CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CA0077747
TENTATIVE ORDER R5-2027-XXXX

TENTATIVE WASTE DISCHARGE REQUIREMENTS FOR CHESTER PUBLIC UTILITY DISTRICT CHESTER SEWAGE TREATMENT PLANT PLUMAS COUNTY

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

Table 1. Discharger Information

Discharger:	Chester Public Utility District
Name of Facility:	Chester Sewage Treatment Plant
Facility Street Address:	881 First Avenue
Facility City, Zip:	Chester, CA 96020
Facility County:	Plumas County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Secondary-treated municipal wastewater	40.30164°	-121.22486°	Lake Almanor
002	Secondary-treated municipal wastewater	40.30164°	-121.22486°	Constructed Wetland Ponds

Table 3. Administrative Information

This Order was Adopted on:	**XX February 2027**
This Order shall become effective on:	**1 April 2027**
This Order shall expire on:	**31 March 2032**
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with California Code of Regulations, title 23, and an application for reissuance of a NPDES permit no later than:	**31 March 2031**
The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as follows:	**Minor Discharge**

I, Patrick Pulupa, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **XX February 2027**.

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PATRICK PULUPA, Executive Officer

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I. FACILITY INFORMATION

Information describing the Chester Public Utility District (Discharger), Chester Sewage Treatment Plant (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Central Valley Water Board), finds:

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

B. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of Public Resources Code. Additionally, the adoption of land discharge requirements for the Facility constitutes permitting an existing facility that is categorically exempt from the provisions of CEQA pursuant to CCR, title 14, section 15301.

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

D. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections **IV.B, V.B, and VI.C.4** are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

E. Monitoring and Reporting. 40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This Order and the Monitoring and Reporting Program, provided in Attachment E,

establish monitoring and reporting requirements to implement federal and State requirements. The burden, including costs, of these monitoring and reporting requirements bears a reasonable relationship to the need for these reports and the benefits to be obtained therefrom. The Discharger, as owner and operator of the Facility, is responsible for these requirements, which are necessary to determine compliance with this Order. The need for these requirements is further discussed in the Fact Sheet, Attachment F.

F. Notification of Interested Persons. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of the notification are provided in the Fact Sheet.

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

THEREFORE, IT IS HEREBY ORDERED that Order R5-2021-0022 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Central Valley Water Board from taking enforcement action for violations of the previous Order.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater from the Facility, as the Facility is specifically described in the Fact Sheet in section II, in a manner different from that described in this Order is prohibited.

B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions I.G. and I.H. (Attachment D).

C. Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.

D. Discharge of waste classified as ‘hazardous’, as defined in the CCR, title 22, section 66261.1 et seq., is prohibited.

E. **Peak Wet Weather Flow.** Average daily discharge flow exceeding a peak wet weather flow of 0.5 million gallons per day (MGD) is prohibited.

F. Discharge of secondary treated disinfected municipal wastewater to Lake Almanor from 1 June through 30 September is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001 (D-001)

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at D-001. Unless otherwise specified compliance shall be measured at Monitoring Location EFF-001, as described in the Monitoring and Reporting Program (MRP), Attachment E:

a. The Discharger shall maintain compliance with the effluent limitations specified in Table 4:

Table 4. Effluent Limitations

Parameters	Units	Average Monthly	Average Weekly	Maximum Daily
Ammonia Nitrogen, Total (as N)	milligrams per liter (mg/L)	8.4	21	--
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD_5)	mg/L	30	45	--
Copper, Total Recoverable	micrograms per liter (µg/L)	34	--	64
Total Suspended Solids (TSS)	mg/L	30	45	--
Zinc, Total Recoverable	µg/L	90	--	156

b. **pH:**

i. 6.0 Standard Units (SU) as an instantaneous minimum.

ii. 9.0 SU as an instantaneous maximum.

c. **Percent Removal.** The average monthly percent removal of BOD_5 and TSS shall not be less than 85 percent.

d. **Total Residual Chlorine.** Effluent total residual chlorine shall not exceed:

i. 0.011 mg/L, as a 4-day average; and

ii. 0.019 mg/L, as a 1-hour average.

e. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:

i. 23 most probable number per 100 milliliters (MPN/100 mL), as a 7-day median; and

ii. 240 MPN/100mL, more than once in any 30-day period.

B. Land Discharge Specifications – Discharge Point 002 (D-002)

1. The Discharger shall maintain compliance with the following land discharge specifications at Discharge Point 002, with compliance measured at Monitoring Location LND-007 as described in the attached MRP.

   a. The Discharger shall maintain compliance with the Land Discharge Specifications in Table 5:

Table 5. Land Discharge Specifications

Parameter	Units	Average Monthly	Maximum Daily
BOD5	mg/L	40	80
TSS	mg/L	40	80

   b. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:

      i. 23 most probable number per 100 milliliters (MPN/100 mL), as a 7-day median; and

      ii. 240 MPN/100mL, more than once in any 30-day period.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations – Not Applicable

B. Groundwater Limitations

Release of waste constituents from any portion of the Facility shall not cause or contribute to groundwater containing:

1. Total coliform organism level of more than 2.2 MPN/100 mL over any seven-day period.

2. Chemical constituents in concentrations that adversely affect beneficial uses.

3. Chemical constituents in excess of the Maximum Contaminant Levels (MCLs) specified in California Code of Regulations, title 22 (Title 22), sections 64431, 64444, and 64449, Tables 64449-A and 64449-B. For constituents identified in Tables 64449-A and 64449-B, appropriate long-term averaging periods will be

used to evaluate ambient groundwater quality and annual averages of sample results will be used to determine compliance with this limitation.

For Total Dissolved Solids, Specific Conductance, Chloride, and Sulfate, the groundwater limitation is the “Upper” level specified in Table 64449-B, unless a different level(s) has been authorized by the Central Valley Water Board in accordance with the provisions of section 64449 et seq.

4. Taste- or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses (e.g., by creating off-tastes and/or odors; producing detrimental physiological responses in human, plant, animal, or aquatic life [i.e., toxicity]; etc.).

In cases where the natural background concentration of a particular constituent exceeds an applicable groundwater limitation, the natural background concentration shall serve as the limitation for that constituent.

VI. PROVISIONS

A. Standard Provisions

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

2. The Discharger shall comply with the following provisions. In the event that there is any conflict, duplication, or overlap between provisions specified by this Order, the more stringent provision shall apply:

   a. If the Discharger’s wastewater treatment plant is publicly owned or subject to regulation by California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, CCR, division 3, chapter 26.

   b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

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

      ii. obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;

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

      iv. a material change in the character, location, or volume of discharge.

The causes for modification include:

i. New regulations. New regulations have been promulgated under section 405(d) of the CWA, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

ii. Land application plans. When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

iii. Change in sludge use or disposal practice. Under 40 CFR section 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Central Valley Water Board may review and revise this Order at any time upon application of any affected person or the Central Valley Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Central Valley Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. Contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

ii. Controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

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

f. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

g. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by U.S. EPA under section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

h. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

i. Safeguard to electric power failure:

    i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, or failure of electric power, the discharge shall comply with the terms and conditions of this Order.

    ii. Upon written request by the Central Valley Water Board, the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past 5 years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Central Valley Water Board.

    iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water Board that the existing safeguards are inadequate, provide to the Central Valley Water Board and U.S. EPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this Order.

j. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under the Central Valley Water Board Standard Provision contained in section VI.A of this Order.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

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

The Central Valley Water Board, after review of the technical report, may establish conditions which it deems necessary to control accidental discharges and to minimize the effects of such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

k. A publicly owned treatment works whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last 3 years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in 4 years, the Discharger shall notify the Central Valley Water Board by 31 January. A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within
120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Central Valley Water Board may extend the time for submitting the report.

l. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR,

sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

m. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

n. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board.

o. This Order may be reopened to transfer ownership or control of this Order. The succeeding owner or operator must apply in writing requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Central Valley Water Board, and a statement. The statement shall comply with the signatory and certification requirements in the federal Standard Provisions (Attachment D, section V.B) and state that the new owner or operator assumes full responsibility for compliance with this Order.

p. If the Discharger submits a timely and complete ROWD for permit reissuance, this permit shall continue in force and effect until the permit is reissued or the Regional Water Board rescinds the permit.

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

r. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, land discharge specification, groundwater limitation, or effluent limitation of this Order, the Discharger shall notify the Central Valley Water Board by telephone (530) 224-4845 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Central Valley Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance

and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

a. Conditions that necessitate a major modification of a permit are described in 40 CFR section 122.62, including, but not limited to:

i. If new or amended applicable water quality standards are promulgated or approved pursuant to section 303 of the CWA, or amendments thereto, this permit may be reopened and modified in accordance with the new or amended standards.

ii. When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.

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

c. **Mercury.** If mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted, this Order shall be reopened, or an effluent concentration limitation imposed. If the Central Valley Water Board determines that a mercury offset program is feasible for Dischargers subject to a NPDES permit, then this Order may be reopened to reevaluate the mercury mass loading limitation(s) and the need for a mercury offset program for the Discharger.

d. **Whole Effluent Toxicity**

i. This Order may be reopened for modification to revise the aquatic toxicity provisions if the California Supreme Court determines that the test of significant toxicity cannot be used in NPDES permits and the State Water Board suspends or revises the aquatic toxicity water quality standards.

ii. If after review of new data and information, it is determined that the discharge has reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions' numeric chronic aquatic toxicity objective and Basin Plan's narrative toxicity objective, this Order may be reopened and effluent limitations added for acute and/or chronic toxicity.

e. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 17 January 2020, certain Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley became effective. Other provisions subject to U.S. EPA approval became effective on 2 November 2020, when approved by U.S. EPA. As the Central Valley Water Board moves forward to implement those provisions that are now in effect, this Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

f. **Water Effects Ratios (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating criteria for applicable inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total when developing effluent limitations for copper and zinc. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Toxicity Reduction Evaluation (TRE) Requirements.**

i. **Chronic Whole Effluent Toxicity Median Monthly Effluent Target (MMET).** No more than one Ceriodaphnia dubia chronic aquatic toxicity test initiated in a calendar month, analyzed using the TST approach, shall result in a "Fail" at the IWC for any endpoint.

ii. **Chronic Whole Effluent Toxicity Maximum Daily Effluent Target (MDET).** No Ceriodaphnia dubia chronic aquatic toxicity test shall result in a "Fail" at the IWC for the sub-lethal endpoint measured in the test and a percent effect for the survival Ceriodaphnia dubia endpoint greater than or equal to 50 percent.

iii. **TRE:** The Discharger is required to conduct a TRE, as detailed in the Monitoring and Reporting Program (Attachment E, Section V.G), when any combination of two or more **MDET or MMET** exceedances occur within a single toxicity calendar month or within two successive toxicity calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity) or if there is no effluent available to complete a routine monitoring test or **MMET** test, the Executive Officer may require a TRE.

b. **Groundwater Monitoring Well Network Evaluation**. To determine compliance with the groundwater limitations contained in section V.B. of this Order, the Discharger is required to evaluate the adequacy of its groundwater monitoring network. This provision requires the Discharger to evaluate its groundwater monitoring network to ensure there are one or more background monitoring wells and a sufficient number of designated monitoring wells downgradient of every treatment, storage, and disposal unit that does or may release waste constituents to groundwater. The evaluation of the adequacy of the monitoring well network is due within **12 months following effective date of this Order.**

c. **Groundwater Monitoring Well Installation Work Plan**. After evaluation of the monitoring well network and determination of the need for additional groundwater monitoring wells or replacement wells, the Discharger shall submit a Groundwater Monitoring Well Installation Work Plan no later than **3 months following Groundwater Monitoring Well Network Evaluation approval**. The Work Plan shall be prepared in accordance with, and include the items listed in, Attachment I, “Monitoring Well Installation Standard Requirements,” sections I and II. All monitoring wells shall comply with the appropriate standards as described in California Well Standards Bulletin 74-90 (June 1991) and Water Well Standards: State of California Bulletin 74-81 (December 1981), and any more stringent standards adopted by the Discharger or County pursuant to Water Code section 13801**.**

d. **Groundwater Evaluation Report.** The Discharger shall install new groundwater monitoring wells, if necessary, collect monitoring data, and submit a report evaluating the underlying groundwater **with the ROWD**. The report shall also include an evaluation of the unsaturated soil thickness between the bottom of the ponds and highest groundwater, groundwater gradient, and a review of potential impacts on sensitive receptors in the area (e.g., drinking water wells).

3. Best Management Practices and Pollution Prevention

a. **Salinity Evaluation and Minimization Plan (SEMP).** The Discharger shall continue to implement a SEMP to identify and address sources of salinity discharged from the Facility. The Discharger submitted a Notice of Intent to comply with the Salt Control Program and selected the Alternative Permitting Approach. Accordingly, the Discharger shall participate in the CV-SALTS Prioritization and Optimization (P&O) Study. Furthermore, an evaluation of the effectiveness of the SEMP shall be submitted with the ROWD. The evaluation shall include, at minimum, the calendar year average concentrations of effluent electrical conductivity during the term of the Order. If the average electrical conductivity concentration for any calendar year exceeds a performance-based **trigger of 245 µmhos/cm**, the Discharger shall evaluate possible sources of salinity contributing to the exceedance of the trigger and update the SEMP to include a plan of action to control salinity.

4. Construction, Operation and Maintenance Specifications

a. **Constructed Wetland/Treatment Pond Operating Requirements**.

i. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this Order.

ii. Wastewater treatment, storage, and disposal shall not cause pollution or a nuisance as defined by Water Code section 13050.

iii. The discharge shall remain within the permitted waste treatment/containment structures and land application areas at all times.

iv. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.

v. All conveyance, treatment, storage, and disposal systems shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

vi. Objectionable odors shall not be perceivable beyond the limits of the property where the waste is generated, treated, and/or discharged at an intensity that creates or threatens to create nuisance conditions.

vii. As a means of discerning compliance with vi. (above), the dissolved oxygen (DO) content in the upper one foot of any wastewater pond shall not be less than 1.0 mg/L for three consecutive sampling events. If DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings

to the Regional Water Board in writing within 10 days and shall include a specific plan to resolve the low DO results within 30 days.

viii. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow). As a means of management and to discern compliance with this requirement, the Discharger shall install or utilize a device that clearly shows the water level at design capacity and enables the determination of available operational freeboard.

ix. Wastewater treatment, storage, and ponds or structures shall have sufficient capacity to accommodate allowable wastewater flow, design seasonal precipitation, and ancillary inflow and infiltration during the winter while ensuring continuous compliance with all requirements of this Order. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

x. On or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with viii. and ix (above).

xi. Public contact with wastewater shall be precluded through such means as fences, signs, and other acceptable alternatives.

xii. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

(a) An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.

(b) Weeds shall be minimized.

(c) Vegetation, debris, and deceased algae shall not accumulate on the water surface.

xiii. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

xiv. Wastewater contained in any unlined pond shall not have a pH less than 6.0 or greater than 9.0.

xv. The Discharger shall monitor sludge accumulation in the constructed wetland ponds/treatment ponds and shall periodically remove sludge as necessary to maintain adequate storage capacity. Specifically, if the estimated volume of sludge in the reservoir exceeds five percent of the permitted reservoir capacity, the Discharger shall complete sludge cleanout within 12 months after the date of the estimate.

xvi. The discharge shall not cause degradation of any water supply.

xvii. The discharge of waste classified as “hazardous” as defined in section 2521(a) of Title 23, California Code of Regulations (CCR) to the treatment ponds is prohibited.

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

a. **Sludge/Biosolids Treatment or Discharge Specifications.** Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the wastewater treatment plant. Biosolids refer to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 C.F.R. Part 503.

i. Collected screenings, residual sludge, biosolids, and other solids removed from liquid wastes shall be disposed of in a manner consistent with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste, as set forth in Title 27, CCR, division 2, subdivision 1, section 20005, et seq. Removal for further treatment, storage, disposal, or reuse at sites (e.g., landfill, composting sites, soil amendment sites) that are operated in accordance with valid waste discharge requirements issued by a regional water board will satisfy these specifications.

Sludge and solid waste shall be removed from screens, sumps, ponds, clarifiers, etc. as needed to ensure optimal plant performance.

The treatment of sludge generated at the Facility shall be confined to the Facility property and conducted in a manner that precludes infiltration of waste constituents into soils in a mass or concentration that will violate Groundwater Limitations in section V.B. of this Order. In addition, the storage of residual sludge, solid waste, and biosolids on Facility property shall be temporary and controlled, and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or concentration

that will violate Groundwater Limitations included in section V.B. of this Order.

ii. The use, disposal, storage, and transportation of biosolids shall comply with existing federal and state laws and regulations, including permitting requirements and technical standards included in 40 C.F.R. Part 503. If the State Water Board and the Central Valley Water Board are given the authority to implement regulations contained in 40 C.F.R. Part 503, this Order may be reopened to incorporate appropriate time schedules and technical standards. The Discharger must comply with the standards and time schedules contained in 40 C.F.R. Part 503 whether or not they have been incorporated into this Order.

iii. The Discharger shall implement onsite sludge/biosolids treatment, processing, and storage for the Facility as described in the Fact Sheet (Attachment F, section II.A). This Order may be reopened to address any proposed change in the onsite treatment, processing, or storage of sludge/biosolids.

b. **Collection System.** The Discharger is separately subject to the requirements of, and must comply with, State Water Board Order 2022-0103-DWQ, *Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems*, or any subsequent order adopted to revise or replace Order 2022-0103-DWQ.

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

A. BOD5 and TSS Effluent Limitations and Land Discharge Specifications (sections IV.A.1 and IV.B.1.a). Compliance with the surface water effluent limitations and land discharge specifications for BOD5 and TSS in section IV.A.1 and IV.B.1.a, shall be ascertained by 24-hour composite samples as specified in Table E-3 and E-4, respectively, subject to the temporary grab-sample allowance in MRP section IV.A.2.b. Compliance with the percent removal requirements in section IV.A.1.c shall be calculated using the arithmetic mean of BOD5 and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

B. Total Coliform Organisms Effluent Limitations and Land Discharge Specifications (sections IV.A.1.e and IV.B.1.b). For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For

example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday, Friday, and Thursday) are used to calculate the 7-day median. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 23 per 100 milliliters, the Discharger will be considered out of compliance.

C. Effluent Limitations (section IV.A). Compliance with effluent limitations for pollutants other than those specified above shall be determined in accordance with section 2.4.5 of the State Water Board's *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (2005) (State Implementation Policy or SIP) as follows:

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

2. When determining compliance with an average weekly and monthly effluent limitation (AWEL, AMEL, respectively) and more than one sample result is available in a month, the discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

D. Total Residual Chlorine Effluent Limitations (Section IV.A.1.d). Continuous monitoring analyzers for chlorine residual or for dechlorination agent residual in the effluent are appropriate methods for compliance determination. A positive residual dechlorination agent in the effluent indicates that chlorine is not present in the discharge, which demonstrates compliance with the effluent limitations. This type of monitoring can also be used to prove that some chlorine residual exceedances are false positives. Continuous monitoring data showing either a positive dechlorination agent residual or a chlorine residual at or below the prescribed limit are sufficient to show compliance with the total residual chlorine effluent limitations, as long as the instruments are maintained and calibrated in accordance with the manufacturer's recommendations.

Any excursion above the 1-hour average or 4-day average total residual chlorine effluent limitations is a violation. If the Discharger conducts continuous monitoring and the Discharger can demonstrate, through data collected from a back-up monitoring system, that a chlorine spike recorded by the continuous monitor was not actually due to chlorine, then any excursion resulting from the recorded spike will not be considered an exceedance, but rather reported as a false positive. Records supporting validation of false positives shall be maintained in accordance with Attachment D, section IV (Standard Provisions).

E. Peak Wet Weather Flow Prohibition (Section III.E). Compliance with the peak wet weather flow prohibition will be determined based on the average daily flow when discharging to Lake Almanor. The average daily flow is determined by dividing the total volume of flow discharged by the number of days discharge to Lake Almanor occurred during the month.

ATTACHMENT A – DEFINITIONS

1Q10
The lowest one-day flow with an average reoccurrence frequency of once in ten years.

7Q10
The lowest average seven consecutive day flow with an average reoccurrence frequency of once in ten years.

