resulting from its discharge.
- 4.3.4.2.8. **Prevent objectionable bottom deposits.** The mixing zones will not cause objectionable bottom deposits because the effluent receives secondary treatment at the treatment plant. The treatment biologically degrades and removes suspended particles that could contribute to receiving water bottom deposits. During the dry season intermittent discharge exercises, when dilution, flushing, and mixing is less, the discharge is to comply with more stringent CBOD and TSS effluent limitations than that of federal Secondary Treatment Standards, resulting in lower total suspended solids. In addition, this Order imposes receiving water limitations that prohibit bottom deposits or aquatic growths to the extent that such deposits or growths cause nuisance or adversely affect beneficial uses.
- 4.3.4.2.9. **Do not cause nuisance.** The mixing zones will not cause a nuisance because the effluent receives secondary treatment and is disinfected prior to discharge. Moreover, this Order imposes receiving water limitations that prohibit discharges from causing nuisance as defined in Water Code section 13050(m).
- 4.3.4.2.10. **Do not dominate the receiving water bodies or overlap a mixing zone from a different outfall.** The mixing zones will not dominate the receiving water because they represent no more than 0.04 percent of Lower San Francisco Bay. Moreover, the mixing zones will not overlap with any other mixing zones because the Regional Water Board has not established any other mixing zones near this outfall.

4.3.4.2.11. **Are not located at or near any drinking water intake.** The mixing zones are in marine waters and not located at or near any drinking water intake.

SIP section 1.4.2.2.B calls for mixing zones to protect beneficial uses. The mixing zones described above will protect beneficial uses because ammonia, copper, and cyanide are not carcinogenic, mutagenic, teratogenic, persistent, or bioaccumulative. Discharges will occur only during peak wet weather events when significantly increased wet weather flows at the mixing zones will provide flushing and dilution.

SIP section 1.4.2.2 requires mixing zones to be as small as practicable. A mixing zone covering 39 acres would correspond to a dilution ratio of 4:1 (D=3). However, if the Discharger can comply with effluent limitations based on less dilution, then smaller mixing zones are practicable. Monitoring data show that the Discharger can comply with smaller mixing zones for copper and cyanide. Therefore, this Order establishes the 39-acre area as a mixing zone for ammonia, and the smaller areas as the mixing zones for copper and cyanide. The cyanide mixing zone covers 18 acres (corresponding to a dilution ratio of 3:1 [D=2]), and the copper mixing zone covers 1.6 acres (corresponding to a dilution ratio of 2:1 [D=1]). Figure 1, below, illustrates these mixing zones.

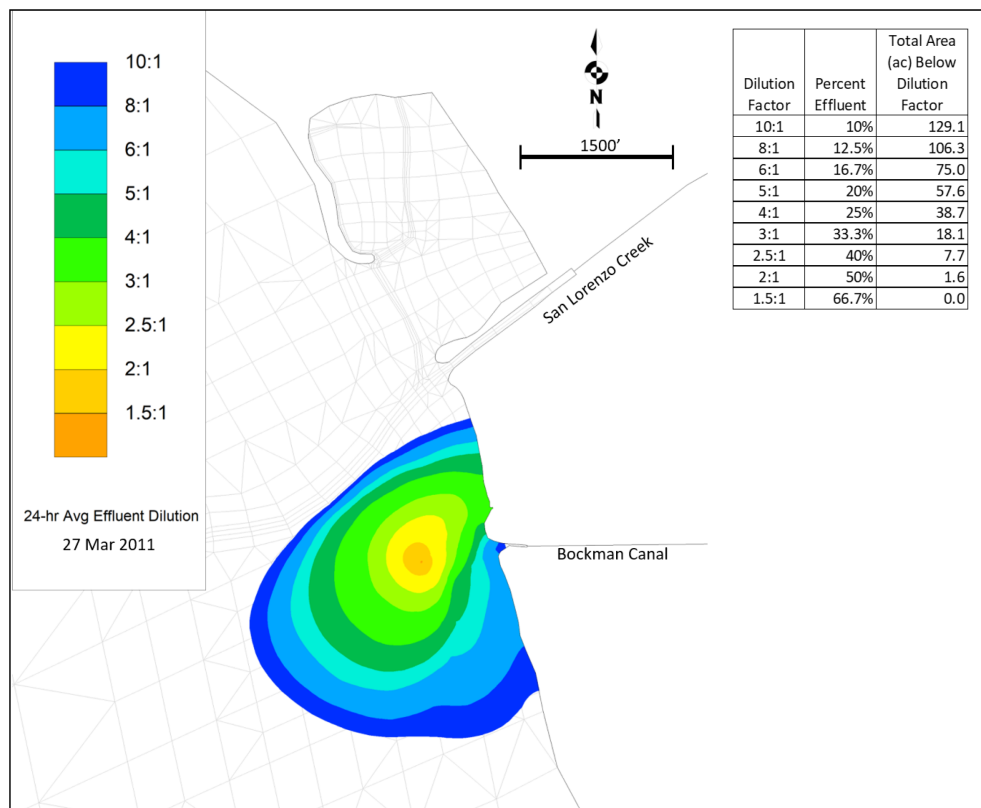


Figure 1. Mixing Zones

4.3.4.3. **WQBEL Calculations.** The following table shows the WQBEL calculations for copper and cyanide in accordance with SIP section 1.4.

Table F-9. WQBEL Calculations

Pollutant	Copper	Cyanide
Units	µg/L	µg/L
Basis and Criteria type	Basin Plan Site-Specific Objective	Basin Plan Site-Specific Objective
Criteria - Acute	3.9	-
Criteria - Chronic	2.5	-
Site-Specific Objective Criteria - Acute	9.4	9.4
Site-Specific Objective Criteria - Chronic	6.0	2.9
Water Effects Ratio (WER)	2.4	1
Lowest WQO	6.0	2.9
Site Specific Translator - MDEL	0.87	-
Site Specific Translator - AMEL	0.73	-
Dilution Factor (D)	1	2
Number of samples per month	4	4
Aquatic life criteria analysis required? (Y/N)	Y	Y
Human Health criteria analysis required? (Y/N)	N	Y
Applicable Acute WQO	10.8	9.4
Applicable Chronic WQO	8.2	2.9
Human Health Criteria	-	2.2 x 10 ⁵
Background (Maximum Concentration for Aquatic Life Calculation)	2.55	0.52
Background (Average Concentration for Human Health Calculation)	-	0.43
Is the pollutant on the 303d list and/or bioaccumulative (Y/N)?	N	N
Effluent Concentration Allowance Acute	19.1	27.4
Effluent Concentration Allowance Chronic	13.9	7.9
Effluent Concentration Allowance Human Health	-	2.2 x 10 ⁵
Number of data points <10 or at least 80% of data reported non-detect? (Y/N)	N	N
Average of effluent data points	5.57	1.89
Standard Deviation of effluent data points	1.70	0.96
Coefficient of Variation Calculated	0.31	0.51
Coefficient of Variation (Selected) - Final	0.31	0.51

Pollutant	Copper	Cyanide
Effluent Concentration Allowance Acute Mult99	0.52	0.37
Effluent Concentration Allowance Chronic Mult99	0.71	0.58
Long-Term Average Acute	9.9	10.1
Long-Term Average Chronic	9.9	4.6
Minimum of Long-Term Average	9.9	4.6
AMEL Mult95	1.3	1.5
MDEL Mult99	1.9	2.7
AMEL (Aquatic Life)	12.5	6.7
MDEL (Aquatic Life)	18.9	12.4
MDEL/AMEL Multiplier	1.5	1.9
AMEL (Human Health)	-	2.2 x 10 ⁵
MDEL (Human Health)	-	5.1 x 10 ⁵
Minimum of AMEL for Aquatic Life vs Human Health	12.5	6.7
Minimum of MDEL for Aquatic Life vs Human Health	18.9	12.4
Previous Order Limitation - AMEL	13	6.3
Previous Order Limitation - MDEL	18	13
Final Limitation - AMEL	13	6.3
Final Limitation - MDEL	18	12

4.3.4.4. **Enterococcus Bacteria.** This Order includes *Enterococcus* effluent limitations based on the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy*. Due to the infrequent and short duration of the discharge, this Order does not require a weekly geometric mean limitation and implements the 90th percentile objective as a maximum daily effluent limitation (MDEL) of 110 CFU/100mL. Expressing the limitation as an MDEL is more practicable and more stringent than expressing it as a 90th percentile.

4.3.4.5. **Total Residual Chlorine.** The limitation for total residual chlorine in this Order is derived from the one-hour average criterion from U.S EPA's *Ambient Water Quality Criteria for Chlorine – 1984* (EPA 440/5-84-030). For marine and estuarine waters, the numeric criterion is 0.013 mg/L as a one-hour average.

4.4. Discharge Requirement Considerations

- 4.4.1. **Anti-Backsliding.** This Order complies with the anti-backsliding provisions of CWA sections 402(o) and 303(d)(4), and 40 C.F.R. section 122.44(l), which generally require effluent limitations in a reissued permit to be as stringent as those in the previous order unless an exception applies. The requirements of this Order are at least as stringent as those in the previous order, as amended by Order R2-2023-0023, or otherwise fall under an anti-backsliding exception as explained below.

This Order contains a new *Enterococcus* bacteria effluent limitation based on the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California – Part 3, Bacteria Provisions and a Water Quality Standards Variance Policy*. The new effluent limitation is in lieu of and not comparable to the fecal coliform limitation in the previous permit. The anti-backsliding rule does not apply to a limitation that is not comparable to the prior limitations (State Water Board Order WQ 2001-06). Assuming the limitations are comparable and the new limitations are less stringent, CWA section 402(o)(1) allows for WQBELs to be relaxed if it is consistent with the provisions of CWA section 303(d)(4) and does not result in a violation of water quality standards.

The previous order's fecal coliform effluent limitation was water-quality based. CWA section 303(d)(4)(B) applies to this discharge because Lower San Francisco Bay attains the water quality level needed for shellfish harvesting recreation, making it an attainment water. Under CWA section 303(d)(4)(B), a limitation based on a water quality standard or any other permitting standard may only be relaxed where the action is consistent with an antidegradation policy. As explained in Fact Sheet section 4.4.2, water quality will not be degraded with respect to bacteria, and the change in limitations will not result in a violation of water quality standards.

This Order does not retain the previous order's fecal coliform limitation because Basin Plan Table 4-2A no longer requires total or fecal coliform limitations for shallow-water discharges to protect shellfish harvesting as long as the discharge is not in the immediate vicinity of shellfish habitat. The area surrounding the outfall is comprised primarily of tidal mudflats with no rocky substrate conducive to shellfish habitat. Additionally, a field survey and subsequent Biological Assessment report (April 2020), prepared by LSA, found no shellfish beds within the vicinity of the outfall.

This Order also does not retain the previous order's average monthly technology-based effluent limitations for CBOD and TSS. In renewed, reissued, or modified permits, CWA section 402(o) prohibits (a) the replacement of technology-based effluent limitations to reflect subsequently promulgated effluent limitation guidelines that are less stringent, and (b) in the case of

effluent limitations established under CWA section 301(b)(1)(C) or 303(d), effluent limitations that are less stringent than comparable limitations in the prior permit. The removal of the previous average monthly CBOD and TSS technology-based effluent limitations does not fit within either category; therefore, only the anti-backsliding prohibition at 40 C.F.R. section 122.44(l) applies.

Removal of the average monthly CBOD and TSS effluent limitations is consistent with 40 C.F.R. section 122.44(l)(1), which allows backsliding if the circumstances on which the previous order was based have materially and substantially changed since the time it was issued and would constitute cause for permit modification or revocation and reissuance under 40 C.F.R. section 122.62, such as new information (other than revised regulations, guidance, or test methods) that would have justified the application of different permit conditions at the time of permit issuance. Here, the circumstances on which the previous order was based have materially and substantially changed. The Discharger previously planned to discharge out of its shallow-water outfall continuously for up to 30 days to evaluate the feasibility of discharging full time from that outfall in the future. The Discharger no longer proposes continuous discharge from its shallow-water outfall and, as such, will only discharge from that outfall during peak wet weather events or during brief maintenance exercises of its outfall, consistent with Discharge Prohibition 3.3 of this Order. Discharges from the shallow-water outfall will be extremely rare; only two wet-weather discharges occurred during the last permit term, both of which were during record-breaking storms on December 31, 2022, and January 1, 2023. Based on these circumstances, wet weather discharges are expected to be brief, intermittent, and rare, occurring no more than eight times per year. This new information justifies the removal of average monthly limitations for CBOD or TSS, which is not appropriate for intermittent discharges.

This Order replaces the previous order's annual average percent removal technology-based effluent limitation of 70 percent for total ammonia with a dry season average percent removal technology-based effluent limitation of 75 percent to better reflect the nature of the Discharger's nitrification technology, which relies on nitrifying bacteria that become limited during colder and wetter months (i.e., the wet season, October 1 through April 30) and more effective during the warmer and dryer months (i.e., the dry season, May 1 through September 30). The new total ammonia limitation is not comparable to the total ammonia limitation in the previous permit because the change in averaging period from annual to the dry season, along with an increase in percent removal, does not necessarily relax the limitation (i.e., there are fewer months to average) and is therefore consistent with State Water Board Order WQ 2001-06.

- 4.4.2. **Antidegradation.** This Order complies with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Board Resolution 68-16. As

explained below, this Order does not authorize lowering water quality as compared to the level of discharge authorized in the previous order, as amended by Order R2-2023-0023, which is the baseline by which to measure whether degradation will occur.

The removal of fecal coliform limitations will not degrade water quality because the Discharger must still disinfect bacteria to meet the *Enterococcus* bacteria limitations intended to protect water contact recreation. The new *Enterococcus* bacteria limitations serve a comparable purpose, reflect the most up-to-date water quality objectives, and will not lower water quality-related to bacteria in the receiving waters. Because *Enterococcus* bacteria and fecal coliform are both indicators for fecal waste, they are removed from wastewater in similar ways. Basin Plan Table 4-2A no longer requires total or fecal coliform limitations for this shallow-water discharge because, according to the Biological Assessment report (April 2020), there are no shellfish beds in the immediate vicinity of the discharge, and the new *Enterococcus* limitations will ensure that water quality will not be degraded as it relates to bacteria.

The removal of the average monthly technology-based effluent limitations for CBOD and TSS will not degrade water quality because the Facility's treatment performance will remain limited by this Order's average weekly technology-based effluent limitations for CBOD and TSS, which are based on the same performance data from which the average monthly effluent limitations were promulgated (see Fact Sheet section 4.2). Furthermore, the Discharger no longer proposes to discharge from its shallow-water outfall continuously for up to 30 days. Instead, the Discharger will only discharge from that outfall during peak wet weather events or during brief maintenance exercises of its outfall.

The replacement of the annual average total ammonia removal limitation of 70 percent for with a dry season average removal limitation of 75 percent will not degrade water quality because the Facility's nitrification (i.e., ammonia removal) performance will remain the same as during the previous order term. The new ammonia limitation serves a comparable purpose to the previous limitation, and ammonia will be removed by the same treatment technology that will perform in the same manner as it did under the previous limit. Therefore, this Order does not allow for a reduced level of treatment or increased volume of discharge relative to the previous order, and water quality will not be degraded.

- 4.4.3. **Stringency of Requirements for Individual Pollutants.** This Order contains both technology-based and water quality-based effluent limitations for individual pollutants. The technology-based requirements implement minimum, applicable federal technology-based requirements. In addition, this Order contains more stringent effluent limitations as necessary to meet water quality standards. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement CWA requirements.