Acute Aquatic Toxicity Test
A test to determine an adverse effect (usually lethality) on a group of aquatic test organisms during a short-term exposure (e.g., 24, 48, or 96 hours).

Alternative Hypothesis
A 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, is the sum of measured values divided by the number of samples. For ambient water concentrations, the arithmetic mean is calculated as follows:

Arithmetic mean = $\mu = \Sigma x / n$

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

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

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

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

Calendar Month
A period of time from the first of a month to the last day of the month (e.g., from January 1 to January 31, from April 1 to April 30, or from December 1 to December 31).

Calendar Quarter
A period of time defined as three consecutive calendar months (e.g., from January 1 to March 31, from April 1 to June 30, or from October 1 to December 31).

Calendar Year
A period of time defined as twelve consecutive calendar months (i.e., January 1 to December 31).

Chronic Aquatic Toxicity Test
A test to determine an adverse effect (sub-lethal or lethal) on a group of aquatic test organisms during an exposure of duration long enough to assess sub-lethal effects.

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

Coefficient of Variation (CV)
CV is a measure of the data variability and is calculated as the estimated standard deviation divided by the arithmetic mean of the observed values.

Daily Discharge
Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

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

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

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

Dilution Credit
Dilution Credit is the amount of dilution granted to a discharge in the calculation of a water quality-based effluent limitation, based on the allowance of a specified mixing zone. It is calculated from the dilution ratio or determined through conducting a mixing zone study or modeling of the discharge and receiving water.

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

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

Endpoint
An effect that is measured in a toxicity study. Endpoints in toxicity tests may include, but are not limited to survival, reproduction, and growth. A measured response of a receptor to a stressor. An endpoint can be measured in a toxicity test or field survey.

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

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

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

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

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

Instream Waste Concentration (IWC)
The concentration of effluent in the receiving water after mixing.

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

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

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

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

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

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

Null Hypothesis
A 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
The percent effect at the instream waste concentration (IWC) shall be calculated using untransformed data and the following equation:

$$\text{Percent Effect of the Sample} = \frac{\text{Mean Control Response} - \text{Mean Sample Response}}{\text{Mean Control Response}} \cdot 100$$

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

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

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

Regulatory Management Decision (RMD)
The 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.

Response
A measured biological effect (e.g., survival, reproduction, growth) as a result of exposure to a stimulus.

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

Species Sensitivity Screening
An analysis to determine the single most sensitive species from an array of test species to be used in a single species laboratory test series.

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

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

where:

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

Statewide Toxicity Provisions

The Statewide Toxicity Provisions became effective on 25 April 2022 and include statewide numeric water quality objectives for both acute and chronic toxicity and a program of implementation to control toxicity.

Statistical Threshold Value (STV)
The STV for the bacteria water quality objective is a set value that approximates the 90th percentile of the water quality distribution of a bacterial population.

Test of Significant Toxicity (TST)
A statistical approach used to analyze aquatic toxicity test data, as described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1.

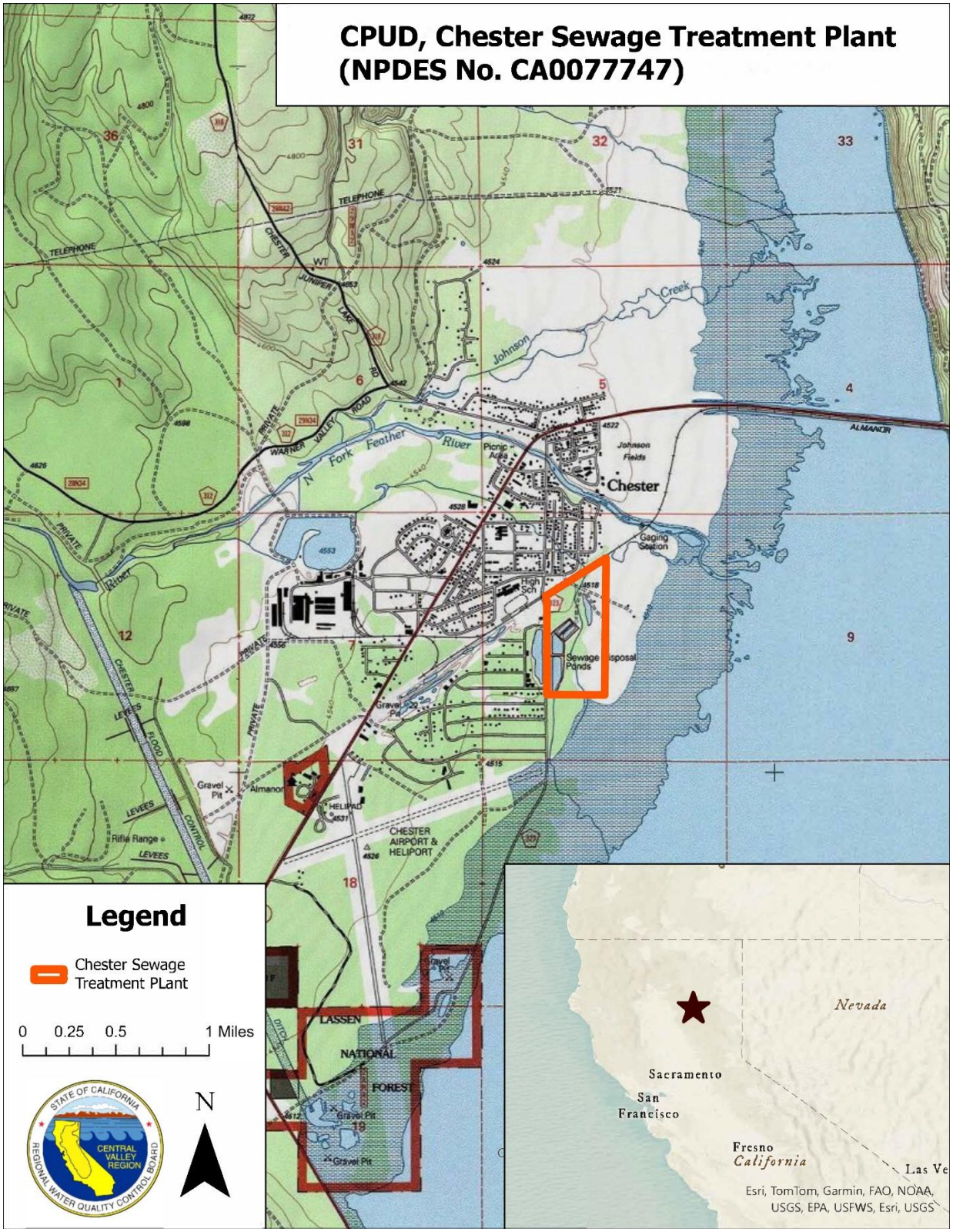
Toxicity Reduction Evaluation (TRE)
TRE is a study conducted in a stepwise process designed to identify the causative agents of effluent or ambient toxicity, isolate the sources of toxicity, evaluate the effectiveness of toxicity control options, and then confirm the reduction in toxicity. The first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

WET Maximum Daily Effluent Target (MDET)
For the purposes of chronic aquatic toxicity, an MDET is a target used to determine whether a Toxicity Reduction Evaluation (TRE) should be conducted. Not meeting the MDET is not a violation of an effluent limitation.

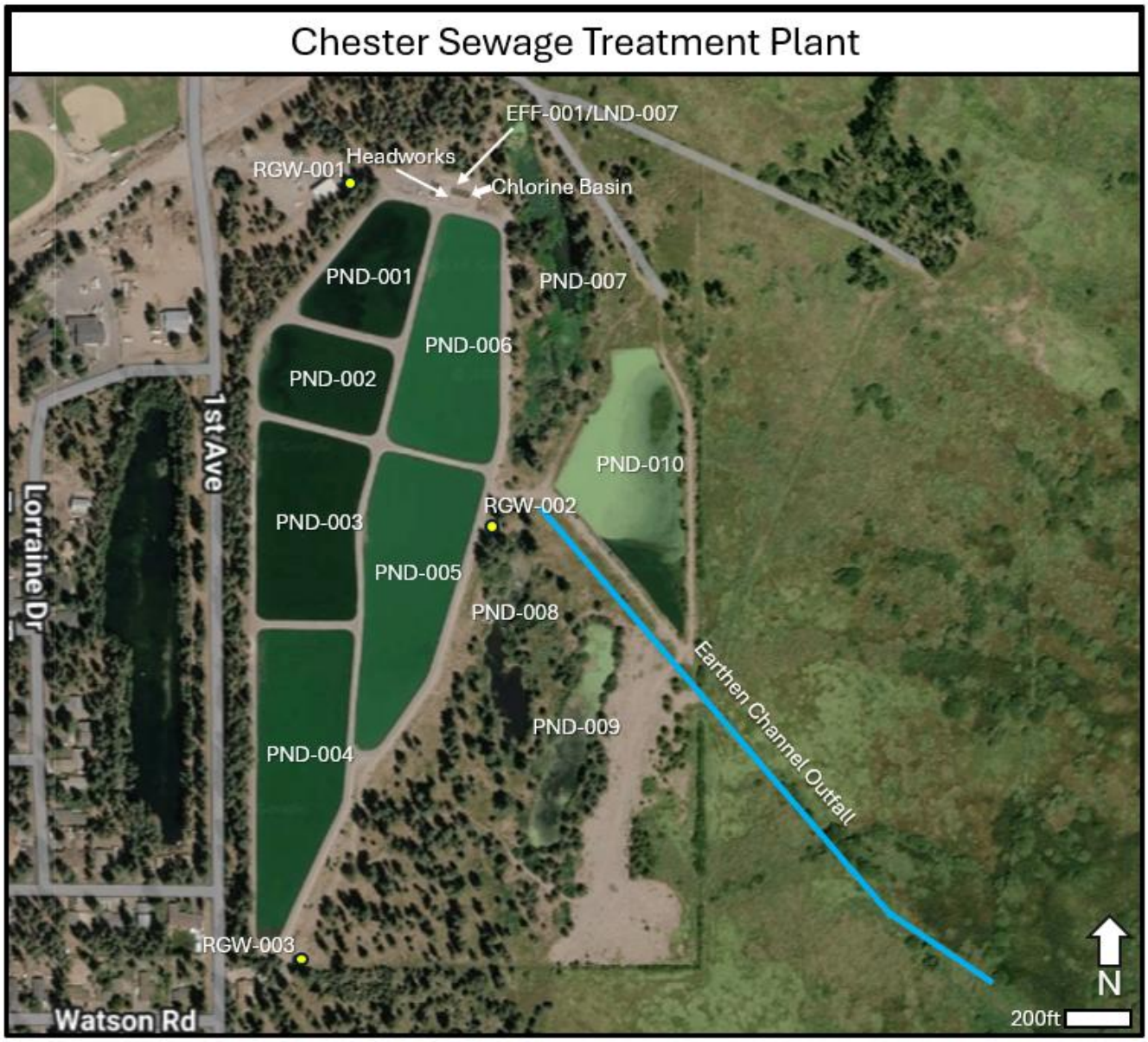
WET Median Monthly Effluent Target (MMET)
For the purposes of chronic aquatic toxicity, an MMET is a target based on a maximum of three independent toxicity tests used to determine whether a TRE should be conducted. Not meeting the MMET is not a violation of an effluent limitation.

WET MMET Tests
For the purposes of chronic aquatic toxicity, for dischargers not required to comply with numeric chronic toxicity effluent limitations, MMET Tests are a maximum of two tests that are used in addition to the routine monitoring test to determine whether a TRE should be conducted.

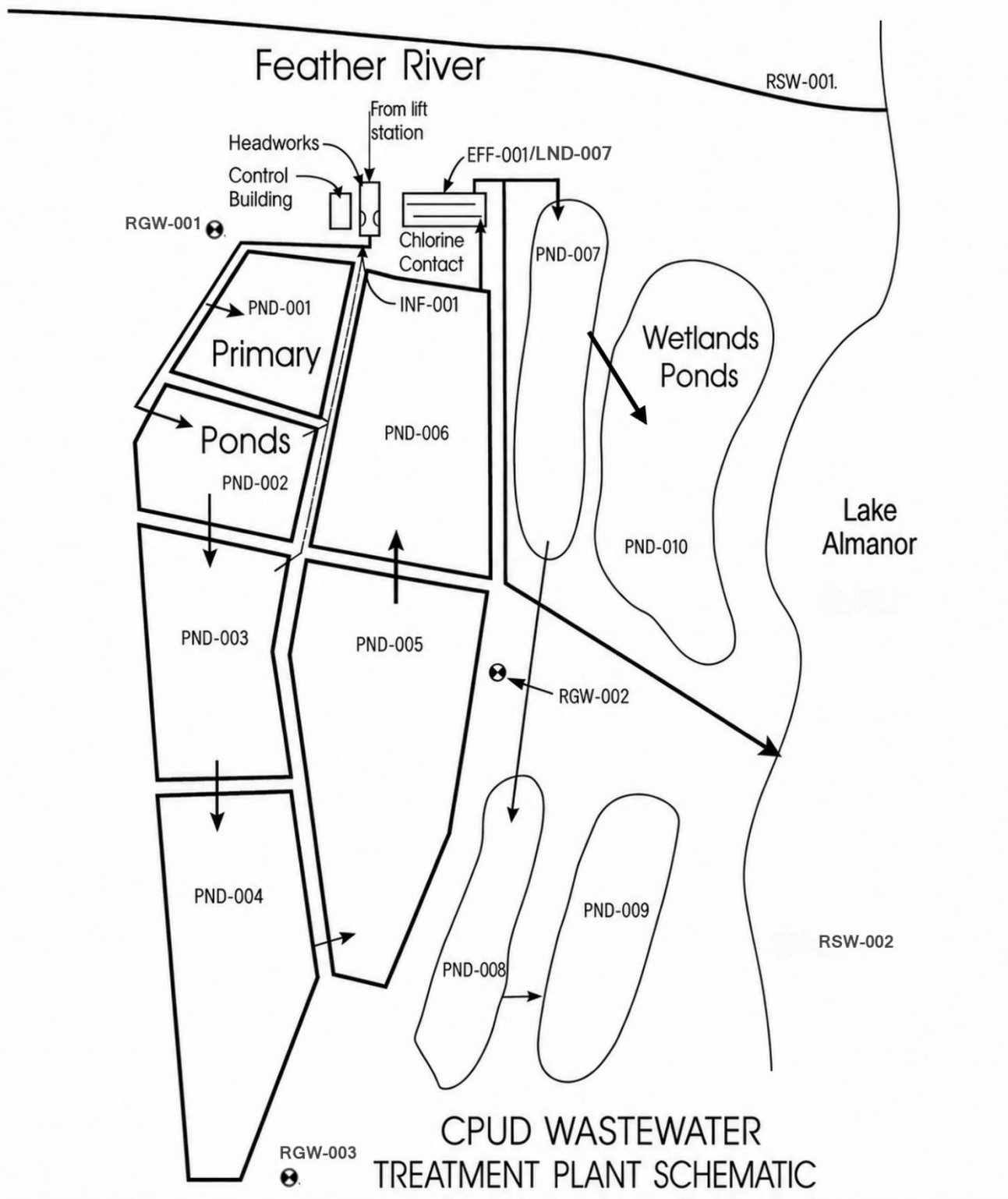
ATTACHMENT B.1 – LOCATION MAP



ATTACHMENT B.2 – FACILITY MAP



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply:

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. section 122.41(a); Wat. Code, sections 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not yet been modified to incorporate the requirement. (40 C.F.R. section 122.41(a)(1).)

B. Need to Halt or Reduce Activity Not a Defense

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

C. 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. section 122.41(d).)

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes having 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. section 122.41(e).)

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the Central Valley 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. section 1318(a)(4)(B); 40 C.F.R. section 122.41(i); Wat. Code, section 13267, 13383):

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order (33 U.S.C section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(1); Wat. Code, sections 13267, 13383);

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order (33 U.S.C. section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(2); Wat. Code, sections 13267, 13383);

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order (33 U.S.C section 1318(a)(4)(B)(ii); 40 C.F.R. section 122.41(i)(3); Wat. Code, section 13267, 13383); and

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

G. Bypass

1. Definitions

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

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

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is

for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. section 122.41(m)(2).)

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

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

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

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

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

5. **Notice**

   a. **Anticipated bypass.** If the Discharger knows in advance of the need for a bypass, it shall submit prior notice if possible, at least 10 days before the date of the bypass. The notice shall be sent to the Central Valley Water Board. As of 21 December 2023, all notices shall be submitted electronically to the initial recipient (State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/), defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. Part 3, section 122.22, and 40 C.F.R. Part 127. (40 C.F.R. section 122.41(m)(3)(i).)

b. **Unanticipated bypass.** The Discharger shall submit a notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below (24-hour notice). The notice shall be sent to the Central Valley Water Board. As of 21 December 2023, all notices shall be submitted electronically to the initial recipient (State Water Board's California Integrated Water Quality System (CIWQS) Program website. (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/), defined in Standard Provisions – Reporting V.J below. Notices shall comply with 40 C.F.R. Part 3, section 122.22, and 40 C.F.R. Part 127. (40 C.F.R. section 122.41(m)(3)(ii).)

H. Upset

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

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

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

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

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

   c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.1 below (24-hour notice) (40 C.F.R. section 122.41(n)(3)(iii)); and

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

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

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the 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. section 122.41(f).)

B. Duty to Reapply

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

C. Transfers

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

III. STANDARD PROVISIONS – MONITORING

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

B. 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. subchapters N or O. 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 or O. For the purposes of this paragraph, a method is sufficiently sensitive when 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 or O for the measured pollutant or pollutant parameter, or when:

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

a. 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;

b. 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.

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, subchapters N or O, monitoring must be conducted according to a test procedure specified in this Order for such pollutants or pollutant parameters. (40 C.F.R. sections 122.21(e)(3), 122.41(j)(4); 122.44(i)(1)(iv).)

IV. STANDARD PROVISIONS – RECORDS

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

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements (40 C.F.R. section 122.41(j)(3)(i));

2. The individual(s) who performed the sampling or measurements (40 C.F.R. section 122.41(j)(3)(ii));

3. The date(s) analyses were performed (40 C.F.R. section 122.41(j)(3)(iii));

4. The individual(s) who performed the analyses (40 C.F.R. section 122.41(j)(3)(iv));

5. The analytical techniques or methods used (40 C.F.R. section 122.41(j)(3)(v)); and

6. The results of such analyses. (40 C.F.R. section 122.41(j)(3)(vi).)

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

1. The name and address of any permit applicant or Discharger (40 C.F.R. section 122.7(b)(1)); and

2. Permit applications and attachments, permits and effluent data. (40 C.F.R. section 122.7(b)(2).)

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Central Valley Water Board, State Water Board, or U.S. EPA within a reasonable time, any information which the Central Valley 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 Central Valley Water Board, State Water Board, or U.S. EPA copies of records required to be kept by this Order. (40 C.F.R. section 122.41(h); Wat. Code, sections 13267, 13383.)

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Central Valley Water Board, State Water Board, and/or U.S. EPA shall be signed and certified in accordance with Standard Provisions – Reporting V.B.2, V.B.3, V.B.4, V.B.5, and V.B.6 below. (40 C.F.R. section 122.41(k).)

2. All permit applications shall be signed by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of U.S. EPA). (40 C.F.R. section 122.22(a)(3).)

3. All reports required by this Order and other information requested by the Central Valley Water Board, State Water Board, or U.S. EPA shall be signed by a person described in Standard Provisions – Reporting V.B.2 above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in Standard Provisions – Reporting V.B.2 above (40 C.F.R. section 122.22(b)(1));

   b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity

such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.) (40 C.F.R. section 122.22(b)(2)); and

c. The written authorization is submitted to the Central Valley Water Board and State Water Board. (40 C.F.R. section 122.22(b)(3).)

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Central Valley 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. section 122.22(c).)

5. Any person signing a document under Standard Provisions – Reporting V.B.2 or V.B.3 above shall make the following certification:

   "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my 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. section 122.22(d).)

6. Any person providing the electronic signature for such documents described in Standard Provision – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all of the 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 section 122.22(e).)

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program (Attachment E) in this Order. (40 C.F.R. section 122.41(l)(4).)

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Valley Water Board or State

Water Board for reporting the results of monitoring, sludge use, or disposal practices. As of 21 December 2016, all reports and forms must be submitted electronically to the initial recipient, defined in Standard Provisions – Reporting V.J, and comply with 40 C.F.R. part 3, section 122.22, and 40 C.F.R. part 127. (40 C.F.R. section 122.41(l)(4)(i).)

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. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Central Valley Water Board. (40 C.F.R. section 122.41(l)(4)(ii).)

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

F. Planned Changes

The Discharger shall give notice to the Central Valley 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. section 122.41(l)(1)):

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

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

   The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. section 122.41(l)(1)(ii).)

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

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Central Valley 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. section 122.41(l)(2).)

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard

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

I. Other Information

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

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the appropriate initial recipient, as determined by U.S. EPA, and as defined in 40 C.F.R. section 127.2(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. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. section 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13350, 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Central Valley Water Board of the following (40 C.F.R. section 122.42(b)):

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

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

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. section 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This MRP establishes monitoring and reporting requirements that implement federal and California requirements.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Central Valley Water Board.

B. Final effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

C. Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory accredited for such analyses by the State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW; formerly the Department of Public Health), in accordance with the provision of Water Code section 13176. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Central Valley Water Board. In the event an accredited laboratory is not available to the Discharger for any onsite field measurements such as pH, dissolved oxygen (DO), turbidity, temperature, and residual chlorine, such analyses performed by a non-accredited laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program for any onsite field measurements such as pH, DO, turbidity, temperature, and residual chlorine must be kept onsite in the treatment facility laboratory and shall be available for inspection by Central Valley Water Board staff. The Discharger must demonstrate sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform these field measurements. The Quality Assurance-Quality Control Program must conform to U.S. EPA guidelines or to procedures approved by the Central Valley Water Board.

D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their

continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

F. Laboratory analytical methods shall be sufficiently sensitive in accordance with the Sufficiently Sensitive Methods Rule (SSM Rule) specified under 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). A U.S. EPA-approved analytical method is sufficiently sensitive for a pollutant/parameter where:

1. The method minimum level (ML) is at or below the applicable water quality objective for the receiving water, or;

2. The method ML is above the applicable water quality objective for the receiving water but the amount of the pollutant/parameter in the discharge is high enough that the method detects and quantifies the level of the pollutant/parameter, or;

3. the method ML is above the applicable water quality objective for the receiving water, but the ML is the lowest of the 40 C.F.R. 136 U.S. EPA-approved analytical methods for the pollutant/parameter.

G. The Discharger shall file with the Central Valley Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this Monitoring and Reporting Program.

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	At a location where a representative sample of influent into the Facility can be collected prior to entrance into any treatment process. [Latitude: 40.30165°; Longitude: -121.22499°]
D-001	EFF-001	At a location where a representative sample of effluent can be collected when discharge to Lake Almanor occurs. [Latitude: 40.30164°; Longitude: -121.22486°]
--	RSW-001	N. Fork Feather River, upstream to Lake Almanor, Department of Water Resources Station Identification Number 45546. [Latitude: 40.307372°, Longitude: - 121.222656°]

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	RSW-002	Lake Almanor, Department of Water Resources Station Identification Number 45545. [Latitude: 40.2750°; Longitude: -121.1792°].
--	PND-001	Preliminary treatment Primary Pond 1 [Latitude: 40.300988°; Longitude: -121.225592°].
--	PND-002	Preliminary treatment Primary Pond 2 [Latitude: 40.300169°; Longitude: -121.226105°].
--	PND-003	Treatment Pond 3 [Latitude: 40.299096°; Longitude: -121.226317°].
--	PND-004	Treatment Pond 4 [Latitude: 40.297572°; Longitude: -121.226308°].
--	PND-005	Treatment Pond 5 [Latitude: 40.298868° ; Longitude: -121.225289°].
--	PND-006	Treatment Pond 6 [Latitude: 40.300376°; Longitude: -121.224951°].
--	PND-007	Constructed Wetland Pond 1 [Latitude: 40.300658° ; Longitude: -121.223922°].
D-002	LND-007	Land discharge monitoring location at a location where a representative sample of the effluent can be collected before being discharged into Constructed Wetland Pond 1 (PND-007). [Latitude: 40.30164°; Longitude: -121.22486°]
--	PND-008	Constructed Wetland Pond 2 [Latitude: 40.297955°; Longitude: -121.224491°].
--	PND-009	Constructed Wetland Pond 3 [Latitude: 40.297487°; Longitude: -121.223690°].
--	PND-010	Constructed Wetland Pond 4 [Latitude: 40.299128°; Longitude: -121.223123°].
--	RGW-001	Groundwater Monitoring Well 1 [Latitude: 40.301676° ; Longitude: -121.225778°].
--	RGW-002	Groundwater Monitoring Well 2 [Latitude: 40.299104°; Longitude: -121.224475°].
--	RGW-003	Groundwater Monitoring Well 3 [Latitude: 40.296028°; Longitude: -121.226269°].

Table E-1 Note:

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

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

1. The Discharger shall monitor influent to the Facility at Monitoring Location INF-001 in accordance with Table E-2 and the testing requirements described in section III.A.2 below:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
pH	standard units	Grab	1/Week
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD5)	mg/L	24-hour Composite	1/Week
Total Suspended Solids (TSS)	mg/L	24-hour Composite	1/Week

2. **Table E-2. Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-2:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136; or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

   b. **Grab Samples.** All grab samples shall not be collected at the same time each day to get a complete representation of variations in the influent.

   c. **24-Hour Composite Samples.** All composite samples shall be collected from a 24-hour flow proportional composite.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor secondary treated wastewater at D-001, Monitoring Location EFF-001 in accordance with Table E-3 and the testing requirements described in section IV.A.2 below:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	Million gallons per day (MGD)	Meter	Continuous
Chlorine, Total Residual	mg/L	Meter	Continuous
pH	standard units	Grab	Daily
Temperature	Degrees Celsius	Grab	Daily
BOD5	mg/L	24-hour Composite	1/Week
BOD5	% removal	Calculate	1/Week
TSS	mg/L	24-hour Composite	1/Week
TSS	% removal	Calculate	1/Week
Electrical Conductivity @ 25°Celsius	µmhos/cm	Grab	1/Week
Total Coliform Organisms	MPN/100 mL	Grab	1/Week
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Month
Dissolved Organic Carbon	mg/L	Grab	1/Month
Copper, Total Recoverable	µg/L	Grab	1/Month
Copper, Dissolved	µg/L	Grab	1/Month
Hardness, Total (as CaCO3)	mg/L	Grab	1/Month
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Month
Nitrite Nitrogen, Total (as N)	mg/L	Grab	1/Month
Zinc, Total Recoverable	µg/L	Grab	1/Month
Zinc, Dissolved	µg/L	Grab	1/Month
Standard Minerals	Varies	Grab	1/Year
Priority Pollutants and Other Constituents of Concern	(see section IX.E)	(see section IX.E)	(see section IX.E)
Whole Effluent Toxicity	(see section V)	(see section V)	(see section V)

2. **Table E-3. Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-3:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

   b. **24-hour composite samples** shall be collected from a 24-hour flow proportional composite. The Discharger may use grab samples to

demonstrate compliance with the monitoring requirements specified in table E-3 for the first 6 months following adoption of this Order; thereafter, the Discharger shall collect samples from a 24-hour flow proportional composite sampler.

c. **Handheld Field Meter**. A handheld field meter may be used for **dissolved oxygen, temperature, and pH**, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

d. **Temperature** and **pH** shall be recorded at the time of **ammonia** sample collection.

e. **Whole Effluent Toxicity.** Ammonia samples shall be collected concurrently with whole effluent toxicity monitoring.

f. **Total Residual Chlorine** must be monitored using an analytical method that is sufficiently sensitive to measure at the permitted level of 0.01 mg/L.

g. **Standard Minerals** shall include: at a minimum, the following elements/compounds: Total Alkalinity (including alkalinity series), Boron, Calcium, Chloride, Hardness, Iron, Magnesium, Manganese, Nitrate-Nitrogen, Potassium, Sodium, and Sulfate, and include verification that the analysis is complete (i.e., cation/anion balance).

h. **Filtered metals.** Metals with secondary maximum contaminant levels (e.g., iron and manganese) shall be determined from samples that have passed through a 1.5-micron filter to reduce filterable residue prior to preservation and analysis. Metal constituents will then be analyzed using the acid-soluble procedure described in U.S. EPA-approved test methods as appropriate, or other methods approved by the Central Valley Water Board.

i. **Hardness** samples shall be collected concurrently with metals samples.

j. **Total Coliform Organisms.** Samples for total coliform organisms may be collected at any point following disinfection.

k. **Priority Pollutants.** For all priority pollutant constituents listed in Table E-3 (Copper and zinc) the RL shall be consistent with sections 2.4.2 and 2.4.3 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP) and the SSM Rule specified under 40 C.F.R. sections 122.21(e)(3) and 122.44(i)(1)(iv).

l. **Dissolved Organic Carbon monitoring** shall be conducted concurrently with pH and hardness sampling.

m. **Whole Effluent Toxicity monitoring** shall be in accordance with section V of this MRP.

3. **Intermittent Discharge.** If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record for the constituents listed above, with exception of toxicity, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Toxicity Calendar Month, Quarter and Year.

1. **Toxicity Calendar Month.** The toxicity calendar month is defined as the period of time beginning on the day of the initiation of the routine toxicity monitoring to the day before the corresponding day of the next month if the corresponding day exists, or if not to the last day of the next month.

2. **Toxicity Calendar Quarter.** A toxicity calendar quarter is defined as **three consecutive toxicity calendar months.** For purposes of this Order, the toxicity calendar quarters **begin on 1 October, 1 January, 1 April, and 1 July** (i.e., from 1 October to 31 December, from 1 January to 31 March, from 1 April to 30 June, and from 1 July to 30 September); however, pursuant to section III.F of this Order, discharge to Lake Almanor is prohibited from 1 June through 30 September.

3. **Toxicity Calendar Year.** A toxicity calendar year is defined as **twelve consecutive toxicity calendar months.** For purposes of this Order, the toxicity calendar year **begins on 1 January to 31 December**, in years in which there are at least 15 days of discharge in at least one toxicity calendar quarter.

B. Chronic Toxicity Testing. The Discharger shall meet the following chronic toxicity testing requirements:

1. **Instream Waste Concentration (IWC) for Chronic Toxicity.** The chronic toxicity IWC is 100 percent effluent.

2. **Routine Monitoring Frequency.** The Discharger shall perform routine chronic toxicity testing twice per toxicity calendar year in years in which there are at least 15 days of discharge **expected** in at least one toxicity calendar quarter, concurrent with effluent ammonia sampling.

3. **Sample Types.** Effluent samples shall be 24-hour composite samples when discharging to D-001 and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001.

4. **Chronic Toxicity MMET Testing.** If a routine chronic toxicity monitoring test results in a "fail" at the IWC, then the Discharger shall complete a chronic toxicity MMET test. If the first MMET test results in a "pass", the Discharger shall complete a second chronic toxicity MMET test. All required chronic toxicity MMET tests shall be initiated within the same toxicity calendar month as the initiation of the routine chronic toxicity monitoring test. If the first chronic toxicity MMET test results in a "fail" at the IWC, then the second chronic toxicity MMET test is unnecessary and is waived.

5. **Additional Routine Monitoring Tests for TRE Determination.**

   A TRE is required when there is any combination of two or more MDET or MMET exceedances within a single toxicity calendar month or within two successive toxicity calendar months. In order to determine if a TRE is necessary when there is only one MDET or MMET exceedance in a single toxicity month, an additional routine monitoring test is required in the successive toxicity month. This additional routine monitoring test is not required if the Discharger is already conducting a TRE. This additional routine monitoring test could result in the need to conduct additional MMET tests per section V.B.4 above.

6. **Sample Volumes.** Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.

7. **Test Species.** The testing shall be conducted using the most sensitive species, the water flea (Ceriodaphnia dubia). The Discharger shall conduct chronic toxicity tests with the water flea (Ceriodaphnia dubia), unless otherwise specified in writing by the Executive Officer (see Section V.F.2 for more information on the determination of the most sensitive species). The Executive Officer has the authority to allow the temporary use of the next appropriate species as the most sensitive species when the discharger submits documentation and the Executive Officer determines that the discharger has encountered unresolvable test interference or cannot secure a reliable supply of test organisms. The "next appropriate species" is a species in Table 1 of the Statewide Toxicity Provisions in the same test method classification (e.g., chronic aquatic toxicity test methods, acute aquatic toxicity test method), in the same salinity classification (e.g., freshwater or marine), and in the same taxon as the most sensitive species. When there are no other species in Table 1 in the same taxon as the most sensitive species (e.g., freshwater chronic toxicity tests), the "next appropriate species" is the species exhibiting the highest

percent effect at the IWC tested in the species sensitivity screening other than the most sensitive species.

8. **Test Methods.** Discharger shall conduct the chronic toxicity tests on effluent samples at the instream waste concentration for the discharge in accordance with species and test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821-R-02-013, 2002; Table IA, 40 C.F.R. part 136).

9. **Dilution and Control Water.** Dilution water and control water shall be prepared and used as specified in the test methods manual. If dilution water and control water are different from test organism culture water, then a second control using culture water shall also be used.

10. **Test Failure.** If the effluent chronic toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method in EPA/821-R-02-013, the Discharger must conduct a Replacement Test as soon as possible, as specified in subsection B.11, below.

11. **Replacement Test.** When a required toxicity test for routine monitoring or MMET tests is not completed, a new toxicity test to replace the toxicity test that was not completed shall be initiated as soon as possible. The new toxicity test shall replace the routine monitoring or MMET tests, as applicable, for the toxicity calendar month in which the toxicity test that was not completed was required to be initiated, even if the new toxicity test is initiated in a subsequent month. The new toxicity test for routine monitoring or MMET tests, as applicable, and any MMET tests required to be conducted due to the results of the new toxicity test shall be used to determine if the MMET and the MDET are met for the toxicity calendar month in which the toxicity test that was not completed was required to be initiated. The new toxicity test and any MMET tests required to be conducted due to the results of the new toxicity test shall not be used to substitute for any other required toxicity tests. Scenarios could occur in which a test is not initiated by a Discharger within the required time period. When this is caused by circumstances outside of the Discharger's control, that were not preventable with the reasonable exercise of care, the Central Valley Water Board will not require the test to be initiated within the originally required time period, provided that the Discharger promptly initiates, and ultimately completes, a replacement test. In such cases, the Central Valley Water Board must determine that the circumstances were not preventable with the reasonable exercise of care.

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

1. The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test

approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1.

2. The null hypothesis (Ho) for the TST statistical approach is:

   Mean discharge IWC response ≤ RMD x Mean control response, where the chronic RMD = 0.75.

   A test result that rejects this null hypothesis is reported as "Pass." A test result that does not reject this null hypothesis is reported as "Fail."

3. The relative "Percent Effect" at the discharge IWC is defined and reported as:

   Percent Effect = ((Mean control response – Mean discharge IWC response) / Mean control response) x 100.

   This is a t-test (formally Student's t-Test), a statistical analysis comparing two sets of replicate observations, i.e., a control and IWC. The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC differs from the control, the test result is "Fail"). The Welch's t-test employed by the TST statistical approach is an adaptation of Student's t-test and is used with two samples having unequal variances.

D. WET Testing Notification Requirements. The Discharger shall notify the Central Valley Water Board of test results exceeding the chronic toxicity effluent monitoring target as soon as the Discharger learns of the exceedance, but no later than 24 - hours after receipt of the monitoring results.

E. WET Testing Reporting Requirements. The Discharger shall submit the full laboratory report for all toxicity testing as an attachment to CIWQS for the reporting period (e.g., monthly, quarterly, semi-annually or annually) and provide the data (i.e., Pass/Fail) in the PET tool for uploading into CIWQS. The laboratory report shall include:

1. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the IWC for the discharge, the dates of sample collection and initiation of each toxicity test.

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

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

F. Most Sensitive Species Screening. The Discharger shall perform subsequent species screening to re-evaluate the most sensitive species. The species sensitivity screening shall be conducted as follows and the results submitted with the Report of Waste Discharge.

1. **Frequency of Testing for Species Sensitivity Screening.** Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing conducted quarterly for 1-year in each quarter in which there is at least 15 days of discharge using the water flea (Ceriodaphnia dubia), fathead minnow (Pimephales promelas), and green alga (Pseudokirchneriella subcapitata). If the discharge occurs in one quarter for the year, two sets of testing shall be conducted within the same quarter. The tests shall be performed at an IWC of no less than 100 percent effluent.

2. **Determination of Most Sensitive Species.** If a single test in the species sensitivity screening testing results in a "Fail" using the TST statistical approach, then the species used in that test shall be established as the most sensitive species. If there is more than a single test that results in a "Fail", then of the species with results of a "Fail", the species that exhibits the highest percent effect shall be established as the most sensitive species. If none of the tests in the species sensitivity screening results in a "Fail", but at least one of the species exhibits a percent effect greater than **10** percent, then the single species that exhibits the highest percent effect shall be established as the most sensitive species. In all other circumstances, the Executive Officer shall have discretion to determine which single species is the most sensitive considering the test results from the species sensitivity screening. For subsequent species sensitivity screening, if the first two subsequent screening events result in no change in the most sensitive species, the Discharger may cease the subsequent species sensitive screening testing and the most sensitive species will remain unchanged.

   The Executive Officer shall have discretion to allow the temporary use of the next appropriate species as the most sensitive species when the Discharger submits documentation and the Executive Officer determines that the Discharger has encountered unresolvable test interference or cannot secure a reliable supply of test organisms. The "next appropriate species" is a species in Table 1 of the Statewide Toxicity Provisions in the same test method classification (e.g., chronic aquatic toxicity test methods, acute aquatic toxicity test method), in the same salinity classification (e.g., freshwater or marine), and in the same taxon as the most sensitive species. When there are no other species in Table 1 in the same taxon as the most sensitive species (e.g., freshwater chronic toxicity tests), the "next appropriate species" is the species exhibiting the highest percent effect at the IWC tested in the species sensitivity screening other than the most sensitive species.

   The most sensitive species shall be used for chronic toxicity testing for the remainder of the permit term. The Discharger may use the four most recent

tests for use in determining the most sensitive species if the tests were conducted in a manner sufficient to make such determination. If the most sensitive species cannot be determined from the species sensitivity screening discussed above, the Discharger shall rotate the test species as the most sensitive species every toxicity calendar year as follows:

a. *Ceriodaphnia dubia* (survival and reproduction test) for the remainder of the toxicity calendar year this Order is effective;

b. *Pimephales promelas* (larval survival and growth test) for the entire toxicity calendar year following the toxicity calendar year this Order is effective;

c. Pseudokirchneriella *subcapitata* (growth test) for the entire toxicity calendar year of the second year following the toxicity calendar year this Order is effective; and

d. Cycling back to *Ceriodaphnia dubia* (survival and reproduction test) after Pseudokirchneriella *subcapitata* (growth test) and through the same rotation.

If a single test exhibits toxicity, demonstrated by a test that results in a “Fail” using the TST statistical approach, then the species used in that test shall be established as the most sensitive species until a subsequent Order rescinding this Order becomes effective.