This Order's WQBELs have been derived to implement water quality objectives that protect beneficial uses. The beneficial uses and water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating these WQBELs are based on the CTR, as implemented in accordance with the SIP, which U.S. EPA approved on May 18, 2000. U.S. EPA approved most Basin Plan beneficial uses and water quality objectives prior to May 30, 2000. Beneficial uses and water quality objectives submitted to U.S. EPA prior to May 30, 2000, but not approved by U.S. EPA before that date, are nonetheless "applicable water quality standards for purposes of the CWA" pursuant to 40 C.F.R. section 131.21(c)(1). U.S. EPA approved the remaining beneficial uses and water quality objectives, so they are also applicable water quality standards pursuant to 40 C.F.R. section 131.21(c)(2).

5. RATIONALE FOR RECEIVING WATER LIMITATIONS

The receiving water limitations in sections 5.1 and 5.2 of the Order are based on Basin Plan narrative and numeric water quality objectives. The receiving water limitation in section 5.3 of the Order requires compliance with federal and State water quality standards in accordance with the CWA and regulations adopted thereunder.

6. RATIONALE FOR PROVISIONS

6.1. Standard Provisions

Attachment D contains standard provisions that apply to all NPDES permits in accordance with 40 C.F.R. section 122.41 and additional conditions applicable to specific categories of permits in accordance with 40 C.F.R. section 122.42. The Discharger must comply with these provisions. The conditions set forth in 40 C.F.R. sections 122.41(a)(1) and (b) through (n) apply to all state-issued NPDES permits and must be incorporated into permits either expressly or by reference.

In accordance with 40 C.F.R. section 123.25(a)(12), states may omit or modify conditions to impose more stringent requirements. Attachment G contains standard provisions that supplement the provisions in Attachment D. This Order omits the federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the State's enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates Water Code section 13387(e) by reference.

6.2. Monitoring and Reporting Provisions

CWA section 308 and 40 C.F.R. sections 122.41(h), 122.41(j)-(l), 122.44(i), and 122.48 require that NPDES permits specify monitoring and reporting requirements.

Water Code section 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. For more information, see Fact Sheet section 7.

6.3. Special Provisions

6.3.1. Reopener Provisions

These provisions are based on 40 C.F.R. sections 122.62 and 122.63 and allow modification of this Order and its effluent limitations as necessary in response to updated water quality objectives, regulations, or other new and relevant information that may become available in the future, and other circumstances as allowed by law.

6.3.2. Effluent Characterization Study and Report

This Order does not include WQBELs for pollutants that do not demonstrate reasonable potential, but this provision requires the Discharger to evaluate monitoring data to verify that the reasonable potential analysis conclusions of this Order remain valid. This requirement is authorized pursuant to 40 C.F.R. section 122.41(h) and Water Code section 13383 and is necessary to inform the next permit reissuance and to ensure that the Discharger takes timely steps in response to any unanticipated change in effluent quality during the term of this Order.

6.3.3. Pollutant Minimization Program

This provision is based on Basin Plan section 4.13.2 and SIP section 2.4.5. section 2.4.5. The Discharger submits an annual pollution prevention report under NPDES Permit CA0037869 that includes copper and cyanide action plans based on Basin Plan sections 7.2.1.2 and 4.7.2.2.

6.3.4. Special Provisions

6.3.4.1. Chlorine Process Control Plan. This provision is consistent with Order R2-2023-0023 and is necessary to ensure that using a water quality-based effluent limitation for chlorine is consistent with antidegradation policies. The provision requires the Discharger to implement a Chlorine Process Control Plan to target a chlorine residual of 0.0 mg/L at the discharge point. This will ensure that chlorine will typically not be present in discharge and, if chlorine is detected, the duration of such discharges will be relatively short.

6.3.4.2. Wet Weather Discharges Annual Technical Report. This provision is necessary to evaluate compliance with the discharge prohibitions in section 3 of this Order and the monitoring requirements in MRP sections 3 and 4.

- 6.3.4.3. **Wet Weather Facilities Management Plan.** This provision is necessary to ensure that the Discharger evaluates and manages its Facility to minimize future discharges. Many requirements of this Order are based on the continued infrequency of discharges to Lower San Francisco Bay.

7. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

The following provides the rationale for the monitoring and reporting requirements in the MRP.

7.1. Monitoring Requirements Rationale

- 7.1.1. **Influent Monitoring.** Influent monitoring for total ammonia and other nitrogen forms at Monitoring Location INF-002C is necessary to evaluate compliance with this Order's dry-season average percent removal effluent limitation of 75 percent for total ammonia and assess the plant's removal efficiency for total nitrogen. Basin Plan section 4.7.2.2 requires influent cyanide monitoring for the discharger because this Order is based on site-specific cyanide water quality objectives. The influent cyanide monitoring requirement is covered under NPDES Permit CA0037869 (EBDA Common Outfall). The EBDA Common Outfall permit also covers the Discharger's influent CBOD and TSS monitoring to comply with 85 percent removal effluent limitations.
- 7.1.2. **Effluent Monitoring.** Effluent monitoring at Monitoring Location EFF-002C is necessary to evaluate compliance with this Order's effluent limitations and Discharge Prohibition 3.3. It is also necessary to conduct future reasonable potential and nutrient removal analyses and comply with Provision 6.3.2 of this Order (Effluent Characterization Study and Report). Effluent monitoring at Monitoring Location EFF-WW is necessary to evaluate compliance with this Order's effluent limitations and Discharge Prohibition 3.4. It is also necessary to conduct future reasonable potential analyses.
- 7.1.3. **Receiving Water Monitoring.** The Discharger is required to continue participating in the Regional Monitoring Program, which involves collecting data on pollutants and toxicity in San Francisco Bay water, sediment, and biota. This monitoring is necessary to characterize the receiving water and the effects of the discharge this Order authorizes.
- 7.1.4. **Other Monitoring Requirements.** Pursuant to CWA section 308, U.S. EPA requires some dischargers to participate in a Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program that evaluates the analytical abilities of laboratories that perform or support NPDES permit-required monitoring. The program applies to discharger laboratories and contract laboratories, and evaluates each laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES program. There are two options to comply: (1) the Discharger may obtain and analyze DMR-QA samples, or (2) pursuant to a waiver U.S. EPA

issued to the State Water Board, the Discharger may submit results from the most recent Water Pollution Performance Evaluation Study. MRP section 1.4 requires the Discharger to ensure that the results of the DMR-QA Study or most recent Water Pollution Performance Evaluation Study are submitted to the State Water Board, which forwards the results to U.S. EPA.

7.2. Monitoring Requirements Summary. The table below summarizes routine monitoring requirements. This table is for informational purposes only. The actual requirements are specified in the MRP and elsewhere in this Order. In addition to undertaking the monitoring below, the Discharger must conduct receiving water monitoring by continuing to participate in the Regional Monitoring Program.