G. Toxicity Reduction Evaluations (TRE)

1. **TRE Implementation.** The Discharger is required to conduct a TRE when there is any combination of two or more MDET or MMET exceedances within a single toxicity calendar month or within two successive toxicity calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity), the Central Valley Water Board may require a TRE. A TRE may also be required when there is no effluent available to complete a routine monitoring test or MMET test.

   a. **Preparation and Implementation of Detailed TRE Action Plan.** The Discharger shall conduct TREs in accordance with an approved TRE Work Plan. Within 30 days of the test result that triggered the TRE, the Discharger shall submit to the Executive Officer a TRE Action Plan. The TRE Action Plan shall include the following information, and comply with additional conditions set by the Executive Officer:

      i. Specific actions the Discharger will take to investigate and identify the cause(s) of toxicity, including a TRE WET monitoring schedule;

      ii. Specific actions the Discharger will take to mitigate the impact of the discharge and prevent the recurrence of toxicity; and

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

b. The Central Valley Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

2. **TRE Work Plan.** The Discharger shall submit to the Central Valley Water Board a TRE Work Plan for approval by the Executive Officer by the due date in the Technical Reports Table E-11. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The TRE Work Plan shall outline the procedures for identifying the source(s) of and reducing or eliminating effluent toxicity. The TRE Work Plan must be of adequate detail to allow the Discharger to immediately initiate a TRE and shall be developed in accordance with U.S. EPA guidance as discussed below.

a. Toxicity Reduction Evaluation Guidance for Municipal Wastewater Treatment Plants, EPA/833-B-99/002, August 1999.

b. Generalized Methodology for Conducting Industrial Toxicity Reduction Evaluations (TREs), EPA/600/2-88/070, April 1989.

c. Methods for Aquatic Toxicity Identification Evaluations: Phase I Toxicity Characterization Procedures, Second Edition, EPA 600/6-91/003, February 1991.

d. Toxicity Identification Evaluation: Characterization of Chronically Toxic Effluents, Phase I, EPA/600/6-91/005F, May 1992.

e. Methods for Aquatic Toxicity Identification Evaluations: Phase II Toxicity Identification Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA/600/R-92/080, September 1993.

f. Methods for Aquatic Toxicity Identification Evaluations: Phase III Toxicity Confirmation Procedures for Samples Exhibiting Acute and Chronic Toxicity, Second Edition, EPA 600/R-92/081, September 1993.

g. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, EPA-821-R-02-012, October 2002.

h. Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition, EPA-821-R-02-013, October 2002.

i. Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001, March 1991.

VI. LAND DISCHARGE MONITORING REQUIREMENTS

A. Monitoring Location LND-007

1. The Discharger shall monitor secondary treated wastewater to D-002, Monitoring Location LND-007 in accordance with Table E-4 and the testing requirements described in section VI.A.2 below:

Table E-4. Land Discharge Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
pH	SU	Grab	Daily
Temperature	Degrees Celsius	Grab	Daily
BOD5	mg/L	24-hour Composite	1/Week
TSS	mg/L	24-hour Composite	1/Week
Electrical Conductivity at 25°C	µmhos/cm	Grab	1/Week
Total Coliform Organisms	MPN/100 mL	Grab	1/Week
Ammonia (as N)	mg/L	Grab	1/Month
Dissolved Organic Carbon	mg/L	Grab	1/Month
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Month
Nitrite Nitrogen, Total (as N)	mg/L	Grab	1/Month
Total Trihalomethanes	µg/L	Grab	1/Year
Standard Minerals	Varies	Grab	1/Year
Copper, Total Recoverable	µg/L	Grab	2/Year
Hardness, Total (as CaCO3)	mg/L	Grab	2/Year
Zinc, Total Recoverable	µg/L	Grab	2/Year
Priority Pollutants and Other Constituents of Concern	(see section IX.E)	(see section IX.E)	(see section IX.E)

2. **Table E-4. Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-4:

   a. **Handheld Field Meter**. A handheld field meter may be used for **dissolved oxygen, temperature, and pH**, provided the meter utilizes a

U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program will be maintained at the Facility.

b. **Temperature** and **pH** shall be recorded at the time of **ammonia** sample collection.

c. **Standard Minerals** shall include: at a minimum, the following elements/compounds: Total Alkalinity (including alkalinity series), Boron, Calcium, Chloride, Hardness, Iron, Magnesium, Manganese, Nitrate-Nitrogen, Potassium, Sodium, and Sulfate, and include verification that the analysis is complete (i.e., cation/anion balance).

d. **Filtered Metals**. Metals with secondary maximum contaminant levels (aluminum, iron, and manganese) shall be determined from samples that have passed through a 1.5-micron filter to reduce filterable residue prior to preservation and analysis. Metal constituents will then be analyzed using the acid-soluble procedure described in U.S. EPA-approved test methods as appropriate, or other methods approved by the Central Valley Water Board.

e. **Hardness** samples shall be collected concurrently with metals samples.

f. **Total Coliform Organisms.** Samples for total coliform organisms may be collected at any point following disinfection.

g. **Dissolved Organic Carbon** monitoring shall be conducted concurrently with pH and hardness sampling.

h. **Priority Pollutants.** Priority pollutant characterization at LND-007 shall be conducted according to the schedule in section IX.E.1.a, with concurrent upstream receiving water sampling under section IX.E.1.b. For all priority pollutant constituents listed in Table E-4 (copper and zinc) the RL shall be consistent with sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) and the SSM Rule specified under 40 C.F.R. sections 122.21(e)(3) and 122.44(i)(1)(iv).

i. **24-hour composite samples** shall be collected from a 24-hour flow proportional composite. The Discharger may use grab samples to demonstrate compliance with the monitoring requirements specified in table E-4 for the first 6 months proceeding adoption of this Order; thereafter, the Discharger shall collect samples from a 24-hour flow proportional composite sampler.

B. Monitoring Locations PND-001, PND-002 and PND-007

1. The Discharger shall conduct monitoring at the preliminary treatment area, including Primary Ponds 1 and 2 (PND-001 and PND-002), as well as at the first constructed wetland pond in the land-disposal system, Wetland Pond 1 (PND-007), that receives effluent from LND-007, as follows:

Table E-5. PND-001, PND-002 and PND-007 Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Freeboard	Feet	Measured	1/Month
Berm Condition	--	Observation	1/Month
Dissolved Oxygen	mg/L	Grab/Meter	1/Month
Electrical Conductivity @ 25°C	µmhos/cm	Grab/Meter	1/Month
Oxidation-Reduction Potential	Millivolts (mV)	Grab/Meter	1/Month
pH	SU	Grab/Meter	1/Month
Temperature	Degrees Celsius	Grab/Meter	1/Month
Settled Matter Depth	Feet, inches	Measured	1/Permit Term

2. **Table E-5. Testing Requirements**. The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-5:

   a. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

   b. **A hand-held field meter** may be used for dissolved oxygen, electrical conductivity, pH, turbidity, Oxidation-Reduction Potential and temperature, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.

   c. **Dissolved Oxygen and pH** shall be collected between 8:00 am and 10:00 a.m. when there is more than one foot of water in the pond. If there is insufficient water in the pond, no sample shall be collected; the insufficient-water condition shall be reported in the monthly monitoring report.

d. **Settled Matter Depth** is only required at preliminary treatment Primary Ponds 1 and 2 (PND-001 and PND-002).

e. The Discharger shall inspect the condition of the ponds monthly and document visual observations. Notations shall include observations of:

i. Presence of weeds in the water or along the berm;

ii. Accumulations of dead algae, vegetation, scum, or debris on the pond surface;

iii. Animal burrows in the berms;

iv. Evidence of seepage from the berms or downslope of the pond.

C. Monitoring Locations PND-003, PND-004, PND-005, PND-006, PND-008, PND-009, and PND-010

1. The Discharger shall monitor at treatment ponds 3 through 6 (PND-003 through PND-006) and constructed wetland ponds 2 through 4 (PND-008 through PND-010) as follows:

Table E-6. PND-003, PND-004, PND-005, PND-006, PND-008, PND-009 and PND-010 Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Freeboard	Feet	Measured	1/Month
Berm Condition	--	Observation	1/Month

2. **Table E-6. Testing Requirements**. The Discharger shall comply with the following testing requirements described in Table E-6:

a. The Discharger shall inspect the condition of the ponds monthly and document visual observations. Notations shall include observations of:

i. Presence of weeds in the water or along the berm;

ii. Accumulations of dead algae, vegetation, scum, or debris on the pond surface;

iii. Animal burrows in the berms;

iv. Evidence of seepage from the berms or downslope of the pond.

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location RSW-001 and RSW-002

1. Except for the characterization monitoring required by section IX.E.1, when discharge to Lake Almanor is occurring, the Discharger shall monitor RSW-001 and RSW-002 in accordance with Table E-7. The California Department of Water Resources (DWR) has monitored Lake Almanor at these two locations historically. DWR sampling results can be utilized to meet monitoring requirements as prescribed in this monitoring and reporting program. However, the Discharger is obligated to gather all water quality data required by this monitoring and reporting program even if sampling is not completed by the DWR. Sampling efforts should be coordinated with the DWR whenever possible.

Table E-7. Receiving Water Monitoring Requirements at RSW-001 and RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved Oxygen	mg/L	Grab/Meter	1/Week
pH	SU	Grab/Meter	1/Week
Electrical Conductivity @ 25˚C	µmhos/cm	Grab/Meter	1/Week
Temperature	Degrees Celsius	Grab/Meter	1/Week
Ammonia (as N)	mg/L	Grab	1/Month
Copper, Dissolved	µg/L	Grab	1/Month
Copper, Total Recoverable	µg/L	Grab	1/Month
Dissolved Organic Carbon	mg/L	Grab	1/Month
Hardness, Total (as CaCO3)	mg/L	Grab	1/Month
Zinc, Dissolved	µg/L	Grab	1/Month
Zinc, Total Recoverable	µg/L	Grab	1/Month
Total Dissolved Solids	mg/L	Grab	1/Year
Priority Pollutants and Other Constituents of Concern (RSW-001 only)	(see section IX.E)	(see section IX.E)	(see section IX.E)

2. **Table E-7. Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-7:

   a. **Applicable to all parameters**. Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the

Central Valley Water Board to another 40 CFR part 136 allowed sample type.

b. **Handheld Field Meter.** A handheld field meter may be used for dissolved oxygen, temperature, and pH, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program will be maintained at the Facility.

c. **Temperature and pH** shall be recorded at the time of ammonia sample collection.

d. **Hardness** samples shall be collected concurrently with metals samples.

e. **Filtered Metals**. Metals with secondary maximum contaminant levels (aluminum, iron, and manganese) shall be determined from samples that have passed through a 1.5-micron filter to reduce filterable residue prior to preservation and analysis. Metal constituents will then be analyzed using the acid-soluble procedure described in U.S. EPA-approved test methods as appropriate, or other methods approved by the Central Valley Water Board.

f. **Dissolved Organic Carbon** monitoring shall be conducted concurrently with pH and hardness sampling.

g. **Priority Pollutants.** Priority pollutant characterization at RSW-001 shall be collected i concurrently with effluent characterization at EFF-001 or LND-007, as required by sections IX.E.1.a and IX.E.1.b. For all priority pollutant constituents listed in Table E-7 (copper and zinc) the RL shall be consistent with sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) and the SSM Rule specified under 40 C.F.R. sections 122.21(e)(3) and 122.44(i)(1)(iv).

3. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001 and RSW-002 when discharging to Lake Almanor. Attention shall be given to the presence of:

a. Floating or suspended matter;

b. Discoloration;

c. Bottom deposits;

d. Aquatic life;

e. Visible films, sheens, or coatings;

f. Fungi, slimes, or objectionable growths; and

g. Potential nuisance conditions.

Notes on receiving water conditions shall be summarized in the monitoring report.

B. Monitoring Locations RGW-001, RGW-002, and RGW-003

1. The Discharger shall conduct groundwater monitoring at RGW-001, RGW-002, RGW-003 and any new groundwater monitoring wells in accordance with Table E-8 and the testing requirements described in section VIII.B.2 below:

Table E-8. Groundwater Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Depth to Groundwater	±0.01 feet	Measurement	1/Quarter
Groundwater Elevation	±0.01 feet	Calculated	1/Quarter
Gradient	feet/feet	Calculated	1/Quarter
Gradient Direction	Degrees	Calculated	1/Quarter
Dissolved Oxygen	mg/L	Grab/Meter	1/Quarter
Electrical Conductivity @ 25°C	µmhos/cm	Grab/Meter	1/Quarter
pH	SU	Grab/Meter	1/Quarter
Oxidation Reduction Potential	mV	Grab/Meter	1/Quarter
Temperature	Degrees Celsius	Grab/Meter	1/Quarter
Turbidity	NTU	Grab/Meter	1/Quarter
Ammonia (as N)	mg/L	Grab	1/Quarter
Nitrogen, Total (as N)	mg/L	Grab	1/Quarter
Nitrate (as N)	mg/L	Grab	1/Quarter
Nitrite (as N)	mg/L	Grab	1/Quarter
Metals, dissolved/filtered	µg/L	Grab	1/Quarter
Standard Minerals	Varies	Grab	1/Quarter
Total Coliform Organisms	MPN/100 mL	Grab	1/Quarter
Total Dissolved Solids	mg/L	Grab	1/Quarter
Total Kjeldahl Nitrogen	mg/L	Grab	1/Quarter
Total Organic Carbon	mg/L	Grab	1/Quarter
Total Trihalomethanes	µg/L	Grab	1/Quarter

2. **Table E-8. Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-8:

a. **Prior to construction and/or beginning a sampling program** of any new groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for approval. Once installed, all new wells shall be added to the monitoring network (which currently consists of Monitoring Wells RGW-001, RGW-002, and RGW-003) and shall be sampled and analyzed according to the schedule in Table E-8. All samples shall be collected using approved U.S. EPA methods.

b. **Prior to sampling** or purging monitoring wells, groundwater depth shall be measured in each well to the nearest 0.01 feet. Groundwater elevations shall then be calculated to determine groundwater gradient and flow direction. Low flow or no-purge sampling methods are required, until pH, electrical conductivity and turbidity have stabilized prior to sampling. If low-flow sampling is infeasible, each monitoring well shall be purged of at least 3 to 5 casing volumes until pH, electrical conductivity and turbidity have stabilized prior to sampling.

c. **Groundwater elevation and groundwater directional flow.** Depth-to-water measurements shall be collected from surveyed measuring points on each monitoring well and reported with the quarterly monitoring reports. The calculation of groundwater elevations, groundwater flow directions, and groundwater gradients shall be performed by a Professional Geologist (PG) or a California-licensed Professional Engineer (PE). These calculations shall be reported with the quarterly monitoring reports in accordance with Table E-8 and summarized in the final Groundwater Evaluation Report.

d. The Discharger shall maintain the groundwater monitoring well network. If a groundwater monitoring well is dry for more than four consecutive sampling events or is damaged, the Discharger shall submit a work plan and proposed time schedule to replace the well. The well shall be replaced following approval of the work plan.

e. **Applicable to all parameters.** Parameters shall be analyzed using the analytical methods described in 40 CFR part 136 or by methods approved by the Central Valley Water Board or the State Water Board. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

f. **Standard minerals** shall include: at a minimum, the following elements/compounds: Total Alkalinity (including alkalinity series), Boron, Calcium, Chloride, Hardness, Iron, Magnesium, Manganese, Nitrate-Nitrogen, Potassium, Sodium, and Sulfate, and include verification that the analysis is complete (i.e., cation/anion balance).

g. **Metals**. Metals shall include, at a minimum, the following: Aluminum, Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium (Total and Hexavalent), Cobalt, Copper, Iron, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Silver, Thallium, Vanadium, and Zinc.

h. **Metals**. Metals with secondary maximum contaminant levels (Aluminum, Iron, and Manganese) shall be determined from samples that have passed through a 1.5-micron filter to reduce filterable residue prior to preservation and analysis. Metal constituents will then be analyzed using the acid-soluble procedure described in U.S. EPA-approved test methods as appropriate, or other methods approved by the Central Valley Water Board.

i. **Duration Between Routine Monitoring.** For quarterly (1/Quarter) routine monitoring, samples shall not be conducted within 45 days from the previous sampling event for the same parameter at the same monitoring location.

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

   a. A composite sample of sludge shall be collected annually or any time that sludge is removed from the ponds, whichever is less frequent, at Monitoring Location BIO-001 in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for priority pollutants (excluding asbestos).

   b. Biosolids monitoring shall be conducted using the methods in Test Methods for Evaluating Solid Waste, Physical/Chemical methods (EPA publication SW-846), as required in 40 C.F.R. section 503.8(b)(4). All results must be reported on a 100% dry weight basis. Records of all analyses must state on each page of the laboratory report whether the results are expressed in “100% dry weight” or “as is.”

B. Municipal Water Supply - Not Applicable

C. Filtration System - Not Applicable

D. Pyrethroid Pesticides Monitoring – Not Applicable

E. Effluent and Receiving Water Characterization

1. **Monitoring Frequency.** The Discharger does not discharge to the receiving water on a continuous basis. The characterization monitoring is required

whether the Discharger is discharging to Discharge Point 001 or Discharge Point 002.

a. **Effluent Sampling**. Samples shall be collected from the effluent (Monitoring Location EFF-001 or LND-007) semi-annually during the calendar year following the completion of the NPDES *Permit Compliance Project* described in section II.E of Attachment F. If the NPDES *Permit Compliance Project* is not complete by 1 January 2030, then the Discharger must sample the effluent semiannually in 2030.

b. **Receiving Water Sampling**. Samples shall be collected from the upstream receiving water (Monitoring Location RSW-001) concurrently with the effluent water characterization sampling.

2. **Analytical Methods.** Constituents shall be collected and analyzed consistent with the Discharger's Analytical Methods Report (MRP, section X.D.1) using sufficiently sensitive analytical methods and Reporting Levels (RLs) per the SSM Rule specified in 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). The "Reporting Level" is synonymous with the "Method Minimum Level" described in the SSM Rule. The results of the monitoring shall be submitted to the Central Valley Water Board with the quarterly self-monitoring reports. Each individual monitoring event shall provide representative sample results for the effluent and upstream receiving water, if receiving water is sampled.

3. **Analytical Methods Report Certification.** Prior to beginning the Effluent and Receiving Water Characterization monitoring, the Discharger shall provide a certification acknowledging the scheduled start date of the Effluent and Receiving Water Characterization monitoring and confirming that samples will be collected and analyzed as described in the previously submitted Analytical Methods Report. If there are changes to the previously submitted Analytical Methods Report, the Discharger shall outline those changes. A one-page certification form will be provided by Central Valley Water Board staff with the permit's Notice of Adoption that the Discharger can use to satisfy this requirement. The certification form shall be submitted electronically via CIWQS submittal by the due date in the Technical Reports Table E-11.

4. The Discharger shall conduct effluent and receiving water characterization monitoring in accordance with Table E-9 and the testing requirements described in section IX.E.5 below.

Table E-9. Effluent and Receiving Water Characterization Monitoring

VOLATILE ORGANICS

CTR Number	Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
25	2-Chloroethyl vinyl Ether	110-75-8	µg/L	Grab
17	Acrolein	107-02-8	µg/L	Grab
18	Acrylonitrile	107-13-1	µg/L	Grab
19	Benzene	71-43-2	µg/L	Grab
20	Bromoform	75-25-2	µg/L	Grab
21	Carbon Tetrachloride	56-23-5	µg/L	Grab
22	Chlorobenzene	108-90-7	µg/L	Grab
24	Chloroethane	75-00-3	µg/L	Grab
26	Chloroform	67-66-3	µg/L	Grab
35	Methyl Chloride	74-87-3	µg/L	Grab
23	Dibromochloromethane	124-48-1	µg/L	Grab
27	Dichlorobromomethane	75-27-4	µg/L	Grab
36	Methylene Chloride	75-09-2	µg/L	Grab
33	Ethylbenzene	100-41-4	µg/L	Grab
89	Hexachlorobutadiene	87-68-3	µg/L	Grab
34	Methyl Bromide (Bromomethane)	74-83-9	µg/L	Grab
94	Naphthalene	91-20-3	µg/L	Grab
38	Tetrachloroethylene (PCE)	127-18-4	µg/L	Grab
39	Toluene	108-88-3	µg/L	Grab
40	trans-1,2-Dichloroethylene	156-60-5	µg/L	Grab
43	Trichloroethylene (TCE)	79-01-6	µg/L	Grab
44	Vinyl Chloride	75-01-4	µg/L	Grab
NL	Methyl-tert-butyl ether (MTBE)	1634-04-4	µg/L	Grab
41	1,1,1-Trichloroethane	71-55-6	µg/L	Grab
42	1,1,2-Trichloroethane	79-00-5	µg/L	Grab
28	1,1-Dichloroethane	75-34-3	µg/L	Grab
30	1,1-Dichloroethylene (DCE)	75-35-4	µg/L	Grab
31	1,2-Dichloropropane	78-87-5	µg/L	Grab
32	1,3-Dichloropropylene	542-75-6	µg/L	Grab
37	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	Grab
101	1,2,4-Trichlorobenzene	120-82-1	µg/L	Grab
29	1,2-Dichloroethane	107-06-2	µg/L	Grab
75	1,2-Dichlorobenzene	95-50-1	µg/L	Grab
76	1,3-Dichlorobenzene	541-73-1	µg/L	Grab
77	1,4-Dichlorobenzene	106-46-7	µg/L	Grab

SEMI-VOLATILE ORGANICS

CTR Number	Semi-Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
60	Benzo(a)Anthracene	56-55-3	µg/L	Grab
85	1,2-Diphenylhydrazine	122-66-7	µg/L	Grab
45	2-Chlorophenol	95-57-8	µg/L	Grab
46	2,4-Dichlorophenol	120-83-2	µg/L	Grab
47	2,4-Dimethylphenol	105-67-9	µg/L	Grab
49	2,4-Dinitrophenol	51-28-5	µg/L	Grab
82	2,4-Dinitrotoluene	121-14-2	µg/L	Grab
55	2,4,6-Trichlorophenol	88-06-2	µg/L	Grab
83	2,6-Dinitrotoluene	606-20-2	µg/L	Grab
50	2-Nitrophenol	88-75-5	µg/L	Grab
71	2-Chloronaphthalene	91-58-7	µg/L	Grab
78	3,3-Dichlorobenzidine	91-94-1	µg/L	Grab
62	Benzo(b)Fluoranthene	205-99-2	µg/L	Grab
52	4-Chloro-3-methylphenol	59-50-7	µg/L	Grab
48	2-Methyl-4,6-Dinitrophenol	534-52-1	µg/L	Grab
51	4-Nitrophenol	100-02-7	µg/L	Grab
69	4-Bromophenyl Phenyl Ether	101-55-3	µg/L	Grab
72	4-Chlorophenyl Phenyl Ether	7005-72-3	µg/L	Grab
56	Acenaphthene	83-32-9	µg/L	Grab
57	Acenaphthylene	208-96-8	µg/L	Grab
58	Anthracene	120-12-7	µg/L	Grab
59	Benzidine	92-87-5	µg/L	Grab
61	Benzo(a)Pyrene	50-32-8	µg/L	Grab
63	Benzo(ghi)Perylene	191-24-2	µg/L	Grab
64	Benzo(k)Fluoranthene	207-08-9	µg/L	Grab
65	Bis (2-Chloroethoxy) Methane	111-91-1	µg/L	Grab
66	Bis (2-Chloroethyl) Ether	111-44-4	µg/L	Grab
67	Bis (2-Chloroisopropyl) Ether	108-60-1	µg/L	Grab
68	Bis(2-Ethylhexyl) Phthalate	117-81-7	µg/L	Grab
70	Butylbenzyl Phthalate	85-68-7	µg/L	Grab
73	Chrysene	218-01-9	µg/L	Grab
81	Di-n-butyl Phthalate	84-74-2	µg/L	Grab
84	Di-n-Octyl Phthalate	117-84-0	µg/L	Grab
74	Dibenzo(a,h)anthracene	53-70-3	µg/L	Grab
79	Diethyl Phthalate	84-66-2	µg/L	Grab
80	Dimethyl Phthalate	131-11-3	µg/L	Grab
86	Fluoranthene	206-44-0	µg/L	Grab
87	Fluorene	86-73-7	µg/L	Grab
88	Hexachlorobenzene	118-74-1	µg/L	Grab
90	Hexachlorocyclopentadiene	77-47-4	µg/L	Grab
91	Hexachloroethane	67-72-1	µg/L	Grab

CTR Number	Semi-Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
92	Indeno(1,2,3-cd) Pyrene	193-39-5	µg/L	Grab
93	Isophorone	78-59-1	µg/L	Grab
98	N-Nitrosodiphenylamine	86-30-6	µg/L	Grab
96	N-Nitrosodimethylamine	62-75-9	µg/L	Grab
97	N-Nitrosodi-n-Propylamine	621-64-7	µg/L	Grab
95	Nitrobenzene	98-95-3	µg/L	Grab
53	Pentachlorophenol (PCP)	87-86-5	µg/L	Grab
99	Phenanthrene	85-01-8	µg/L	Grab
54	Phenol	108-95-2	µg/L	Grab
100	Pyrene	129-00-0	µg/L	Grab

INORGANICS

CTR Number	Inorganic Parameters	CAS Number	Units	Effluent Sample Type
NL	Aluminum, Total	7429-90-5	µg/L	Grab
1	Antimony, Total	7440-36-0	µg/L	Grab
2	Arsenic, Total	7440-38-2	µg/L	Grab
3	Beryllium, Total	7440-41-7	µg/L	Grab
4	Cadmium, Total	7440-43-9	µg/L	Grab
5a	Chromium, Total	7440-47-3	µg/L	Grab
6	Copper, Total	7440-50-8	µg/L	Grab
14	Iron, Total	7439-89-6	µg/L	Grab
7	Lead, Total	7439-92-1	µg/L	Grab
8	Mercury, Total	7439-97-6	µg/L	Grab
NL	Mercury, Methyl	22967-92-6	µg/L	Grab
NL	Manganese, Total	7439-96-5	µg/L	Grab
9	Nickel, Total	7440-02-0	µg/L	Grab
10	Selenium, Total	7782-49-2	µg/L	Grab
11	Silver, Total	7440-22-4	µg/L	Grab
12	Thallium, Total	7440-28-0	µg/L	Grab
13	Zinc, Total	7440-66-6	µg/L	Grab

NON-METALS/MINERALS

CTR Number	Non-Metal/Mineral Parameters	CAS Number	Units	Effluent Sample Type
NL	Boron	7440-42-8	µg/L	Grab
NL	Chloride	16887-00-6	mg/L	Grab
14	Cyanide, Total (as CN)	57-12-5	µg/L	Grab
NL	Sulfate	14808-79-8	mg/L	Grab
NL	Sulfide (as S)	5651-88-7	mg/L	Grab

PESTICIDES/PCBs/DIOXINS

CTR Number	Pesticide/PCB/Dioxin Parameters	CAS Number	Units	Effluent Sample Type
110	4,4-DDD	72-54-8	µg/L	Grab
109	4,4-DDE	72-55-9	µg/L	Grab
108	4,4-DDT	50-29-3	µg/L	Grab
112	alpha-Endosulfan	959-98-8	µg/L	Grab
103	alpha-BHC (Benzene hexachloride)	319-84-6	µg/L	Grab
102	Aldrin	309-00-2	µg/L	Grab
113	beta-Endosulfan	33213-65-9	µg/L	Grab
104	beta-BHC (Benzene hexachloride)	319-85-7	µg/L	Grab
107	Chlordane	57-74-9	µg/L	Grab
106	delta-BHC (Benzene hexachloride)	319-86-8	µg/L	Grab
111	Dieldrin	60-57-1	µg/L	Grab
114	Endosulfan Sulfate	1031-07-8	µg/L	Grab
115	Endrin	72-20-8	µg/L	Grab
116	Endrin Aldehyde	7421-93-4	µg/L	Grab
117	Heptachlor	76-44-8	µg/L	Grab
118	Heptachlor Epoxide	1024-57-3	µg/L	Grab
105	gamma-BHC (Benzene hexachloride or Lindane)	58-89-9	µg/L	Grab
119	Polychlorinated Biphenyl (PCB) 1016	12674-11-2	µg/L	Grab
120	PCB 1221	11104-28-2	µg/L	Grab
121	PCB 1232	11141-16-5	µg/L	Grab
122	PCB 1242	53469-21-9	µg/L	Grab
123	PCB 1248	12672-29-6	µg/L	Grab
124	PCB 1254	11097-69-1	µg/L	Grab
125	PCB 1260	11096-82-5	µg/L	Grab
126	Toxaphene	8001-35-2	µg/L	Grab
16	2,3,7,8-TCDD (Dioxin)	1746-01-6	µg/L	Grab

CONVENTIONAL PARAMETERS

CTR Number	Conventional Parameters	CAS Number	Units	Effluent Sample Type
NL	pH	--	SU	Grab
NL	Temperature	--	ºC	Grab

NON-CONVENTIONAL PARAMETERS

CTR Number	Nonconventional Parameters	CAS Number	Units	Effluent Sample Type
NL	Hardness (as CaCO3)	471-34-1	mg/L	Grab
NL	Specific Conductance (Electrical Conductivity or EC)	EC	µmhos /cm	Grab
NL	Total Dissolved Solids (TDS)	TDS	mg/L	Grab
NL	Dissolved Organic Carbon (DOC)	DOC	mg/L	Grab

NUTRIENTS

CTR Number	Nutrient Parameters	CAS Number	Units	Effluent Sample Type
NL	Ammonia, Total as Nitrogen	7664-41-7	mg/L	Grab
NL	Nitrate, Total as Nitrogen	14797-55-8	mg/L	Grab
NL	Nitrite, Total as Nitrogen	14797-65-0	mg/L	Grab
NL	Phosphorus, Total (as P)	7723-14-0	mg/L	Grab

OTHER CONSTITUENTS OF CONCERN

CTR Number	Other Constituents of Concern	CAS Number	Units	Effluent Sample Type
NL	Chlorpyrifos	2921-88-2	µg/L	Grab
NL	Diazinon	333-41-5	µg/L	Grab

5. **Table E-9. Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-9:

   a. **Applicable to All Parameters.** Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

   b. **Grab Samples.** A grab sample is defined as an individual discrete sample collected over a period of time not exceeding 15 minutes. It can be taken manually, using a pump, scoop, vacuum, or other suitable device.

   c. **24-hour Composite Samples.** All 24-hour composite samples shall be collected from a 24-hour flow proportional composite.

   d. **Redundant Sampling.** The Discharger is not required to conduct effluent monitoring for constituents that have already been sampled in a given month, as required in Table E-3, or Table E-4 with the exception of hardness which shall be sampled concurrently with the hardness-dependent metals (cadmium, copper, chromium III, lead, nickel, silver, and zinc).

   e. **Concurrent Sampling.** Effluent and receiving water sampling shall be performed at approximately the same time, on the same date.

   f. **Sample Type.** All receiving water samples shall be taken as grab samples. Effluent samples shall be taken as described in Table E-9.

   g. **Bis (2-ethylhexyl) phthalate.** In order to verify if bis (2-ethylhexyl) phthalate is truly present, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.

h. **Total Mercury and Methyl Mercury.** Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2). The analysis of methyl mercury and total mercury shall be by U.S. EPA method 1630 and 1631 (Revision E), respectively, with a reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury.

i. **Ammonia (as N).** For receiving water characterization, sampling is required only at the upstream station. Effluent ammonia sampling remains required by Tables E-3, E-4, and E-9, as applicable.

j. **Chlorpyrifos and Diazinon** shall be sampled using U.S. EPA Method 625M, Method 8141, or equivalent GC/MS method with a lower Reporting Limit than the Basin Plan water quality objectives of 0.015 µg/L and 0.1 µg/L for chlorpyrifos and diazinon, respectively.

k. **CIWQS Data Entry.** The Discharger shall provide the data in the PET tool for uploading into CIWQS.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

2. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Central Valley Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.

4. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act" of 1986.

B. Self-Monitoring Reports (SMRs)

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

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through X. The Discharger shall submit monthly, quarterly, and annual SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. Monthly SMRs are required even if there is no discharge. If no discharge to Lake Almanor occurs during the month, the monitoring report must state that there has been no surface water discharge and include all applicable land, pond, groundwater, and other required monitoring results.

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

Table E-10. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
1/Hour	Permit effective date	Hourly	Submit with monthly SMR
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
1/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR
1/Month	Permit effective date	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
1/Quarter	Permit effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February of following year
2/Year	Permit effective date	1 January through 30 June 1 July through 31 December	1 August 1 February of following year
1/Year	Permit effective date	1 January through 31 December	1 February of following year

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable Reporting Level (RL) and the current laboratory's 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:

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

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

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

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

   d. Dischargers are to instruct laboratories to establish calibration standards so that the 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.

5. **Multiple Sample Data.** When determining compliance with an AMEL, AWEL, or MDEL for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of "Detected, but Not Quantified" (DNQ) or "Not Detected" (ND). In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

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

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

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

   c. The Discharger shall attach all final laboratory reports from all contracted commercial laboratories, including quality assurance/quality control information, with all its SMRs for which sample analyses were performed.

7. The Discharger shall submit in the SMRs calculations and reports in accordance with the following requirements:

   a. **Calendar Annual Average Salinity Trigger.** The Discharger shall report the calendar annual average electrical conductivity for EFF-001 and LND-007, separately as applicable, in the December SMR. Each annual

average shall be calculated from the samples gathered at that monitoring location during the calendar year and evaluated against the performance-based trigger in WDR section VI.C.3.a.

b. **Removal Efficiency (BOD_5 and TSS).** The Discharger shall calculate and report the percent removal of BOD_5 and TSS in the SMRs. The percent removal shall be calculated as specified in section VII.A of the Waste Discharge Requirements.

c. **Total Coliform Organisms Effluent Limitations.** The Discharger shall calculate and report the 7-day median of total coliform organisms for the effluent. The 7-day median of total coliform organisms shall be calculated as specified in section VII.B of the Waste Discharge Requirements.

C. Discharge Monitoring Reports (DMRs)

1. 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 any upgraded version. Electronic DMR submittal will be in addition to electronic SMR submittal. Information about electronic DMR submittal (http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/) is available on the Internet.

D. Other Reports

1. **Analytical Methods Report.** The Discharger shall complete and submit an Analytical Methods Report, electronically via CIWQS submittal, by the due date shown in the Technical Reports Table E-11. The Analytical Methods Report shall include the following for each constituent to be monitored in accordance with this Order: 1) applicable water quality objective, 2) reporting level (RL), 3) method detection limit (MDL), and 4) analytical method. The analytical methods shall be sufficiently sensitive with RLs consistent with the SSM Rule per 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv), and with the Minimum Levels (MLs) in the SIP, Appendix 4. The “Reporting Level or RL” is synonymous with the “Method Minimum Level” described in the SSM Rule. If an RL is not less than or equal to the applicable water quality objective for a constituent, the Discharger shall explain how the proposed analytical method complies with the SSM Rule as outlined above in Attachment E, MRP section I.F. Central Valley Water Board staff will provide a tool with the permit’s Notice of Adoption to assist the Discharger in completing this requirement. The tool will include the constituents and associated applicable water quality objectives to be included in the Analytical Methods Report.

2. **Annual Operations Report.** The Discharger shall submit a written report to the Central Valley Water Board, electronically via CIWQS submittal, containing the following by the due date in the Technical Reports Table E-11:

a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.

b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.

c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.

d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the wastewater treatment plant as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.

e. A statement certifying when the outfall (unlined ditch) was last inspected and maintenance records associated with the outfall.

f. The Discharger may also be requested to submit an annual report to the Central Valley Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the waste discharge requirements.

3. **Recycled Water Policy Annual Reports.** In accordance with section 3 of the *Water Quality Control Policy for Recycled Water* (Recycled Water Policy), the Discharger shall electronically submit an annual report of monthly data to the State Water Board by 30 April annually covering the previous calendar year using the State Water Board's GeoTracker website (https://geotracker.waterboards.ca.gov/). Information for setting up and using the GeoTracker system can be found in the *ESI Guide for Responsible Parties* document on the State Water Board's website for Electronic Submittal of Information (https://www.waterboards.ca.gov/ust/electronic_submittal/index.html).

   The annual report to GeoTracker must include volumetric reporting of the items listed in section 3.2 of the Recycled Water Policy (https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf). A pdf of the upload confirmation from GeoTracker for the Recycled Water Policy Annual Report shall be uploaded into CIWQS annually as a technical report per Table E-11, to demonstrate compliance with this reporting requirement.

4. **Report of Waste Discharge (ROWD).** For the 5-year permit renewal, the Discharger shall submit a written report to the Central Valley Water Board,

electronically via CIWQS submittal, containing, at minimum, the following by the due date in the Technical Reports Table E-11:

a. Report of Waste Discharge (Form 200);

b. NPDES Form 1 (not needed if submitting Form 2A);

c. NPDES Form 2A;

d. NPDES Form 2S;

e. **Salinity Evaluation and Minimization Plan (SEMP).** The Discharger shall evaluate the effectiveness of the SEMP and provide a summary with the Report of Waste Discharge; and

f. **Mixing Zone Requests.** A mixing zone analysis for constituents the Discharger is requesting the continuation of dilution credits and mixing zones in the calculation of water quality-based effluent limits; and

g. **Most Sensitive Species Screening**. The Discharger shall perform subsequent sensitive species screening testing to re-evaluate the most sensitive species for chronic whole effluent toxicity testing in accordance with MRP section V.F and results submitted with the ROWD.

5. **Technical Report Submittals.** This Order includes requirements to submit a ROWD, special study technical reports, progress reports, and other reports identified in the MRP (hereafter referred to collectively as “technical reports”). The Technical Reports Table E-11 and subsequent table notes below summarize all technical reports required by this Order and the due dates for submittal. All technical reports shall be submitted electronically via CIWQS submittal. Technical reports should be uploaded as a PDF, Microsoft Word, or Microsoft Excel file attachment.

Table E-11. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
Intentionally left blank	Standard Reporting Requirements	Intentionally left blank	Intentionally left blank
1	Report of Waste Discharge (ROWD)	31 March 2031	MRP X.D.4
2	Groundwater Monitoring Well Network Evaluation	1 March 2028	WDR VI.C.2.b
3	Groundwater Monitoring Well Installation, Work Plan	3 months following Central Valley Water Board approval of Report # 2	WDR VI.C.2.c

Report #	Technical Report	Due Date	CIWQS Report Name
4	Groundwater Evaluation Final Report (submit with ROWD)	31 March 2031	WDR VI.C.2.d
5	Species Sensitivity Screening Results (submit with ROWD)	31 March 2031	MRP V.F
6	SEMP Effectiveness Evaluation (submit with ROWD)	31 March 2031	WDR VI.C.3.a
7	Analytical Methods Report	31 May 2027	MRP X.D.1
8	Analytical Methods Report Certification	At least 30 days before the first effluent and receiving water characterization monitoring event	MRP IX.E.3.
9	Toxicity Reduction Evaluation (TRE) Workplan	2 July 2027	MRP V.G.2
10	Annual Operations Report	1 February 2028	MRP X.D.2
11	Annual Operations Report	1 February 2029	MRP X.D.2
12	Annual Operations Report	1 February 2030	MRP X.D.2
13	Annual Operations Report	1 February 2031	MRP X.D.2
14	Annual Operations Report	1 February 2032	MRP X.D.2
15	Recycled Water Policy Annual Report and CIWQS Submittal Confirmation	30 April 2027	MRP X.D.3
16	Recycled Water Policy Annual Report and CIWQS Submittal Confirmation	30 April 2028	MRP X.D.3
17	Recycled Water Policy Annual Report and CIWQS Submittal Confirmation	30 April 2029	MRP X.D.3
18	Recycled Water Policy Annual Report and CIWQS Submittal Confirmation	30 April 2030	MRP X.D.3
19	Recycled Water Policy Annual Report and CIWQS Submittal Confirmation	30 April 2031	MRP X.D.3
20	Recycled Water Policy Annual Report and CIWQS Submittal Confirmation	30 April 2032	MRP X.D.3

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

Waste Discharge ID:	5A320100001
CIWQS Facility Place ID:	214199
Discharger	Chester Public Utility District
Name of Facility:	Chester Sewage Treatment Plant
Facility Address:	881 First Avenue
Facility City, State Zip:	Chester, CA 96020
Facility County:	Plumas County
Facility Contact, Title and Phone Number:	Allan Homme, Utility Operations Manager, (530) 258-2171
Authorized Person to Sign and Submit Reports:	Bonnie Mullaney, General Manager, 707-932-0800
Mailing Address:	P.O. Box 503, Chester, CA, 96020
Billing Address:	P.O. Box 503, Chester, CA, 96020
Type of Facility:	Publicly Owned Treatment Works (POTW)
Major or Minor Facility:	Minor
Threat to Water Quality:	2
Complexity:	B
Pretreatment Program:	No
Recycling Requirements:	N/A
Facility Permitted Flow:	0.5 million gallons per day (MGD)
Facility Design Flow:	0.75 MGD
Watershed:	Lake Almanor Hydrologic Area (518.41)
Receiving Water:	Lake Almanor
Receiving Water Type:	Inland Surface Water

A. Chester Public Utility District (hereinafter Discharger) is the owner and operator of the Chester Sewage Treatment Plant (hereinafter Facility), a Publicly-Owned Treatment Works (POTW).