Table F-10. Monitoring Requirements Summary

Parameter ^[1]	Influent INF-002C ^[2]	Effluent EFF-002C ^[2]	Effluent EFF-WW ^[2]
CBOD	-	1/Discharge	-
TSS	-	1/Discharge	-
pH	-	1/Discharge ^[3]	-
<i>Enterococcus</i> Bacteria	-	1/Discharge	-
Chlorine, Total Residual	-	-	Continuous/D or Once every two hours during discharge ^[4]
Ammonia, Total	1/Month	1/Month ^{[3],[5]}	-
Kjeldahl Nitrogen, Total	1/Month	-	-
Nitrate-Nitrite	1/Month	1/Month	-
Nitrogen, Total	1/Month	1/Month	-
Nitrogen, Total Inorganic	-	1/Month	-
Copper, Total	-	1/Year ^[5]	-
Cyanide, Total	-	1/Year ^[5]	-
Discharge Duration	-	-	1/Discharge
Flow	-	-	1/Discharge
Discharge Volume	-	-	1/Discharge
Temperature	-	1/Year ^[6]	-
Priority Pollutants	-	Once ^{[6],[7]}	-

Footnotes:

- ^[1] The Discharger must also comply with the monitoring requirements in the Mercury and PCBs Watershed Permit (NPDES Permit CA0038849) and the Nutrient Watershed Permit (NPDES Permit CA0038873). Monitoring for these permit requirements is conducted by EBDA at its deepwater outfall.
- ^[2] The MRP defines these monitoring locations and sampling frequencies.
- ^[3] MRP Table E-6 defines additional wet season monitoring requirements.
- ^[4] The Discharger must monitor continuously or by grab samples. If monitoring continuously, total residual chlorine concentrations must be recorded at a frequency of not less than every 5 minutes. The minimum level for total residual chlorine analysis must be no greater than 0.05 mg/L. To document compliance with the minimum level, the Discharger must calibrate continuous total residual chlorine analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If monitoring by grab samples, the Discharger must collect at least one sample per discharge event and continue sampling at least once every two hours for longer duration discharges.
- ^[5] Monitoring is not required during discharge maintenance exercises.

^[6] The Discharger must monitor during the wet season.

^[7] Provision 6.3.2 of the Order requires this monitoring.

8. PUBLIC PARTICIPATION

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

8.1. Notification of Interested Parties. The Regional Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. The public had access to the agenda and any changes in dates and locations through the [Regional Water Board's website](https://waterboards.ca.gov/sanfranciscobay) (waterboards.ca.gov/sanfranciscobay).

8.2. Written Comments. Interested persons were invited to submit written comments concerning the tentative WDRs as explained through the notification process. Comments were to be submitted either in person, by email, or by mail to the Executive Office at the Regional Water Board at 1515 Clay Street, Suite 1400, Oakland, California 94612, to the attention of Natlie Lee.

Written comments were due at the Regional Water Board office by 5:00 p.m. on April 11, 2024

8.3. Public Hearing. The Regional Water Board held a public hearing on the tentative Order during its regular meeting at the following date and time:

Date: May 8, 2024
Time: 9:00 a.m.

Contact: Natlie Lee, (510) 622-2325
Mail to: Natlie.Lee@waterboards.ca.gov

Interested persons were provided notice of the hearing and information on how to participate. At the public hearing, the Regional Water Board heard testimony pertinent to the discharge and Order.

Dates and venues can change. The [Regional Water Board's website](https://waterboards.ca.gov/sanfranciscobay) is (waterboards.ca.gov/sanfranciscobay), where one can access the current agenda for changes.

8.4. Reconsideration of Waste Discharge Requirements. Any person aggrieved by this Regional Water Board action may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050. The State Water Board must receive the

petition at the following address within 30 calendar days of the date of Regional Water Board action:

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

A petition may also be filed by email at waterqualitypetitions@waterboards.ca.gov.

For instructions on how to file a water quality petition for review, see the [Water Board's petition instructions](#) (waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml).

- 8.5. Information and Copying.** Supporting documents and comments received are on file. To review these documents, please contact Melinda Wong, the Regional Water Board's custodian of records, by calling (510) 622-2300 or emailing Melinda.Wong@waterboards.ca.gov. Document copying may be arranged.
- 8.6. Register of Interested Persons.** Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference the Facility, and provide a name, address, and phone number.
- 8.7. Additional Information.** Requests for additional information or questions regarding this Order should be directed to Natlie Lee, (510) 622-2325, Natlie.Lee@waterboards.ca.gov.

**ATTACHMENT G – REGIONAL STANDARD PROVISIONS,
AND MONITORING AND REPORTING REQUIREMENTS
(SUPPLEMENT TO ATTACHMENT D)**

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**ATTACHMENT G – REGIONAL STANDARD PROVISIONS,
AND MONITORING AND REPORTING REQUIREMENTS
(SUPPLEMENT TO ATTACHMENT D)**

APPLICABILITY

This document supplements the requirements of Federal Standard Provisions (Attachment D). For clarity, these provisions are arranged using the same headings as those used in Attachment D.

1. STANDARD PROVISIONS – PERMIT COMPLIANCE

1.1. Duty to Comply – Not Supplemented

1.2. Need to Halt or Reduce Activity Not a Defense – Not Supplemented

1.3. Duty to Mitigate – Supplement to Attachment D, Provision 1.3.

1.3.1. **Contingency Plan.** The Discharger shall maintain a Contingency Plan as prudent in accordance with current facility emergency planning. The Contingency Plan shall describe procedures to ensure that existing facilities remain in, or are rapidly returned to, operation in the event of a process failure or emergency incident, such as employee strike, strike by suppliers of chemicals or maintenance services, power outage, vandalism, earthquake, or fire. The Discharger may combine the Contingency Plan and Spill Prevention Plan (see Provision 1.3.2, below) into one document. In accordance with Regional Water Board Resolution No. 74-10, discharge in violation of the permit where the Discharger has failed to develop and implement a Contingency Plan as described below may be the basis for considering the discharge a willful and negligent violation of the permit pursuant to California Water Code section 13387. The Contingency Plan shall, at a minimum, provide for the following:

- 1.3.1.1. Sufficient personnel for continued facility operation and maintenance during employee strikes or strikes against contractors providing services;
- 1.3.1.2. Maintenance of adequate chemicals or other supplies, and spare parts necessary for continued facility operations;
- 1.3.1.3. Emergency standby power;
- 1.3.1.4. Protection against vandalism;
- 1.3.1.5. Expeditious action to repair failures of, or damage to, equipment, including any sewer lines;

- 1.3.1.6. Reporting of spills and discharges of untreated or inadequately treated wastes, including measures taken to clean up the effects of such discharges; and
- 1.3.1.7. Maintenance, replacement, and surveillance of physical condition of equipment and facilities, including any sewer lines.
- 1.3.2. **Spill Prevention Plan.** The Discharger shall maintain a Spill Prevention Plan to prevent accidental discharges and to minimize the effects of any such discharges. The Spill Prevention Plan shall do the following:
 - 1.3.2.1. Identify the possible sources of accidental discharge, untreated or partially-treated waste bypass, and polluted drainage;
 - 1.3.2.2. State when current facilities and procedures became operational and evaluate their effectiveness; and
 - 1.3.2.3. Predict the effectiveness of any proposed facilities and procedures and provide an implementation schedule with interim and final dates when the proposed facilities and procedures will be constructed, implemented, or operational.
- 1.4. **Proper Operation and Maintenance** – Supplement to Attachment D, Provision 1.4
 - 1.4.1. **Operation and Maintenance Manual.** The Discharger shall maintain an Operation and Maintenance Manual to provide the plant and regulatory personnel with a source of information describing all equipment, recommended operational strategies, process control monitoring, and maintenance activities. To remain a useful and relevant document, the Operation and Maintenance Manual shall be kept updated to reflect significant changes in treatment facility equipment and operational practices. The Operation and Maintenance Manual shall be maintained in usable condition and be available for reference and use by all relevant personnel and Regional Water Board staff.
 - 1.4.2. **Wastewater Facilities Status Report.** The Discharger shall maintain a Wastewater Facilities Status Report and regularly review, revise, or update it, as necessary. This report shall document how the Discharger operates and maintains its wastewater collection, treatment, and disposal facilities to ensure that all facilities are adequately staffed, supervised, financed, operated, maintained, repaired, and upgraded as necessary to provide adequate and reliable transport, treatment, and disposal of all wastewater from both existing and planned future wastewater sources under the Discharger's service responsibilities.
 - 1.4.3. **Proper Supervision and Operation of Publicly Owned Treatment Works (POTWs).** POTWs shall be supervised and operated by persons possessing

certificates of appropriate grade pursuant to Title 23, section 3680, of the California Code of Regulations.

1.5. Property Rights – Not Supplemented

1.6. Inspection and Entry – Not Supplemented

1.7. Bypass – Not Supplemented

1.8. Upset – Not Supplemented

1.9. Other – Addition to Attachment D

- 1.9.1. Neither the treatment nor the discharge of pollutants shall create pollution, contamination, or nuisance as defined by California Water Code section 13050.
- 1.9.2. Collection, treatment, storage, and disposal systems shall be operated in a manner that precludes public contact with wastewater. If public contact with wastewater could reasonably occur on public property, warning signs shall be posted.
- 1.9.3. If the Discharger submits a timely and complete Report of Waste Discharge for permit reissuance, this permit shall continue in force and effect until the permit is reissued or the Regional Water Board rescinds the permit.

2. STANDARD PROVISIONS – PERMIT ACTION – NOT SUPPLEMENTED

3. STANDARD PROVISIONS – MONITORING

3.1. Sampling and Analyses – Supplement to Attachment D, Provisions 3.1 and 3.2

- 3.1.1. **Certified Laboratories.** Water and waste analyses shall be performed by a laboratory certified for these analyses in accordance with California Water Code section 13176.
- 3.1.2. **Minimum Levels.** For the 126 priority pollutants, the Discharger should use the analytical methods listed in Table B unless the Monitoring and Reporting Program (MRP, Attachment E) requires a particular method or minimum level (ML). All monitoring instruments and equipment shall be properly calibrated and maintained to ensure accuracy of measurements.
- 3.1.3. **Monitoring Frequency.** The MRP specifies the minimum sampling and analysis schedule.
 - 3.1.3.1. **Sample Collection Timing**
 - 3.1.3.1.1. The Discharger shall collect influent samples on varying days selected at random and shall not include any plant recirculation or other sidestream

wastes, unless otherwise stipulated in the MRP. The Executive Officer may approve an alternative influent sampling plan if it is representative of plant influent and complies with all other permit requirements.

- 3.1.3.1.2. The Discharger shall collect effluent samples on days coincident with influent sampling, unless otherwise stipulated by the MRP. If influent sampling is not required, the Discharger shall collect effluent samples on varying days selected at random, unless otherwise stipulated in the MRP. The Executive Officer may approve an alternative effluent sampling plan if it is representative of plant discharge and in compliance with all other permit requirements.
- 3.1.3.1.3. The Discharger shall collect effluent grab samples during periods of daytime maximum peak flows (or peak flows through secondary treatment units for facilities that recycle effluent).
- 3.1.3.1.4. Effluent sampling for conventional pollutants shall occur on at least one day of any multiple-day bioassay the MRP requires. During the course of the bioassay, on at least one day, the Discharger shall collect and retain samples of the discharge. In the event that a bioassay result does not comply with effluent limitations, the Discharger shall analyze the retained samples for pollutants that could be toxic to aquatic life and for which it has effluent limitations.
 - 3.1.3.1.4.1. The Discharger shall perform bioassays on final effluent samples; when chlorine is used for disinfection, bioassays shall be performed on effluent after chlorination and dechlorination; and
 - 3.1.3.1.4.2. The Discharger shall analyze for total ammonia nitrogen and calculate the amount of un-ionized ammonia whenever test results fail to meet effluent limitations.

3.1.3.2. **Conditions Triggering Accelerated Monitoring**

- 3.1.3.2.1. **Average Monthly Effluent Limitation Exceedance.** If the results from two consecutive samples of a constituent monitored in a particular month exceed the average monthly effluent limitation for any parameter (or if the required sampling frequency is once per month or less and the monthly sample exceeds the average monthly effluent limitation), the Discharger shall, within 24 hours after the results are received, increase its sampling frequency to daily until the results from the additional sampling show that the parameter complies with the average monthly effluent limitation.
- 3.1.3.2.2. **Maximum Daily Effluent Limitation Exceedance.** If a sample result exceeds a maximum daily effluent limitation, the Discharger shall, within 24 hours after the result is received, increase its sampling frequency to

daily until the results from two samples collected on consecutive days show compliance with the maximum daily effluent limitation.

- 3.1.3.2.3. **Acute Toxicity.** If final or intermediate results of an acute bioassay indicate a violation or threatened violation (e.g., the percentage of surviving test organisms of any single acute bioassay is less than 70 percent), the Discharger shall initiate a new test as soon as practical or as described in applicable State Water Board plan provisions that become effective after adoption of these Regional Standard Provisions. The Discharger shall investigate the cause of the mortalities and report its findings in the next self-monitoring report.
- 3.1.3.2.4. **Chlorine.** The Discharger shall calibrate chlorine residual analyzers against grab samples as frequently as necessary to maintain accurate control and reliable operation. If an effluent violation is detected, the Discharger shall collect grab samples at least every 30 minutes until compliance with the limitation is achieved, unless the Discharger monitors chlorine residual continuously. In such cases, the Discharger shall continue to conduct continuous monitoring.
- 3.1.3.2.5. **Bypass.** Except as indicated below, if a Discharger bypasses any portion of its treatment facility, it shall monitor flows and collect samples at affected discharge points and analyze samples for all constituents with effluent limitations on a daily basis for the duration of the bypass. The Discharger need not accelerate chronic toxicity monitoring. The Discharger also need not collect and analyze samples for mercury, dioxin-TEQ, and PCBs after the first day of the bypass. The Discharger may satisfy the accelerated acute toxicity monitoring requirement by conducting a flow-through test or static renewal test that captures the duration of the bypass (regardless of the method specified in the MRP). If bypassing disinfection units only, the Discharger shall only monitor bacteria indicators daily.
- 3.1.3.2.5.1. **Bypass for Essential Maintenance.** If a Discharger bypasses a treatment unit for essential maintenance pursuant to Attachment D section 1.7.2, the Executive Officer may reduce the accelerated monitoring requirements above if the Discharger (i) monitors effluent at affected discharge points on the first day of the bypass for all constituents with effluent limitations, except chronic toxicity; and (ii) identifies and implements measures to ensure that the bypass will continue to comply with effluent limitations.
- 3.1.3.2.5.2. **Approved Wet Weather Bypasses.** If a Discharger bypasses a treatment unit or permitted outfall during wet weather with Executive Officer approval pursuant to Attachment D section 1.7.4, the Discharger shall monitor flows and collect and retain samples for affected

discharge points on a daily basis for the duration of the bypass. The Discharger shall analyze daily for TSS using 24 hour composites (or more frequent increments) and for bacteria indicators with effluent limitations using grab samples. If TSS exceeds 45 mg/L in any composite sample, the Discharger shall also analyze daily the retained samples for all other constituents with effluent limitations, except oil and grease, mercury, PCBs, dioxin-TEQ, and acute and chronic toxicity. Additionally, at least once each year, the Discharger shall analyze the retained samples for one approved bypass for all other constituents with effluent limitations, except oil and grease, mercury, PCBs, dioxin-TEQ, and acute and chronic toxicity. This monitoring shall be in addition to the minimum monitoring specified in the MRP.

3.2. Standard Observations – Addition to Attachment D

- 3.2.1. **Receiving Water Observations.** The following requirements only apply when the MRP requires standard observations of receiving waters. Standard observations shall include the following:
- 3.2.1.1. **Floating and Suspended Materials (e.g., oil, grease, algae, and other macroscopic particulate matter)** — presence or absence, source, and size of affected area.
 - 3.2.1.2. **Discoloration and Turbidity** — color, source, and size of affected area.
 - 3.2.1.3. **Odor** — presence or absence, characterization, source, and distance of travel.
 - 3.2.1.4. **Beneficial Water Use** — estimated number of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities.
 - 3.2.1.5. **Hydrographic Condition** — time and height of high and low tides (corrected to nearest National Oceanic and Atmospheric Administration location for the sampling date and time).
 - 3.2.1.6. **Weather Conditions** — wind direction, air temperature, and total precipitation during five days prior to observation.
- 3.2.2. **Wastewater Effluent Observations.** The following requirements only apply when the MRP requires standard observations of wastewater effluent. Standard observations shall include the following:
- 3.2.2.1. **Floating and Suspended Material of Wastewater Origin** (e.g., oil, grease, algae, and other macroscopic particulate matter) — presence or absence.
 - 3.2.2.2. **Odor** — presence or absence, characterization, source, distance of travel, and wind direction.