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

B. The Facility discharges treated municipal wastewater to Lake Almanor, a water of the United States, within Lake Almanor Hydrologic Area. The Discharger was previously regulated by Waste Discharge Requirements (WDRs) Order R5-2021-0022 (National Pollutant Discharge Elimination System (NPDES) Permit No. CA0077747) adopted on 22 April 2021 and expired on 30 May 2026. Attachment B provides a location map of the area around the Facility, and a site map of the Facility. Attachment C provides a flow schematic of the Facility.

C. 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 any applicable requirements under Water Code section 1211. This is not an NPDES permit requirement.

D. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on 29 May 2025. Supplemental information was requested on 27 June 2025 and received on 8 July 2025, 14 July 2025, and 11 August 2025. The application was deemed complete on 19 August 2025.

E. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed five years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. Under 40 C.F.R. section 122.6(d), states authorized to administer the NPDES program may administratively continue state-issued permits beyond their expiration dates until the effective date of the new permits, if state law allows it. Pursuant to California Code of Regulations (CCR), title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the unincorporated town of Chester and serves a population of approximately 2,250. There are currently 1,093 active wastewater connections. The design daily average flow capacity of the Facility is 0.75 MGD.

A. Description of Wastewater and Biosolids Treatment and Controls

1. **Treatment System.** The Facility is a lagoon-based wastewater treatment system that provides secondary treatment and disinfection of municipal wastewater from the Discharger's service area. Wastewater is primarily domestic, with contributions from small commercial users, apartments, and schools. There are no major industrial users.

   The treatment system consists of preliminary screening, influent flow measurement, treatment through a six-pond facultative lagoon system, disinfection in a chlorine contact basin, and discharge either to land through the constructed wetland ponds or to surface water (Lake Almanor) through an unlined ditch. The Facility is operated primarily as a land-discharge Facility, with infrequent seasonal discharge to Lake Almanor. Discharges to Lake Almanor are prohibited during the summer months (June 1 through September 30).

2. **Headworks.** The headworks consists of a manual bar screen, influent pumps, an influent Parshall flume with an ultrasonic level monitor for influent flow measurement, and an influent flow composite sampler. Untreated wastewater passes through the manual bar screen before flow is measured and split between the first two treatment ponds. The headworks provides preliminary treatment by removing rags and coarse solids before wastewater enters the pond system.

3. **Treatment Pond System.** After preliminary treatment, influent is split between two, unlined, primary ponds 1 and 2, identified as PND-001 and PND-002 (designated LND-001 and LND-002 in previous permits). Wastewater then flows through four additional unlined treatment ponds, identified as PND-003, PND-004, PND-005, and PND-006 (designated LND-003 through LND-006 in previous permits).

   The pond system covers approximately 19 acres, provides approximately 31 million gallons of storage, and provides an estimated hydraulic retention time of approximately 40 days during average dry weather flow. The pond system provides biological treatment and settling before treated effluent is routed to the chlorine contact basin where it is then disinfected with chlorine gas before being discharged either to Lake Almanor or discharged to the constructed wetland ponds. Effluent discharged to Lake Almanor is dechlorinated with sodium bisulfite at the downstream end of the chlorine contact basin.

4. **Biological Treatment.** Biological treatment is provided primarily by the pond system. Treatment occurs through natural biological activity, settling, algae production, and oxygen transfer within the ponds. The existing lagoon system provides BOD and TSS reduction before disinfection.

5. **Disinfection System.** Effluent from the pond system is routed to a concrete chlorine contact basin for disinfection. The existing disinfection system uses gas chlorination.

6. **Dechlorination System.** Effluent discharged to Lake Almanor is dechlorinated before discharge with sodium bisulfite. Dechlorination occurs at the downstream end of the chlorine contact basin. Secondary treated disinfected wastewater is not de-chlorinated when discharged to the wetland ponds.

7. **Wetland Ponds and Land Discharge System.** The Facility uses four constructed wetland ponds, identified as PND-007, PND-008, PND-009, and PND-010 (designated LND-007 through LND-010 in previous permits), for land disposal of treated municipal wastewater. Treated effluent routed to the constructed wetland ponds is disinfected but not dechlorinated.

   LND-007 is the representative monitoring point for treated effluent before it is routed either to the wetland ponds or, during infrequent authorized discharge events to the unlined ditch leading to Lake Almanor. Because the same treated effluent is routed through LND-007 before either land discharge or surface water discharge, LND-007 is used to characterize treated effluent quality for the Facility.

8. **Surface Water Outfall.** When the Facility discharges to Lake Almanor, treated and dechlorinated effluent is conveyed through an approximately one-half-mile unlined ditch. The ditch crosses private property, which limits routine access. The ditch is used only during authorized discharge to Lake Almanor.

9. **Biosolids and Sludge Management. T**he Facility does not have a mechanical sludge handling or dewatering system. Solids generated by treatment settle and accumulate within the pond system. Lockwood Regional Landfill is the anticipated destination if removal is needed.

10. **Groundwater Monitoring Wells.** The groundwater monitoring network consists of three monitoring wells, identified as RGW-001, RGW-002, and RGW-003. The wells are located around the treatment and land-disposal areas and are used to monitor groundwater quality associated with the Facility (Facility Map, Attachment B.2). Geographic coordinates for the monitoring wells are provided in the MRP, Attachment E, Table E-1, Monitoring Station Locations.

    Table F-2 below provides monitoring well construction details for the three monitoring wells at the Facility, which were installed between 13 and 15 October 2014.

Table F-2. Facility Groundwater Well Information

Well ID	Top of Casing Elevation (Feet msl)	Depth (Feet)/ Lithology	Casing	Screen (Feet) / Slot (in)	Seal (feet)/ Pack (feet)	SWL/ Yield
RGW-001 (MW-1)	4519.14	20.5; cobbles/ sand	4-in PVC SCH 40	13.5-18.5/ 0.020	0-10 cement; 10-11 bentonite; 11-18.5 #8 gravel	12 ft per 2 gpm
RGW-002 (MW-2)	4514.27	20.8; cobbles/ sand	4-in PVC SCH 40	13.5-18.5; 0.020	0-10 cement; 10-11 bentonite; 11-18.5 #8 gravel	10 ft per 10 gpm
RGW-003 (MW-3)	4515.38	20.6; cobbles/ sand	4-in PVC SCH 40	13.5-18.5; 0.020	0-10 cement; 10-11 bentonite; 11-18.5 #8 gravel	9 ft per 10 gpm

Table F-2. Notes:

1. Well construction information is based on the available well completion reports for monitoring wells RGW-001, RGW-002, and RGW-003.
2. Depth, screen interval, seal depth, and filter pack depth are reported in feet below ground surface (bgs) unless otherwise noted.
3. Top-of-casing elevations are surveyed elevations measured at the north edge of the 4-inch PVC inner casing and are reported in feet above mean sea level (msl).
4. Geographical coordinates are based on Caltrans control monument HPGN D CA 02 FR, located at Chester Airport, using the NAD 83 datum.
5. Elevations are based on Caltrans Brass Cap BM 9-10, located at the southeast corner of the bridge at Highway 36 and the Feather River. The elevation is 4537.06 feet NAVD 88, using a Corpscon conversion from the NGVD 29 elevation of 4533.58 feet.
6. Lithology shown is the primary material identified in the well log at the completed well depth or screened interval. Full lithologic descriptions are included in the well completion reports.
7. Casing is 4-inch diameter PVC Schedule 40. Screen slot size is reported in inches.
8. “#8 gravel” refers to the filter pack material placed around the screened interval.
9. Static water level (SWL) and yield were reported at the time of well installation and may not represent current groundwater conditions or long-term well performance.

B. Discharge Points and Receiving Waters

1. The Facility is located in section 8, T28N, R7E, MDB&M, as shown in Attachment B, a part of this Order.

2. Treated municipal wastewater is discharged at D-001 to Lake Almanor, a water of the United States, at a point latitude 40.30164° and longitude -121.22486°. Discharge to Lake Almanor is prohibited from 1 June through 30 September each year to protect public health during the peak recreational season and to limit nutrient enrichment during the season when recreation and lake use are highest.

3. Treated municipal wastewater is discharged at D-002 to constructed wetland ponds at latitude 40.30164° and longitude -121.22486°.

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

Effluent limitations contained in Order R5-2021-0022 for discharges from D-001 (Monitoring Location EFF-001) and representative monitoring data from the current permit term are summarized below. Surface discharge to Lake Almanor occurred only during May 2023; therefore, the EFF-001 data set represents one month of actual surface discharge during the previous permit term.

Table F-3. Historic Effluent Limitations

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Acute Toxicity	% survival	Instantaneous Minimum 70 Three Consecutive Median 90	--	--	100% survival (5/15/2023)
Ammonia, Total (as Nitrogen)	mg/L	AMEL 8.4 AWEL 15	0.3	0.3	--
BOD5	mg/L	AMEL 30 AWEL 45 MDEL 90	9.1	11	11
BOD5	lbs/ day	AMEL 130 AWEL 190 MDEL 380	96	150	150
Copper, Total Recoverable	µg/L	AMEL 34 MDEL 75	No EFF-001 data	No EFF-001 data	No EFF-001 data
Electrical Conductivity @ 25°C	µmhos/ cm	205 Annual Average	143 (May 2023 avg)	--	168

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Total Coliform Organisms	MPN/ 100 mL	23 as a 7-day median 240 more than once in any 30-day period	920	--	1600
Total Residual Chlorine.	mg/L	0.011 as a 4-day average 0.019 mg/L, as a 1-hour average	--	1.3 (4-day avg)	1.4
TSS	mg/L	AMEL 30 AWEL 45 MDEL 90	14	22.3	22.3
TSS	lbs/ day	AMEL 130 AWEL 190 MDEL 380	68	--	68
Zinc, Total Recoverable	µg/L	AMEL 65 MDEL 120	No EFF-001 data	No EFF-001 data	No EFF-001 data
pH	SU	Instantaneous Max 9 Instantaneous Min 6	--	--	Range 7.0-7.7

Table F-3. Notes:

1. Effluent monitoring data summarized in this table are from EFF-001 during May 2023, the only month in which surface discharge to Lake Almanor was reported during the current permit term.
2. Highest average monthly values are calculated from the available May 2023 EFF-001 results. Highest weekly and highest daily values reflect the applicable limit basis where sufficient data were available; otherwise the maximum reported result is shown.
3. “No EFF-001 data” indicates that no surface-discharge monitoring result was reported for that parameter during May 2023.

D. Compliance Summary

During the previous permit term, the Discharger has been subject to the following enforcement actions:

1. A Notice of Violation (NOV) was issued on 13 August 2024 for total coliform effluent limitation violations that occurred in May 2023.

2. Cease and Desist Order (CDO) R5-2021-0038. CDO was adopted on 17 June 2021. CDO R5-2021-0038 established a time schedule for the Discharger to come into compliance with final ammonia and total coliform effluent limitations. The CDO provided interim effluent limitations that expired on 18 February 2026. The Discharger is actively working on planned improvements to the Facility to ensure compliance with effluent limitations (see Planned Changes).

E. Planned Changes

The Discharger is advancing two Clean Water State Revolving Fund (CWSRF) projects: *NPDES Permit Compliance Project* and the *Wastewater Collection System Evaluation Project*.

The *NPDES Permit Compliance Project* (CWSRF Agreement No. D2501033, Project No. C-06-8587-210, executed 25 June 2026) involves upgrades to the biological treatment process, disinfection, headworks, process controls, and standby power. Planned treatment-plant upgrades include submerged attached growth reactors (SAGRs), a recycle pump station, replacement of chlorine gas with on-site sodium hypochlorite generation, a new larger chlorine contact basin, a mechanical self-cleaning screen, installation of a Supervisory Control and Data Acquisition (SCADA) system, a new operations/blower building, and an emergency standby generator. Design is in progress, and the Agreement's completion of construction date is currently 30 June 2030. The *Wastewater Collection System Evaluation Project* involves collection-system rehabilitation to reduce inflow and infiltration that contributes to hydraulic overloading at the Facility. Planned improvements are provided in Table F-4 below.

Table F-4. Planned Facility Upgrades

Upgrade Category	Planned Improvement	Purpose
Biological treatment	Install submerged attached growth reactors (SAGRs) and a recycle pump station	Improve nitrification and BOD5/TSS removal.
Disinfection	Replace chlorine gas with on-site sodium hypochlorite generation and construct a new, larger chlorine contact basin	Improve disinfection reliability and contact time at higher flows.
Headworks and hydraulics	Install a mechanical self-cleaning screen, improve flow measurement, reduce surging, and upgrade site piping	Improve process stability and reduce operational failures.
Operations and reliability	Install SCADA, a new operations/blower building, and an emergency standby generator	Improve reliability, operator control, and emergency response.

Collection system	Complete hydraulic modeling and prioritize collection-system rehabilitation	Reduce inflow and infiltration and wet-weather hydraulic overloading.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of the Public Resources Code. Additionally, the adoption of land discharge requirements for the Facility constitutes permitting of an existing facility that is categorically exempt from the provisions of CEQA pursuant to CCR, title 14, section 15301.

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

1. **Water Quality Control Plan.** Requirements of this Order specifically implement the applicable Water Quality Control Plans.

    a. Basin Plan. The Central Valley Water Board adopted a Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (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. Beneficial uses applicable to Lake Almanor and groundwater are summarized in Table F-5:

Table F-5. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Lake Almanor	Existing: Hydropower generation (POW); water contact recreation (REC-1); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm water spawning (SPWN); and wildlife habitat (WILD).
002	Groundwater	Municipal and domestic water supply (MUN); agricultural supply (AGR); industrial service supply (IND); and industrial process supply (PRO).

b. ***Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California*.** The Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) was adopted by the State Water Resources Control Board (State Water Board) on 1 December 2020, under authority provided by Water Code sections 13140 and 13170. Except as otherwise indicated, this ISWEBE Plan establishes provisions for water quality and sediment quality that apply to all inland surface waters, enclosed bays, and estuaries and coastal lagoons of the state, including both waters of the United States and surface waters of the state. The State Water Board rescinded the ISWEBE Plan on 5 October 2021 in Resolution No. 2021- 0044. The portions of the ISWEBE Plan, including the Toxicity Provisions, remain in effect as state policy for water quality control.

c. **Statewide Toxicity Provisions.** On 1 December 2020, the State Water Board adopted State Policy for Water Quality Control: Toxicity Provisions (Toxicity Provisions) which established statewide numeric water quality objectives for both acute and chronic toxicity, using the Test of Significant Toxicity (TST), and a program of implementation to control toxicity. Per State Water Board Resolution 2021-0044, the Toxicity Provisions were adopted as a State Policy for Water Quality Control for all inland surface waters, enclosed bays, estuaries, and coastal lagoons of the state, regardless of their status as waters of the United States. The Toxicity Provisions establish a uniform regulatory approach to provide consistent protection of aquatic life beneficial uses and protect aquatic habitats and life from the effects of known and unknown toxicants. The Toxicity Provisions were approved by the Office of Administrative Law on 25 April 2022 and by U.S. EPA on 1 May 2023.

On 14 December 2023, the State Water Board applied for U.S. EPA Region 9 review and approval of a limited-use alternative test procedure (ATP) for the use of one-effluent concentration when conducting whole effluent toxicity (WET) testing (see 40 C.F.R. § 136.5). The application is

specific to acute or chronic WET tests in Table 1 of the application when using the TST statistical approach (U.S. EPA, 2010) for analyzing the data. The application is being sought for all dischargers or facilities in California and their associated laboratories. The ATP application is still pending with U.S. EPA.

The use of the TST has been the subject of litigation. In December 2024, the Second District Court of Appeal upheld the use of the TST in an NPDES permit in the case of *Camarillo Sanitary District v. California Regional Water Quality Control Board - Los Angeles Region* (Cal. Ct. App., 19 Dec. 2024, No. 2D CIV. B333420) 2024 WL 5164726, unpublished.

A separate legal challenge to the State Water Board's adoption of the Toxicity Provisions originated in Fresno County Superior Court on 18 July 2022, through a petition for writ of mandate filed by Camarillo Sanitary District, City of Simi Valley, City of Thousand Oaks, Central Valley Clean Water Association, and Clean Water SoCal (formerly known as Southern California Alliance of Publicly Owned Treatment Works) (Petitioners). One of the claims was that the Toxicity Provisions was inconsistent with the Clean Water Act. On 9 October 2023, the superior court denied the petition in its entirety.

On 19 December 2023, three of the Petitioners filed a notice of appeal of the Fresno Superior Court's decision upholding the Toxicity Provisions. On 5 August 2025, the Fifth District Court of Appeal issued a published opinion holding that the TST statistical approach, which is an integral component of the Toxicity Provisions, cannot be utilized in NPDES permitting to evaluate WET data because the TST is not an approved method under 40 Code of Federal Regulations part 136. (See *Camarillo Sanitary Dist. v. State Wat. Res. Control Board* (2025) 113 Cal.App.5th 407, review granted 12 Nov. 2025, S292989.) The Court of Appeal did not, however, disturb the Toxicity Provisions' use of the TST as a part of its WQOs. The State Water Board prevailed on all other claims in the litigation. The Court of Appeal's decision became final on 4 September 2025.

On 15 September 2025, the State Water Board filed a petition for review of the Fifth District Court of Appeal's decision with the California Supreme Court. On 12 November 2025, the California Supreme Court granted review. The issues to be briefed and argued are limited to the issues raised in the State Water Board's petition for review.

Pending the California Supreme Court's review, the opinion of the Fifth Circuit Court of Appeal is not binding on the Water Boards. However, the opinion may be cited, not only for its persuasive value, but also for the limited purpose of establishing the existence of a conflict in authority.

In accordance with Water Code sections 13146 and 13247, the Central Valley Water Board must fully implement the WQOs and their implementation procedures in the Toxicity Provisions. The numeric WQOs for chronic and acute toxicity established by the Toxicity Provisions, which are based on the TST, were approved by U.S. EPA and remain in effect. As such, the numeric WQOs continue to serve as the applicable federal water quality standards in California.

The Central Valley Water Board must also continue to comply with federal Clean Water Act NPDES regulations for determining reasonable potential and establishing applicable water quality-based effluent limitations (WQBELs). NPDES regulations (40 C.F.R. § 122.44(d)(1)(vii)(A)) require that all WQBELs be derived from and comply with all applicable water quality standards. Moreover, although the Toxicity Provisions left in place narrative WQOs for aquatic toxicity in the Board's regional water quality control plans (i.e., Basin Plans), the Toxicity Provisions did supersede basin plan provisions and portions of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) for implementing narrative WQOs. As such, there are currently no basin plan or SIP procedures in effect for implementing narrative WQOs to determine reasonable potential as required by 40 Code of Federal Regulations section 122.44(d)(1)(ii). As a result, the Board must fully implement all of the Toxicity Provisions.

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

3. **State Implementation Policy.** On 2 March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Central Valley Water Board in the Basin Plan. The SIP became effective on 18 May 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005, that became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.

4. **Antidegradation Policy.** 40 Code of Federal Regulations section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. California's Antidegradation Policy was established by State Water Board Resolution 68-16, *Statement of Policy with Respect to Maintaining High Quality of Waters in California*, (State Antidegradation Policy). The State Antidegradation Policy is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. The State Antidegradation Policy requires that existing water quality be maintained unless degradation is justified based on specific findings. The Central Valley Water Board's Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The Board finds this order is consistent with federal and state antidegradation regulations and policy.

5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 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 must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

6. **Domestic Water Quality.** In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels (MCLs) designed to protect human health and ensure that water is safe for domestic use **except for salinity provided that the Discharger complies with Provision VI.C.3.a.**

7. **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, sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state**.** The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.

8. **Emergency Planning and Community Right to Know Act.** Section 13263.6(a) of the Water Code, requires that "the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric

water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective".