3.2.3. **Beach and Shoreline Observations.** The following requirements only apply when the MRP requires standard observations of beaches or shorelines. Standard observations shall include the following:

3.2.3.1. **Material of Wastewater Origin** — presence or absence, description of material, estimated size of affected area, and source.

3.2.3.2. **Beneficial Use** — estimate of number of people participating in recreational water contact, non-water contact, and fishing activities.

3.2.4. **Waste Treatment and/or Disposal Facility Periphery Observations.** The following requirements only apply when the MRP requires standard observations of the periphery of waste treatment or disposal facilities. Standard observations shall include the following:

3.2.4.1. **Odor** — presence or absence, characterization, source, and distance of travel.

3.2.4.2. **Weather Conditions** — wind direction and estimated velocity.

4. STANDARD PROVISIONS – RECORDS

4.1. Records to be Maintained – Supplement to Attachment D, Provision 4.1

The Discharger shall maintain records in a manner and at a location (e.g., the wastewater treatment plant or the Discharger's offices) such that the records are accessible to Regional Water Board staff. The minimum retention period specified in Attachment D, Provision IV, shall be extended during the course of any unresolved litigation regarding permit-related discharges, or when requested by Regional Water Board or U.S. EPA, Region IX, staff.

A copy of the permit shall be maintained at the discharge facility and be available at all times to operating personnel.

4.2. Records of Monitoring – Supplement to Attachment D, Provision 4.2

Monitoring records shall include the following:

4.2.1. **Analytical Information.** Records shall include analytical method detection limits, minimum levels, reporting levels, and related quantification parameters.

4.2.2. **Disinfection Process.** For the disinfection process, records shall include the following:

4.2.2.1. For bacteriological analyses:

4.2.2.1.1. Wastewater flow rate at the time of sample collection; and

- 4.2.2.1.2. Required statistical parameters for cumulative bacterial values (e.g., moving median or geometric mean for the number of samples or sampling period identified in the MRP).
- 4.2.2.2. For the chlorination process (when chlorine is used for disinfection), at least daily average values for the following:
 - 4.2.2.2.1. Chlorine residual of treated wastewater as it enters the chlorine contact basin (mg/L);
 - 4.2.2.2.2. Chlorine dosage (kg/day); and
 - 4.2.2.2.3. Dechlorination chemical dosage (kg/day).
- 4.2.3. **Wastewater Treatment Process Solids.** For each treatment unit process that involves solids removal from the wastewater stream, records shall include the following:
 - 4.2.3.1. Total volume or mass of solids removed from each collection unit (e.g., grit, skimmings, undigested biosolids, or combination) for each calendar month or other time period as appropriate, but not to exceed annually; and
 - 4.2.3.2. Final disposition of such solids (e.g., landfill, other subsequent treatment unit).
- 4.2.4. **Treatment Process Bypasses.** For all treatment process bypasses, including wet weather blending, records shall include the following:
 - 4.2.4.1. Chronological log of treatment process bypasses;
 - 4.2.4.2. Identification of treatment processes bypassed;
 - 4.2.4.3. Beginning and ending dates and times of bypasses;
 - 4.2.4.4. Bypass durations;
 - 4.2.4.5. Estimated bypass volumes; and
 - 4.2.4.6. Description of, or reference to other reports describing, the bypasses, their cause, the corrective actions taken (except for wet weather blending explicitly approved within the permit and in compliance with any related permit conditions), and any additional monitoring conducted.
- 4.2.5. **Treatment Plant Spills.** The Discharger shall retain a chronological log of spills at the treatment plant, including the headworks and all units and appurtenances downstream, and records supporting the information provided in accordance with Provision 5.5.2, below.

4.3. Claims of Confidentiality – Not Supplemented

5. STANDARD PROVISIONS – REPORTING

5.1. Duty to Provide Information – Not Supplemented

5.2. Signatory and Certification Requirements – Not Supplemented

5.3. Monitoring Reports – Supplement to Attachment D, Provision 5.3

5.3.1. Self-Monitoring Reports. For each reporting period established in the MRP, the Discharger shall submit a self-monitoring report to the Regional Water Board in accordance with the requirements listed in the MRP and below:

5.3.1.1. Transmittal Letter. Each self-monitoring report shall be submitted with a transmittal letter that includes the following:

- 5.3.1.1.1. Identification of all violations of effluent limitations or other waste discharge requirements found during the reporting period;
- 5.3.1.1.2. Details regarding the violations, such as parameters, magnitude, test results, frequency, and dates;
- 5.3.1.1.3. Causes of the violations;
- 5.3.1.1.4. Corrective actions taken or planned to resolve violations and prevent recurrences, and dates or time schedules for implementation (the Discharger may refer to previously submitted reports that address the corrective actions);
- 5.3.1.1.5. Explanation for any data invalidation. Data should not be submitted in a self-monitoring report if it does not meet quality assurance/quality control standards. However, if the Discharger wishes to invalidate a measurement after submitting it in a self-monitoring report, the Discharger shall identify the measurement suspected to be invalid and state the Discharger's intent to submit, within 60 days, a formal request to invalidate the measurement. The formal request shall include the original measurement in question, the reason for invalidating the measurement, all relevant documentation that supports invalidation (e.g., laboratory sheet, log entry, test results), and a discussion of the corrective actions taken or planned (with a time schedule for completion) to prevent recurrence of the sampling or measurement problem;
- 5.3.1.1.6. Description of blending, if any. If the Discharger blends, it shall describe the duration of blending events and certify whether the blending complied with all conditions for blending;

- 5.3.1.1.7. Description of other bypasses, if any. If the Discharger bypasses any treatment units (other than blending), it shall describe the duration of the bypasses and effluent quality during those times; and
- 5.3.1.1.8. Signature. The transmittal letter shall be signed in accordance with Attachment D, Provision 5.2.
- 5.3.1.2. **Compliance Evaluation Summary.** Each self-monitoring report shall include a compliance evaluation summary that addresses each parameter for which the permit specifies effluent limitations, the number of samples taken during the monitoring period, and the number of samples that exceed the effluent limitations.
- 5.3.1.3. **More Frequent Monitoring.** If the Discharger monitors any pollutant more frequently than required by the MRP, the Discharger shall include the results of such monitoring in the calculation and reporting of the data submitted in the self-monitoring report.
- 5.3.1.4. **Analysis Results**
- 5.3.1.4.1. **Tabulation.** Each self-monitoring report shall include tabulations of all required analyses and observations, including parameters, dates, times, sample stations, types of samples, test results, method detection limits, method minimum levels, and method reporting levels (if applicable), signed by the laboratory director or other responsible official.
- 5.3.1.4.2. **Multiple Samples.** Unless the MRP specifies otherwise, when determining compliance with effluent limitations (other than instantaneous effluent limitations) and more than one sample result is available, the Discharger shall compute the arithmetic mean. If the data set contains one or more results that are “Detected, but Not Quantified (DNQ) or “Not Detected” (ND), the Discharger shall instead compute the median in accordance with the following procedure:
- 5.3.1.4.2.1. The data set shall be ranked from low to high, reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
- 5.3.1.4.2.2. The median of the data set shall be determined. If the data set has an odd number of data points, the median is the middle value. If the data set has an even number of data points, the median is the average of the two values around the middle, unless one or both of these values is ND or DNQ, in which case the median shall be the lower of the two results (where DNQ is lower than a quantified value and ND is lower than DNQ).

5.3.1.4.3. **Duplicate Samples.** The Discharger shall report the average of duplicate sample analyses when reporting for a single sample result (or the median if one or more of the duplicates is DNQ or ND [see Provision 5.3.1.4.2, above]). For bacteria indicators, the Discharger shall report the geometric mean of the duplicate analyses.

5.3.1.4.4. **Dioxin-TEQ.** The Discharger shall report for each dioxin and furan congener the analytical results of effluent monitoring, including the reporting level, the method detection limit, and the measured concentration. The Discharger shall report all measured values of individual congeners, including data qualifiers. When calculating dioxin-TEQ, the Discharger shall set congener concentrations below the minimum levels (MLs) to zero. The Discharger shall calculate and report dioxin-TEQ using the following formula, where the MLs, toxicity equivalency factors (TEFs), and bioaccumulation equivalency factors (BEFs) are as provided in Table A:

$$\text{Dioxin-TEQ} = \sum (C_x \times \text{TEF}_x \times \text{BEF}_x)$$

where: C_x = measured or estimated concentration of congener x

TEF_x = toxicity equivalency factor for congener x

BEF_x = bioaccumulation equivalency factor for congener x

Table A
Minimum Levels, Toxicity Equivalency Factors,
and Bioaccumulation Equivalency Factors

Dioxin or Furan Congener	Minimum Level (pg/L)	2005 Toxicity Equivalency Factor (TEF)	Bioaccumulation Equivalency Factor (BEF)
2,3,7,8-TCDD	10	1.0	1.0
1,2,3,7,8-PeCDD	50	1.0	0.9
1,2,3,4,7,8-HxCDD	50	0.1	0.3
1,2,3,6,7,8-HxCDD	50	0.1	0.1
1,2,3,7,8,9-HxCDD	50	0.1	0.1
1,2,3,4,6,7,8-HpCDD	50	0.01	0.05
OCDD	100	0.0003	0.01
2,3,7,8-TCDF	10	0.1	0.8
1,2,3,7,8-PeCDF	50	0.03	0.2
2,3,4,7,8-PeCDF	50	0.3	1.6
1,2,3,4,7,8-HxCDF	50	0.1	0.08
1,2,3,6,7,8-HxCDF	50	0.1	0.2
1,2,3,7,8,9-HxCDF	50	0.1	0.6
2,3,4,6,7,8-HxCDF	50	0.1	0.7
1,2,3,4,6,7,8-HpCDF	50	0.01	0.01
1,2,3,4,7,8,9-HpCDF	50	0.01	0.4
OCDF	100	0.0003	0.02

- 5.3.1.5. **Results Not Yet Available.** The Discharger shall make all reasonable efforts to obtain analytical data for required parameter sampling in a timely manner. Certain analyses may require additional time to complete analytical processes and report results. In these cases, the Discharger shall describe the circumstances in the self-monitoring report and include the data for these parameters and relevant discussions of any violations in the next self-monitoring report due after the results are available.
- 5.3.1.6. **Annual Self-Monitoring Reports.** By the date specified in the MRP, the Discharger shall submit an annual self-monitoring report covering the previous calendar year. The report shall contain the following:
- 5.3.1.6.1. Comprehensive discussion of treatment plant performance, including documentation of any blending or other bypass events, and compliance with the permit. This discussion shall include any corrective actions taken or planned, such as changes to facility equipment or operation practices that may be needed to achieve compliance, and any other actions taken or planned that are intended to improve the performance and reliability of wastewater collection, treatment, or disposal practices;
- 5.3.1.6.2. List of approved analyses, including the following:
- 5.3.1.6.2.1. List of analyses for which the Discharger is certified;
- 5.3.1.6.2.2. List of analyses performed for the Discharger by a separate certified laboratory (copies of reports signed by the laboratory director of that laboratory need not be submitted but shall be retained onsite); and
- 5.3.1.6.2.3. List of “waived” analyses, as approved;
- 5.3.1.6.3. Plan view drawing or map showing the Discharger’s facility, flow routing, and sampling and observation station locations; and
- 5.3.1.6.4. Results of facility report reviews. The Discharger shall regularly review, revise, and update, as necessary, the Operation and Maintenance Manual, Contingency Plan, Spill Prevention Plan, and Wastewater Facilities Status Report so these documents remain useful and relevant to current practices. At a minimum, reviews shall be conducted annually. The Discharger shall describe or summarize its review and evaluation procedures, recommended or planned actions, and estimated time schedule for implementing these actions. The Discharger shall complete changes to these documents to ensure that they remain up-to-date.

5.4. Compliance Schedules – Not Supplemented

5.5. Twenty-Four Hour Reporting – Supplement to Attachment D, Provision 5.5

5.5.1. Oil or Other Hazardous Material Spills

5.5.1.1. Within 24 hours of becoming aware of a spill of oil or other hazardous material not contained onsite and completely cleaned up, the Discharger shall report as follows:

5.5.1.1.1. If the spill exceeds reportable quantities for hazardous materials listed in 40 C.F.R. part 302, the Discharger shall call the California Office of Emergency Services (800 852-7550).

5.5.1.1.2. If the spill does not exceed reportable quantities for hazardous materials listed in 40 C.F.R., part 302, the Discharger shall call the Regional Water Board (510-622-2369).

5.5.1.2. The Discharger shall submit a written report to the Regional Water Board within five working days following either of the above telephone notifications unless directed otherwise by Regional Water Board staff. A report submitted electronically is acceptable. The written report shall include the following:

5.5.1.2.1. Date and time of spill, and duration if known;

5.5.1.2.2. Location of spill (street address or description of location);

5.5.1.2.3. Nature of material spilled;

5.5.1.2.4. Quantity of material spilled;

5.5.1.2.5. Receiving water body affected, if any;

5.5.1.2.6. Cause of spill;

5.5.1.2.7. Estimated size of affected area;

5.5.1.2.8. Observed impacts to receiving waters (e.g., oil sheen, fish kill, water discoloration);

5.5.1.2.9. Corrective actions taken to contain, minimize, or clean up the spill;

5.5.1.2.10. Future corrective actions planned to prevent recurrence, and implementation schedule; and

5.5.1.2.11. Persons or agencies notified.

5.5.2. **Unauthorized Municipal Wastewater Treatment Plant Discharges**¹

5.5.2.1. **Two-Hour Notification.** For any unauthorized discharge that enters a drainage channel or surface water, the Discharger shall, as soon as possible, but not later than two hours after becoming aware of the discharge, notify the California Office of Emergency Services (800-852-7550) and the local health officer or director of environmental health with jurisdiction over the affected water body. Notification shall include the following:

- 5.5.2.1.1. Incident description and cause;
- 5.5.2.1.2. Location of threatened or involved waterways or storm drains;
- 5.5.2.1.3. Date and time that the unauthorized discharge started;
- 5.5.2.1.4. Estimated quantity and duration of the unauthorized discharge (to the extent known), and estimated amount recovered;
- 5.5.2.1.5. Level of treatment prior to discharge (e.g., raw wastewater, primary-treated wastewater, or undisinfected secondary-treated wastewater); and
- 5.5.2.1.6. Identity of person reporting the unauthorized discharge.

5.5.2.2. **Five-Day Written Report.** Within five business days following the two-hour notification, the Discharger shall submit a written report that includes, in addition to the information listed in Provision 5.5.2.1, above, the following:

- 5.5.2.2.1. Methods used to delineate the geographical extent of the unauthorized discharge within receiving waters;
- 5.5.2.2.2. Efforts implemented to minimize public exposure to the unauthorized discharge;
- 5.5.2.2.3. Visual observations of the impacts (if any) noted in the receiving waters (e.g., fish kill, discoloration of receiving water) and extent of sampling if conducted;
- 5.5.2.2.4. Corrective measures taken to minimize the impact of the unauthorized discharge;

¹ California Code of Regulations, Title 23, section 2250(b), defines an unauthorized discharge to be a discharge, not regulated by waste discharge requirements, of treated, partially-treated, or untreated wastewater resulting from the intentional or unintentional diversion of wastewater from a collection, treatment, or disposal system.