9. **Storm Water Requirements.** U.S. EPA promulgated federal regulations for storm water on 16 November 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the storm water program and are obligated to comply with the federal regulations. The State Water Board does not require wastewater treatment facilities with design flows less than 1 MGD to obtain coverage under Order 2014-0057-DWQ, *General Permit for Storm Water Discharges Associated with Industrial Activities* (NPDES General Permit No. CAS000001) (Industrial General Permit). Therefore, this Order does not regulate storm water.

10. **Sanitary Sewer Systems.** On 6 December 2022, the State Water Board adopted Order 2022-0103-DWQ, *Statewide Waste Discharge Requirements General Order for Sanitary Sewer Systems*, which became effective on 5 June 2023. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage and to comply with prohibitions and requirements including but not limited to development of sanitary sewer management plans (SSMPs) and reporting all sanitary sewer overflows (SSOs). The Discharger is subject to the requirements of Order 2022-0103-DWQ.

11. **Sewage Sludge and Biosolids.** This Order does not authorize any act that results in violation of requirements administered by U.S. EPA to implement 40 C.F.R. Part 503, *Standards for the Use or Disposal of Sewage Sludge*. These standards regulate the final use or disposal of sewage sludge that is generated during the treatment of domestic sewage in a municipal wastewater treatment facility. The Discharger is responsible for meeting all applicable requirements of 40 C.F.R. Part 503 that are under U.S. EPA's enforcement authority.

12. **Water Quality Impacts in Disadvantaged or Tribal Communities and Environmental Justice Concerns.** Consistent with Water Code section 13149.2, the Central Valley Water Board has considered environmental justice, tribal impact, and racial equity in issuing this Order. The discharges regulated by this Order may impact one or more disadvantaged communities or tribal communities. The Facility regulated by this Order discharges treated municipal wastewater to Lake Almanor and is subject to discharge limitations given the potential to cause or contribute to exceedances of WQOs for certain constituents, including ammonia, biochemical oxygen demand, chlorine residual, copper, pH, total coliform, total suspended solids, and zinc. This Order addresses potential adverse impacts to water quality from the Facility's discharge by setting prohibitions and limits on the discharge of wastewater,

requiring ongoing monitoring and reporting of the discharged wastewater and receiving water, and imposing other specifications on the facility's wastewater treatment operations.

Consistent with Water Code section 13149.2, the Central Valley Water Board has considered environmental justice, tribal impact, and racial equity in issuing this Order. The discharges regulated by this Order may impact one or more disadvantaged communities or tribal communities. The Discharger has selected the Alternative Salinity Permitting Approach for the Salt Control Program, which provides an alternative approach for compliance with conservative salinity limitations through implementation of specific requirements (i.e., support facilitation and completion of the Salt Control Program's Prioritization & Optimization Study). This Order addresses potential adverse impacts to water quality from the Facility's discharge by setting prohibitions and performance-based triggers on the discharge of wastewater, requiring ongoing monitoring and reporting of the discharged wastewater and receiving water, and imposing other specifications on the facility's wastewater treatment operations.

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

1. Under CWA section 303(d) (33 U.S.C. § 1313(d)), states are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 13 December 2024, U.S. EPA gave partial approval and partial disapproval to California's 2022-2024 section 303(d) List of Water Quality Limited Segments (WQLSs). The Basin Plan references this list of WQLSs, which are defined as "*…those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources* (40 C.F.R. part 130, et seq.)." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*" The listing for Lake Almanor includes mercury.

2. Total Maximum Daily Loads (TMDLs). Table F-6, below, identifies the 303(d) listings and any applicable TMDLs. At the time of this permit renewal, there are no approved TMDLs with waste load allocations that apply to this Facility.

Table F-6. 303 (d) List for Lake Almanor

Pollutant	Potential Sources	TMDL Status
Mercury	Resource extraction	Expected TMDL Completion Date 2027

3. The 303(d) listings and TMDLs have been considered in the development of the Order.

E. Other Plans, Policies, and Regulations

1. **Title 27.** The discharge authorized herein, and the treatment and storage facilities associated with the discharge of treated municipal wastewater, except for discharges of residual sludge and solid waste, are exempt from the requirements of Title 27, CCR, section 20005 et seq (hereafter Title 27). The exemption, pursuant to Title 27 CCR section 20090(a), is based on the following:

   a. The waste consists primarily of domestic sewage and treated effluent;

   b. The waste discharge requirements are consistent with water quality objectives; and

   c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant. In order to qualify for an exemption under Title 27 section 20090(a), the Discharger must demonstrate compliance with the Basin Plan, which requires that constituent concentrations in the groundwater do not exceed the higher of the Basin Plan's groundwater WQOs or background groundwater concentrations.

      This Order requires pond and groundwater water quality monitoring to gather data to continue to determine the exemption status for the Facility. This Order also requires a Groundwater Evaluation Report under WDR section VI.C.2.d that will summarize pond and groundwater monitoring well information as well as pond and groundwater water quality information. Fact Sheet sections II.A.3 and II.A.7 provides a description of the operations of the ponds, Fact Sheet section II.B.3 provides a description of the types of discharge to land, and Fact Sheet section V.B provides the rationale for groundwater limitations.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge or application of waste other than that described in this Order).** This prohibition is based on Water Code section 13260 that requires filing of a ROWD before discharges can occur. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.

2. **Prohibition III.B (No bypasses or overflow of untreated wastewater, except under the conditions at CFR section122.41(m)(4)).** As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the treatment facility. Federal regulations, 40 C.F.R. section 122.41(m), define “bypass” as the intentional diversion of waste streams from any portion of a treatment facility. This section of the federal regulations, 40 C.F.R.
section 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board’s prohibition of bypasses, the State Water Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the federal regulations, 40 C.F.R. section 122.41(m), as allowing bypass only for essential maintenance to ensure efficient operation.

3. **Prohibition III.C (No controllable condition shall create a nuisance**). This prohibition implements Water Code section 13263, subdivision (a), which requires that WDRs take into consideration, among other things, “the need to prevent nuisance,” as that term is defined in Water Code section 13050.

4. **Prohibition III.D (No discharge of hazardous waste)**. The Central Valley Water Board does not permit the discharge of hazardous wastes to waters of the state. The generation, transport, management, and disposal of such wastes are subject to separate regulation under state and federal law (see Health & Saf. Code, § 25100 et seq.; Cal. Code Regs., tit. 22, § 66250 et seq.; 42 U.S.C. § 6901 et seq.; 40 C.F.R. § 260-267).

5. **Prohibition III.E (Peak Wet Weather Flow)**. This prohibition is based on the available dilution established by the 2005 dilution study; any proposed increase in the allowable discharge flow would require an updated dilution study demonstrating that sufficient assimilative capacity and dilution remain available.

6. **Prohibition III.F (Discharge to Lake Almanor from 1 June through 30 September is prohibited)**. This prohibition is based on the peak recreational season for the community surrounding Lake Almanor. The peak recreational period for Lake Almanor goes from 1 June through 30 September of each year. This prohibition is applied in order to minimize body contact, reduce ingestion, and prevent potential nutrient enrichment issues caused by discharge from the Facility during peak recreational months.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 C.F.R. part 133.

Regulations promulgated in 40 C.F.R. section 125.3(a)(1) require technology-based effluent limitations for municipal Dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTWs [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment as defined by the U.S. EPA Administrator.

Based on this statutory requirement, U.S. EPA developed secondary treatment regulations, which are specified in 40 C.F.R. part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of BOD5, TSS, and pH.

2. Applicable Technology-Based Effluent Limitations

a. **BOD_5 and TSS.** Federal regulations at 40 C.F.R. part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD5 and TSS. In addition, 40 C.F.R. section 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. This Order contains a limitation requiring an average of 85 percent removal of BOD_5 and TSS over each calendar month.

b. **pH.** The applicable secondary treatment technology-based effluent limitations for pH include an instantaneous minimum effluent limitation of 6.0 SU and an instantaneous maximum effluent limitation of 9.0 SU.

Summary of Technology-based Effluent Limitations
D-001

Table F-7. Summary of Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations
BOD5	mg/L	AMEL 30 AWEL 45
BOD5	% Removal	Average monthly minimum 85 percent
TSS	mg/L	AMEL 30 AWEL 45
TSS	% Removal	Average monthly minimum 85 percent
pH	SU	Instantaneous Max 9.0 Instantaneous Min 6.0

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBELs must be established using: (1) 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 the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated beneficial uses of the receiving water as specified in the Basin Plan and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

Finally, 40 C.F.R. section 122.44(d)(1)(vii) requires effluent limits to be developed consistent with any available WLAs developed and approved for the discharge.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply.

The Basin Plan on page 2-1 states: “Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…” and with respect to disposal of wastewaters states that “...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.”

The federal CWA section 101(a)(2), states: “it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.” Federal Regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR sections 131.2 and 131.10, require that all waters of the State be regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shellfish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 C.F.R. section 131.3(e) defines existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 C.F.R. section 131.10 requires that uses be attained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

a. **Receiving Water and Beneficial Uses.** Refer to III.C.1. above for a complete description of the receiving water and beneficial uses.

b. **Effluent and Ambient Background Data.** The reasonable potential analysis (RPA), as described in section IV.C.3 of this Fact Sheet, was based on data from March 2023 through March 2026, which includes effluent and ambient background data submitted in eSMRs and ROWD. Because discharge to Lake Almanor was limited to the month of May 2023, representative effluent data from Monitoring Location LND-007 were also used for the RPA.

c. **Assimilative Capacity/Mixing Zone**

   i. The CWA directs the states to adopt water quality standards to protect the quality of its waters. U.S. EPA’s current water quality

standards regulation authorizes states to adopt general policies, such as mixing zones, to implement state water quality standards (40 CFR sections 122.44 and 122.45). The U.S. EPA allows states to have broad flexibility in designing its mixing zone policies. Primary policy and guidance on determining mixing zone and dilution credits is provided by the SIP and the Basin Plan. If no procedure applies in the SIP or the Basin Plan, then the Central Valley Water Board may use the U.S. EPA Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001) (TSD).

For non-Priority Pollutant constituents, the allowance of mixing zones by the Central Valley Water Board is discussed in the Basin Plan, Policy for Application of Water Quality Objectives, which states the following, in part: *"In conjunction with the issuance of NPDES and storm water permits, the Regional Board may designate mixing zones within which water quality objectives will not apply provided the discharger has demonstrated to the satisfaction of the Regional Board that the mixing zone will not adversely impact beneficial uses. If allowed, different mixing zones may be designated for different types of objectives, including, but not limited to, acute aquatic life objectives, chronic aquatic life objectives, human health objectives, and acute and chronic whole effluent toxicity objectives, depending in part on the averaging period over which the objectives apply. In determining the size of such mixing zones, the Regional Board will consider the applicable procedures and guidelines in the EPA's Water Quality Standards Handbook and the [TSD]. Pursuant to EPA guidelines, mixing zones designated for acute aquatic life objectives will generally be limited to a small zone of initial dilution in the immediate vicinity of the discharge."*

For Priority Pollutants, the SIP supersedes the Basin Plan mixing zone provisions. Section 1.4.2 of the SIP states, in part, "…with the exception of effluent limitations derived from TMDLs, in establishing and determining compliance with effluent limitations for applicable human health, acute aquatic life, or chronic aquatic life priority pollutant criteria/objectives or the toxicity objective for aquatic life protection in a basin plan, the Regional Board may grant mixing zones and dilution credits to dischargers…The applicable priority pollutant criteria and objectives are to be met through a water body except within any mixing zone granted by the Regional Board. **The allowance of mixing zones is discretionary and shall be determined on a discharge-by-discharge basis.** The Regional Board may consider allowing mixing zones and dilution credits only for discharges with a physically identifiable point of discharge that is regulated through an NPDES permit issued by the Regional Board." [emphasis added]

For incompletely mixed discharges, the Discharger must complete an independent mixing zone study to demonstrate to the Central Valley Water Board that a dilution credit is appropriate. In granting a mixing zone, section 1.4.2.2 of the SIP requires the following to be met:

*"**A mixing zone shall be as small as practicable.** The following conditions must be met in allowing a mixing zone:*

A mixing zone shall not:

1. *compromise the integrity of the entire water body;*
2. *cause acutely toxic conditions to aquatic life passing through the mixing zone;*
3. *restrict the passage of aquatic life;*
4. *adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under federal or State endangered species laws;*
5. *produce undesirable or nuisance aquatic life;*
6. *result in floating debris, oil, or scum;*
7. *produce objectionable color, odor, taste, or turbidity;*
8. *cause objectionable bottom deposits;*
9. *cause nuisance;*
10. *dominate the receiving water body or overlap a mixing zone from different outfalls; or*
11. *be allowed at or near any drinking water intake. A mixing zone is not a source of drinking water. To the extent of any conflict between this determination and the Sources of Drinking Water Policy (Resolution No. 88-63), this SIP supersedes the provisions of that policy*."

Section 1.4.2.1 of the SIP establishes the authority for the Central Valley Water Board to consider dilution credits based on the mixing zone conditions in a receiving water. Section 1.4.2.1 in part states:

*"The dilution credit, D, is a numerical value associated with the mixing zone that accounts for the receiving water entrained into the discharge. The dilution credit is a value used in the calculation of effluent limitations (described in section 1.4). **Dilution credits may***

be limited or denied on a pollutant-by-pollutant basis, which may result in a dilution credit for all, some, or no priority pollutants in the discharge."

ii. **Lake Almanor and Outfall Characteristics**

Treated effluent is discharged to an unlined ditch that conveys the effluent to the outfall. The outfall is where effluent enters Lake Almanor. Effluent directed to the on-site wetland ponds/land-disposal system does not enter the unlined ditch. The channel extends approximately 3,000 feet, or about one-half mile, through a marsh area before reaching Lake Almanor and crosses private PG&E property, which limits routine access. During discharge to Lake Almanor, the effluent is dechlorinated before entering the channel.

As treated effluent travels through the channel and marsh, it is augmented by freshwater inflow from the surrounding marsh before reaching Lake Almanor. When the discharge enters Lake Almanor, it enters a shallow near-shore area and is subject to lake water level, wind action, temperature and density differences, and other reservoir conditions that can affect the rate and direction of mixing.

Surface-water discharge is authorized only from 1 October through 31 May and is prohibited from 1 June through 30 September.

iii. **Dilution/Mixing Zone Study Results.**

Flow Science, Inc. completed a dilution study for the Discharger in 2005. The study evaluated dilution in the drainage channel/marsh and in Lake Almanor, rather than applying riverine critical-flow methods. The study found approximately 5:1 to 8:1 dilution in the drainage channel approximately 400 feet upstream of Lake Almanor. The study also found that dilution ratios up to approximately 658:1 occurred approximately 550 feet from the shoreline after the discharge entered Lake Almanor.

The available dilution identified by the study substantially exceeds the dilution credits needed for the calculated water quality-based effluent limitations. Consistent with the prior Order, this Order does not grant the full maximum study dilution. Dilution credits are limited on a constituent-by-constituent basis and are allowed only for aquatic life criteria. No human-health dilution credit is granted in Table F-8.

This Order incorporates dilution credits as shown in Table F-8 for both acute and chronic dilution at effluent flows of up to 0.5 mgd, which is the Facility's peak wet weather flow rate. The Discharger must perform additional effluent dilution studies at higher effluent

flows to demonstrate adequate dilution if they wish to acquire dilution ratios at discharge flows greater than 0.5 mgd.

iv. **Evaluation of Available Dilution for Aquatic Life Criteria.**

The SIP requires a mixing zone to be as small as practicable and to comply with the eleven mixing zone prohibitions in section 1.4.2.2.A. Based on the prior mixing-zone study, the prior Order findings, and the discharge-specific conditions described above, the Central Valley Water Board finds that the aquatic-life mixing zones and dilution credits in Table F-8 meet the SIP and Basin Plan requirements, as follows:

(1) Shall not compromise the integrity of the entire water body. The approved mixing zone is small relative to Lake Almanor, which has approximately 1,308,000 acre-feet of storage volume and approximately 44 square miles of surface area. The mixing zone is limited to the near-shore area of the lake and does not affect the integrity of Lake Almanor as a whole.

(2) Shall not cause acutely toxic conditions to aquatic life passing through the mixing zone. The Order includes end-of-pipe effluent limitations and discharge prohibitions to control pollutants that could cause acute toxicity, including total residual chlorine. The dilution credits are limited to the amount needed for the applicable aquatic-life WQBEL calculations and are substantially less than the maximum dilution identified in the 2005 study.

(3) Shall not restrict the passage of aquatic life. The discharge enters a large reservoir through a shallow near-shore area. The approved mixing zone is limited in size relative to Lake Almanor and does not block or substantially restrict aquatic-life passage.

(4) Shall not adversely impact biologically sensitive or critical habitats, including habitat of species listed under federal or State endangered species laws. The mixing zone is relatively small, acutely toxic conditions are not expected, and the Order retains effluent limitations and discharge prohibitions to protect designated beneficial uses.

(5-9) Shall not produce undesirable or nuisance aquatic life; result in floating debris, oil, or scum; produce objectionable color, odor, taste, or turbidity; cause objectionable bottom deposits; or cause nuisance. The Order includes technology-based secondary treatment limits, water quality-based effluent

limitations, disinfection/dechlorination requirements, and discharge prohibitions intended to prevent these conditions.

(10) Shall not dominate the receiving water body or overlap a mixing zone from different outfalls. The mixing zone is small relative to Lake Almanor and the available record does not identify another outfall mixing zone in the immediate vicinity of D-001.

(11) Shall not be allowed at or near any drinking water intake. Based on the previous Order and available record, the mixing zone is not at or near a drinking-water intake.

A pollutant-by-pollutant evaluation is provided in subsection v. below to evaluate whether the mixing zones for each pollutant are as small as practicable and comply with the State and federal antidegradation requirements.

v. **Evaluation of Available Dilution for Specific Constituents (Pollutant-by-Pollutant Evaluation)**

When determining whether to allow dilution credits for a specific pollutant, several factors must be considered, such as, available assimilative capacity, facility performance, and compliance with state and federal antidegradation requirements. The receiving water contains assimilative capacity for ammonia, copper, and zinc, and the acute aquatic life criteria, and chronic aquatic life criteria mixing zones meet the mixing zone prohibitions of the SIP section 1.4.2.2.A.

The SIP also requires that “[a] mixing zone shall be as small as practicable” and states in section 1.4.2.2.B that “[t]he RWQCB shall deny or significantly limit a mixing zone and dilution credits as necessary to protect beneficial uses, meet the conditions of this Policy, or comply with other regulatory requirements.” The State Antidegradation Policy, which incorporates the federal antidegradation policy (State Water Board Order WQ 86-17 [Fay]), requires that existing quality of waters be maintained unless degradation is justified based on specific findings. Item 2 of the State Antidegradation Policy states:

> “Any activity which produces or may produce a waste or increased volume or concentration of waste and which discharges or proposes to discharge to existing high quality waters will be required to meet waste discharge requirements which will result in the best practicable treatment or control of the discharge necessary to assure that (a) a pollution or nuisance will not occur and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained.”

The mixing zones allowed in this Order are as small as practicable and will result in the Discharger implementing best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

A pollutant-by-pollutant evaluation is provided below that evaluates facility performance and percent assimilative capacity used for each pollutant.

(a) **Ammonia.** As outlined above, acute and chronic aquatic life criteria mixing zones for ammonia and a dilution credit of 11 and 17, respectively, meet the eleven mixing zone prohibitions of section 1.4.2.2.A of the SIP. Furthermore, considering Facility performance and compliance with the state and federal antidegradation requirements, the mixing zones are as small as practicable and comply with section 1.4.2.2.B of the SIP.

This Order is retaining the ammonia AMEL of 8.4 mg/L and increasing the AWEL from 15 mg/L in Order R5-2021-0022 to 21 mg/L based on effluent variability. Therefore, no additional use of assimilative capacity is being authorized by this Order. The effluent limits continue to result in the implementation of best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

(b) **Copper.** As outlined above, acute and chronic aquatic life criteria mixing zones for copper and a dilution credit of 14 and 12.5, respectively, meet the eleven mixing zone prohibitions of section 1.4.2.2.A of the SIP. Furthermore, considering Facility performance and compliance with the state and federal antidegradation requirements, the mixing zones are as small as practicable and comply with section 1.4.2.2.B of the SIP.