- 5.5.2.2.5. Measures to be taken to minimize the potential for a similar unauthorized discharge in the future;
- 5.5.2.2.6. Summary of Spill Prevention Plan or Operation and Maintenance Manual modifications to be made, if necessary, to minimize the potential for future unauthorized discharges; and
- 5.5.2.2.7. Quantity and duration of the unauthorized discharge, and the amount recovered.

5.6. Planned Changes – Not Supplemented

5.7. Anticipated Noncompliance – Not Supplemented

5.8. Other Noncompliance – Not Supplemented

5.9. Other Information – Not Supplemented

6. STANDARD PROVISIONS – ENFORCEMENT – NOT SUPPLEMENTED

7. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS – NOT SUPPLEMENTED

8. DEFINITIONS – ADDITION TO ATTACHMENT D

More definitions can be found in Attachment A of this NPDES Permit.

8.1. Arithmetic Calculations

- 8.1.1. **Geometric Mean.** The antilog of the log mean or the back-transformed mean of the logarithmically transformed variables, which is equivalent to the multiplication of the antilogarithms. The geometric mean can be calculated with either of the following equations:

$$\text{Geometric Mean} = \text{Anti log} (1/N \sum \text{Log } C_i)$$

or

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

Where “N” is the number of data points for the period analyzed and “C” is the concentration for each of the “N” data points.

- 8.1.2. **Mass Emission Rate.** The rate of discharge expressed in mass. The mass emission rate is obtained from the following calculation for any calendar day:

$$\text{Mass emission rate (lb/day)} = \frac{8.345}{N} \sum_{i=1}^N Q_i C_i$$

$$\text{Mass emission rate (kg/day)} = \frac{3.785}{N} \sum_{i=1}^N Q_i C_i$$

In which “N” is the number of samples analyzed in any calendar day and “Q_i” and “C_i” are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the “N” grab samples that may be taken in any calendar day. If a composite sample is taken, “C_i” is the concentration measured in the composite sample and “Q_i” is the average flow rate occurring during the period over which the samples are composited. The daily concentration of a constituent measured over any calendar day shall be determined from the flow weighted average of the same constituent in the combined waste streams as follows:

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

In which “N” is the number of component waste streams and “Q” and “C” are the flow rate (MGD) and the constituent concentration (mg/L) associated with each of the “N” waste streams. “Q_t” is the total flow rate of the combined waste streams.

- 8.1.3. **Removal Efficiency.** The ratio of pollutants removed by the treatment facilities to pollutants entering the treatment facilities (expressed as a percentage). The Discharger shall determine removal efficiencies using monthly averages (by calendar month unless otherwise specified) of pollutant concentration of influent and effluent samples collected at about the same time and using the following equation (or its equivalent):

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

- 8.2. **Blending** – the practice of bypassing biological treatment units and recombining the bypass wastewater with biologically-treated wastewater.
- 8.3. **Composite Sample** – a sample composed of individual grab samples collected manually or by an automatic sampling device on the basis of time or flow as specified in the MRP. For flow-based composites, the proportion of each grab sample included in the composite sample shall be within plus or minus five percent (+/-5%) of the representative flow of the waste stream being measured at the time of grab sample collection. Alternatively, equal volume grab samples may be individually analyzed with the flow-weighted average calculated by averaging flow-weighted ratios of each grab sample analytical result. Grab samples comprising time-based composite samples shall be collected at intervals not greater than those specified in the MRP. The quantity of each grab sample comprising a time-

based composite sample shall be a set of flow proportional volumes as specified in the MRP. If a particular time-based or flow-based composite sampling protocol is not specified in the MRP, the Discharger shall determine and implement the most representative protocol.

- 8.4. Duplicate Sample** – a second sample taken from the same source and at the same time as an initial sample (such samples are typically analyzed identically to measure analytical variability).
- 8.5. Grab Sample** – an individual sample collected during a short period not exceeding 15 minutes. Grab samples represent only the condition that exists at the time the sample is collected.
- 8.6. Overflow** – the intentional or unintentional spilling or forcing out of untreated or partially-treated waste from a transport system (e.g., through manholes, at pump stations, or at collection points) upstream of the treatment plant headworks or from any part of a treatment plant.
- 8.7. Priority Pollutants** – those constituents referred to in 40 C.F.R. part 122 as promulgated in the Federal Register, Vol. 65, No. 97, Thursday, May 18, 2000, also known as the California Toxics Rule.
- 8.8. Untreated waste** – raw wastewater.

CTR No.	Pollutant / Parameter	Analytical Method ^[2]	GC	GC MS	LC	Color	FAA	GFAA	ICP	ICP MS	SPGF AA	HYD RIDE	CVAA	DCP
107	Chlordane	608	0.1	-	-	-	-	-	-	-	-	-	-	-
108	4,4'-DDT	608	0.01	-	-	-	-	-	-	-	-	-	-	-
109	4,4'-DDE	608	0.05	-	-	-	-	-	-	-	-	-	-	-
110	4,4'-DDD	608	0.05	-	-	-	-	-	-	-	-	-	-	-
111	Dieldrin	608	0.01	-	-	-	-	-	-	-	-	-	-	-
112	Endosulfan (alpha)	608	0.02	-	-	-	-	-	-	-	-	-	-	-
113	Endosulfan (beta)	608	0.01	-	-	-	-	-	-	-	-	-	-	-
114	Endosulfan Sulfate	608	0.05	-	-	-	-	-	-	-	-	-	-	-
115	Endrin	608	0.01	-	-	-	-	-	-	-	-	-	-	-
116	Endrin Aldehyde	608	0.01	-	-	-	-	-	-	-	-	-	-	-
117	Heptachlor	608	0.01	-	-	-	-	-	-	-	-	-	-	-
118	Heptachlor Epoxide	608	0.01	-	-	-	-	-	-	-	-	-	-	-
119-125	PCBs: Aroclors 1016, 1221, 1232, 1242, 1248, 1254, 1260	608	0.5	-	-	-	-	-	-	-	-	-	-	-
126	Toxaphene	608	0.5	-	-	-	-	-	-	-	-	-	-	-

Footnotes:

- ^[1] Minimum levels are from the *State Implementation Policy*. They are the concentration of the lowest calibration standard for that technique based on a survey of contract laboratories. Laboratory techniques are defined as follows: GC = Gas Chromatography; GCMS = Gas Chromatography/Mass Spectrometry; LC = High Pressure Liquid Chromatography; Color = Colorimetric; FAA = Flame Atomic Absorption; GFAA = Graphite Furnace Atomic Absorption; ICP = Inductively Coupled Plasma; ICPMS = Inductively Coupled Plasma/Mass Spectrometry; SPGFAA = Stabilized Platform Graphite Furnace Atomic Absorption (i.e., U.S. EPA 200.9); Hydride = Gaseous Hydride Atomic Absorption; CVAA = Cold Vapor Atomic Absorption; DCP = Direct Current Plasma.
- ^[2] The suggested method is the U.S. EPA Method unless otherwise specified (SM = Standard Methods). The Discharger may use another U.S. EPA-approved or recognized method if that method has a level of quantification below the applicable water quality objective. Where no method is suggested, the Discharger has the discretion to use any standard method.
- ^[3] Analysis for total chromium may be substituted for analysis of chromium (III) and chromium (VI) if the concentration measured is below the lowest hexavalent chromium criterion (11 ug/l).
- ^[4] The Discharger shall use ultra-clean sampling (U.S. EPA Method 1669) and ultra-clean analytical methods (U.S. EPA Method 1631) for mercury monitoring. The minimum level for mercury is 2 ng/l (or 0.002 ug/l).
- ^[5] MUN = Municipal and Domestic Supply. This designation, if applicable, is in the Findings of the permit.
- ^[6] Determination of Asbestos Structures over 10 [micrometers] in Length in Drinking Water Using MCE Filters, U.S. EPA 600/R-94-134, June 1994.
- ^[7] Detected as azobenzene