This Order is retaining the copper AMEL of 34 µg/L and lowering the MDEL from 75 µg/L in Order R5-2021-0022 to 64 µg/L based on the allowance of the mixing zone. Therefore, no additional use of assimilative capacity is being authorized by this Order. The effluent limits continue to result in the implementation of best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

(c) **Zinc.** As outlined above, acute and chronic aquatic life criteria mixing zones for zinc and a dilution credit of 2.3 and 1.2, respectively, meet the eleven mixing zone prohibitions of section 1.4.2.2.A of the SIP. Furthermore, considering Facility performance and compliance with the state and federal antidegradation requirements, the mixing zones are as small as practicable and comply with section 1.4.2.2.B of the SIP.

The allowance of a mixing zone and dilution credits are a discretionary act by the Central Valley Water Board. The mixing zones and dilution credits for zinc permitted in this Order will result in a minor increase in the discharge (i.e., use 0.1 percent of the available assimilative capacity in the receiving water). According to U.S. EPA's memorandum on Tier 2 Antidegradation Reviews and Significance Thresholds, any individual decision to lower water quality for nonbioaccumulative chemicals that is limited to 10 percent of the available assimilative capacity represents minimal risk to the receiving water and is fully consistent with the objectives and goals of the Clean Water Act. Per U.S. EPA guidance a simple antidegradation analysis is appropriate in this case. Furthermore, considering existing Facility performance and the de minimis impact on the receiving water, the effluent limits will result in the implementation of best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

Based on the findings above, this Order grants mixing zones and dilution credits that have been used for the calculation of WQBELs for ammonia, copper, and zinc. The dimensions of the mixing zones and allowable dilution credits are shown in Table F-8, below.

Table F-8. Mixing Zones and Dilution Credits

Parameter	Mixing Zone Type	Allowed Dilution Credit (	Mixing Zone Size/Basis
Ammonia	Acute and Chronic Aquatic Life	Acute:11 Chronic:17	Near-shore mixing zone
Copper	Acute and Chronic Aquatic Life	Acute:14 Chronic:12.5	Near-shore mixing zone
Zinc	Acute and Chronic Aquatic Life	Acute:2.3 Chronic:1.2	Near-shore mixing zone

Table F-8. Notes:

1. The 2005 dilution study found approximately 5:1 to 8:1 dilution in the drainage channel approximately 400 feet upstream of Lake Almanor and up to approximately 658:1 dilution approximately 550 feet from the shoreline after the discharge entered Lake Almanor.

d. **Conversion Factors.** The default U.S. EPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total criteria when developing effluent limitations for CTR metals, including copper and zinc. Furthermore, a default Water Effects Ratio (WER) of 1 was used when developing effluent limitations for copper and zinc. Per the Reopener Provisions of this Order, if the Discharger performs studies to determine site-specific WERs or dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

e. **Hardness-Dependent CTR Metals Criteria.** The CTR and the NTR contain water quality criteria for seven metals that vary as a function of hardness. The lower the hardness the lower the water quality criteria. The metals with hardness-dependent criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc. This Order has established the criteria for hardness-dependent metals, copper and zinc based on the hardness of the receiving water (actual ambient hardness) as required by the SIP and the CTR.

Available receiving-water hardness data for Lake Almanor is limited. The data used for this permit include an upstream Monitoring hardness of 34.1 mg/L as CaCO3 at RSW-001 on 3 May 2023, and 37 mg/L as CaCO3 at downstream Monitoring Location RSW-002 on 3 May 2023. The updated RPA and WQBEL calculations use the upstream receiving-water hardness value of 34.1 mg/L as CaCO3. The Central Valley Water Board finds that use of this conservative receiving-water hardness value and the associated acute and chronic criteria shown in Table F-9 is protective of beneficial uses and complies with the SIP, CTR, and Basin Plan.

The Central Valley Water Board finds that use of the downstream receiving water hardness value of 37 mg/L as CaCO3, and the associated acute and chronic criteria shown in Table F-9, to conduct the reasonable potential analysis (RPA) for hardness-dependent metals is protective of beneficial uses under ambient receiving water conditions and complies with the SIP, CTR, and Basin Plan. For WQBEL calculations, the Central Valley Water Board used a hardness value of 34 mg/L as CaCO3, in conjunction with the authorized pollutant-specific dilution credits.

Table F-9. Summary of Criteria for CTR Hardness-Dependent Metals

CTR Metals	Ambient Hardness (mg/L)	Acute Criteria (µg/L, total)	Chronic Criteria (µg/L, total)
Copper	37	5.5	4
Chromium III	37	770	92
Cadmium	37	1.5	1.1
Lead	37	23	0.9
Nickel	37	202	22
Silver	37	0.7	--
Zinc	37	52	52

Table F-9. Notes:

1. **Criteria (µg/L total).** Acute and chronic criteria were rounded to two significant figures in accordance with the CTR (40 C.F.R. section 131.38(b)(2)).
2. **Ambient hardness (mg/L).** Values in Table F-9 represent actual observed receiving water hardness measurements of 37 mg/L at RSW-002.
3. **Copper and Zinc.** This Order allows a mixing zone for Copper and Zinc. The ambient hardness shown above is only appropriate for conducting the RPA, because dilution has not been considered. As discussed in section IV.C.2.c, when considering dilution to calculate the WQBELs the appropriate ambient hardness is 34 mg/L (as $CaCO_3$) based solely on upstream receiving water hardness.

3. Determining the Need for WQBELs

Clean Water Act section 301(b)(1)(C) requires effluent limitations necessary to meet water quality standards, and 40 C.F.R. section 122.44(d) requires NPDES permits to include conditions that are necessary to achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality. Federal regulations at 40 C.F.R 122.44(d)(1)(i) state, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Additionally, 40 C.F.R. section 122.44(d)(1)(vii) requires effluent limits to be developed consistent with any available WLAs developed and approved for the discharge. The process to determine whether a WQBEL is required as described in 40 C.F.R. section 122.44(d)(1)(i) is referred to as a reasonable potential analysis or RPA. Central Valley Water Board staff conducted RPAs for nearly 200 constituents, including the 126 U.S. EPA priority toxic pollutants. This section includes details of the RPAs for constituents of concern for the

Facility. The entire RPA is included in the administrative record and a summary of the constituents of concern is provided in Attachment G.

For priority pollutants, the SIP dictates the procedures for conducting the RPA. For non-priority pollutants the Central Valley Water Board is not restricted to one particular RPA method; therefore, the RPAs have been conducted based on U.S. EPA guidance considering multiple lines of evidence and the site-specific conditions of the discharge. Ammonia, acute toxicity, chlorine residual, nitrate plus nitrite, pH, pathogens, and temperature are not priority pollutants. Due to the site-specific conditions of the discharge, the Central Valley Water Board has used professional judgment in determining the appropriate method for conducting the RPA for these non-priority pollutant parameters based on a qualitative assessment as recommended by U.S. EPA guidance. U.S. EPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "State implementation procedures might allow, or even require, a permit writer to determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available…A permitting authority might also determine that WQBELs are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBELs for pathogens in all permits for POTWs discharging to contact recreational waters)." U.S. EPA's TSD also recommends that factors other than effluent data should be considered in the RPA, "When determining whether or not a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants or for toxicity, the regulatory authority can use a variety of factors and information where facility-specific effluent monitoring data are unavailable. These factors also should be considered with available effluent monitoring data." With regard to POTWs, U.S. EPA recommends that, "POTWs should also be characterized for the possibility of chlorine and ammonia problems." (TSD, p. 50)

a. **Constituents with No Reasonable Potential.** Central Valley Water Board staff conducted reasonable potential analyses for nearly 200 constituents, including the 126 U.S. EPA priority toxic pollutants. All reasonable potential analyses are included in the administrative record and a summary of the constituents of concern is provided in Attachment G. WQBELs are not included in this Order for constituents that do not demonstrate reasonable potential to cause or contribute to an instream excursion of an applicable water quality objective; however, monitoring for those pollutants is established in this Order as required by the SIP. If the results of effluent monitoring demonstrate reasonable potential, this Order may be reopened and modified by adding an appropriate effluent limitation.

   Most constituents with no reasonable potential are not discussed in this Order. This section only provides the rationale for the reasonable potential

analyses for the following constituents of concern that were found to have no reasonable potential after assessment of the data:

i. pH

(a) **WQO.** The Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "pH shall not be depressed below 6.5 nor raised above 8.5."

(b) **RPA Results.** Federal regulations at 40 C.F.R. §122.44(d)(1)(i) requires that, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." For priority pollutants, the SIP dictates the procedures for conducting the RPA. pH is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to the site-specific conditions of the discharge, the Central Valley Water Board has used professional judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.

The effluent pH ranged from 6.6 to 10.6 based on 756 samples collected between March 2023 through March 2026. The upstream receiving water pH ranged from 8.34 to 8.75 based on 4 samples collected in May 2023. The downstream receiving water pH ranged from 8.6 to 8.82 based on 4 samples collected in May 2023.

There are times during the allowable discharge period when the pH in the upstream and downstream receiving water is above the Basin Plan objective of 8.5. However, review of paired upstream, downstream, and effluent pH data does not indicate that the pH in the effluent has a measurable impact on the pH in the receiving water.

Based on the paired effluent and receiving water data, the dilution in the receiving water is always greater than 20:1, the Central Valley Water Board finds that the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Basin Plan water quality objectives for pH. Therefore, this Order does not include WQBEL's for pH. However, as discussed in section IV.B.2 of this Fact Sheet, this Order includes technology-based minimum and maximum

effluent limitations of 6.0 and 9.0, respectively, based on the secondary treatment standards at 40 C.F.R. part 133.

ii. **Salinity**

(a) **WQO.** Basin Plan section 3.1 contains a WQO for chemical constituents that incorporates state MCLs (Cal. Code Regs., tit. 22, §§ 64431, 64444, 64449), contains a narrative objective, and contains numeric site-specific WQOs for certain specified water bodies for electrical conductivity (EC), total dissolved solids (TDS), and chloride. The U.S. EPA Ambient Water Quality Criteria for Chloride recommends acute and chronic criteria for the protection of aquatic life. There are no U.S. EPA water quality criteria for the protection of aquatic life for EC, TDS, and/or sulfate. Additionally, there are no U.S. EPA numeric water quality criteria for the protection of agricultural, livestock, and industrial uses. Numeric values for the protection of these uses are typically based on site specific conditions and evaluations to determine the appropriate constituent threshold necessary to implement the Basin Plan's narrative WQO for chemical constituents. The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply. Table F-10, below, contains various recommended levels for EC or TDS, sulfate, and chloride.

Table F-10. Salinity Water Quality Criteria/Objectives

Parameters	Secondary MCL Recommended Level.	Secondary MCL Upper Level	Secondary MCL Short-term Maximum	U.S. EPA NAWQC	Maximum Calendar Annual Average Effluent Concentration	Maximum Daily Effluent Concentration
EC (µmhos/cm) or TDS (mg/L)	EC 900 or TDS 500	EC 1,600 or TDS 1,000	EC 2,200 or TDS 1,500	N/A	EC 180 (2024); TDS 131 (2024)	EC 250 (8 December 2025); TDS 160 (3 September 2025)
Sulfate (mg/L)	250	500	600	N/A	No Data	No Data
Chloride (mg/L)	250	500	600	860 1-hour / 230 4-day	10.6 (2024)	10.6 (25 May 2023)

Table F-10. Notes:

1. **Agricultural Water Quality Objectives.** Applicable agricultural water quality objectives vary. Basin Plan section 4.2 contains a Policy for Application of Water Quality Objectives, which provides procedures for establishing numeric water quality objectives to implement the narrative water quality objective for chemical constituents. The Basin Plan does not require improvement over naturally occurring background concentrations. In cases where the natural background concentration of a particular constituent exceeds an applicable water quality objective, the natural background concentration will be considered to comply with the objective.
2. **Secondary MCLs.** Secondary MCLs are for protection of public welfare and are stated as a recommended level, upper level, and a short-term maximum level. Per the Basin Plan, "Recommended" concentrations are not water quality objectives per se, but should be considered water resource management goals. For waters designated for MUN beneficial use, constituent concentrations ranging to "Upper" concentration levels are only acceptable if authorized by the Central Valley Water Board based on a demonstration that it is not reasonable or feasible to achieve lower levels. Concentrations exceeding "Upper" concentration levels may only be permitted in accordance with the provisions of Title 22. (See Cal. Code Regs., tit. 22, § 64449.)

(b) **RPA Results.**

(1) **Chloride.** Chloride concentrations in the effluent ranged from 9.65 mg/L to 10.6 mg/L, with the highest annual average of 10.6 mg/L, for three samples collected from March 2023 through March 2026. These levels do not exceed the Secondary MCL WQO or the U.S. EPA water quality criteria for the protection of aquatic life.

(2) **Electrical Conductivity or Total Dissolved Solids.** A review of the Discharger's monitoring report shows an average effluent EC of 170 µmhos/cm, with a range from 114 µmhos/cm to 294 µmhos/cm. The maximum annual average between 2023-2026 is 196 µmhos/cm. These levels do not exceed the Secondary MCL WQO. The available background receiving water EC was 92 µmhos/cm at RSW-001 during the May 2023 discharge event. The average TDS effluent concentration was 130 mg/L with concentrations ranging from 160 mg/L to 104 mg/L. The maximum annual average between 2023-2026 is 133 µmhos/cm. These levels do not exceed the Secondary MCL WQO The available background receiving water TDS concentration was 50 mg/L at RSW-001 during the May 2023 discharge event.

(3) **Sulfate.** Sulfate was not sampled in the effluent or receiving water during the previous permit term.

(c) **WQBELs.**

As discussed above, the discharge does not have reasonable potential to cause or contribute to an in-stream excursion of WQOs for salinity. On 17 January 2020, certain amendments to the Basin Plan incorporating a Program to Control and Permit Salt Discharges to Surface and Groundwater (Salt Control Program) became effective. Other amendments became effective on 2 November 2020 when approved by the U.S. EPA. The Salt Control Program is a three-phased program, with each phase lasting 10 to 15 years. The Basin Plan requires all salt dischargers to comply with the provisions of the program. Two compliance pathways are available for salt dischargers during Phase 1.

The Phase 1 Compliance pathways are: 1) Conservative Salinity Permitting Approach, which utilizes the existing regulatory structure and focuses on source control and conservative salinity limits on the discharge, and limits the use of assimilative capacity and compliance time schedules; and 2) Alternative Salinity Permitting Approach, which is an alternative approach to compliance through implementation of specific requirements, such as participating in the Salinity Prioritization and Optimization Study (P&O Study), rather than the application of conservative discharge limits.

The Discharger submitted a Notice of Intent for the Salt Control Program indicating its intent to meet the Alternative Salinity Permitting Approach. This Order requires implementation of a Salinity Evaluation and Minimization Plan, participation in the Salinity P&O Study, and includes a performance-based trigger for EC, consistent with the Alternative Salinity Permitting Approach.

iii. **Nitrate and Nitrite**

(a) **WQO**. DDW has adopted Primary MCLs for the protection of human health for nitrite and nitrate that are equal to 1 mg/L and 10 mg/L (measured as nitrogen), respectively. DDW has also adopted a Primary MCL of 10 mg/L for the sum of nitrate and nitrite, measured as nitrogen.

U.S. EPA has developed a primary MCL and an MCL goal of 1 mg/L for nitrite (as nitrogen). For nitrate, U.S. EPA has developed Drinking Water Standards (10 mg/L as Primary MCL) and NAWQC for protection of human health (10 mg/L for non-cancer health effects).

The Basin Plan (Table 2-1) identifies surface water bodies and beneficial uses, including those for Lake Almanor. The Basin Plan does not designate municipal and domestic supply as a beneficial use for Lake Almanor. Therefore, this Order does not apply the municipal and domestic water supply beneficial use to discharges to Lake Almanor and human health criteria for nitrate and nitrite are not applicable to the discharge.

(b) **RPA Results.** Since there are no applicable nitrate or nitrite water quality criteria for use in determining reasonable potential, reasonable potential does not exist for nitrate and nitrite. Furthermore, Lake Almanor discharges to the north fork of the Feather River. Municipal and domestic supply is assigned as an existing beneficial use of the north fork of the Feather River. However, the discharge would not cause an exceedance of water quality objectives in the north fork of the Feather River due to mixing occurring in Lake Almanor. Therefore, this Order does not contain surface water discharge effluent limitations for nitrate and nitrite.

b. **Constituents with No Data or Insufficient Data.** No parameters.

c. **Constituents with Reasonable Potential.** The Central Valley Water Board finds that the discharge has a reasonable potential to cause or contribute to an instream excursion above a water quality standard for ammonia, copper, total coliform organisms, and zinc. WQBELs for these constituents are included in this Order. A summary of the RPA is provided in Attachment G, and a detailed discussion of the RPA for each constituent is provided below.

i. **Ammonia**

(a) **WQO.** The 2013 U.S. EPA NAWQC for the protection of freshwater aquatic life, for total ammonia, recommends acute (1-hour average; CMC) and chronic (30-day average; CCC) standards based on pH and temperature. U.S. EPA also recommends that no 4-day average concentration should exceed 2.5 times the 30-day CCC. The NAWQC reflects the latest scientific knowledge on the toxicity of ammonia to certain freshwater aquatic life, including toxicity data on sensitive freshwater unionid mussels, non-pulmonary snails, and other freshwater organisms.

The Central Valley Clean Water Association (CVCWA) organized a coordinated effort for POTWs within the Central Valley Region, the Freshwater Mussel Collaborative Study for Wastewater Treatment Plants, to determine how the latest scientific knowledge on the toxicity of ammonia reflected in the

NAWQC could be implemented in the Central Valley Region. Through this effort, a Criteria Recalculation Report was developed in January 2020 using toxicity studies for the freshwater mussel species present in Central Valley Region waters.

The Criteria Recalculation Report implemented U.S. EPA's Recalculation Procedure utilizing toxicity bioassays conducted on resident mussel species to replace the toxicity data for the eastern mussel species in the national dataset to develop site-specific ammonia criteria for waters within the Central Valley Region, including all surface waters in the Sacramento River, San Joaquin River, and Tulare Lake Basin Plans.

U.S. EPA Office of Science and Technology reviewed and approved the Criteria Recalculation Report with a more conservative approach for utilizing the acute-to-chronic ratio procedure for developing the site-specific chronic criterion. The Central Valley Water Board finds that the site-specific ammonia criteria provided in the January 2020 Criteria Recalculation Report is sufficient to implement the Basin Plan's narrative toxicity objective for chemical constituents and to protect aquatic life beneficial uses of the receiving water.

Site-specific Criteria for Lake Almanor. The recalculated site-specific criteria developed in the Criteria Recalculation Report for the acute and chronic criteria are presented as equations that vary according to pH and temperature for situations where freshwater mussels are present and where they are absent. In this case, for the Lake Almanor, freshwater mussels have been assumed to be present. In addition, the recalculated criteria include equations that provide enhanced protection for important salmonid species in the genus Oncorhynchus, which can be implemented for receiving waters where salmonid species are present. Because the Lake Almanor has a beneficial use of cold freshwater habitat and the presence of salmonids in Lake Almanor is well-documented, the criteria equations for waters where salmonids are present were used.

The acute (1-hour average) criterion or CMC was calculated using paired effluent pH and temperature data, collected during the period from March 2023 and March 2026. The most stringent CMC of 9.6 mg/L (ammonia as N) calculated has been implemented in this Order based on paired effluent pH of 7.7 and temperature of 18° C.

The chronic (30-day average) criterion or CCC was calculated using paired downstream receiving water pH and temperature data, collected during the period from March 2023 and March 2026. The most stringent 30-day rolling average CCC of 0.45 mg/L (ammonia as N) has been implemented in this Order based on 30-day average downstream receiving water pH of 8.7 and temperature of 19.5°C. Only one 30-day window of paired receiving-water data was available, from the May 2023 discharge event.

The chronic (4-day average) concentration is derived in accordance with the U.S. EPA criterion as 2.5 times the 30-day CCC. Based on the 30-day CCC of 0.45 mg/L (ammonia as N), the 4-day average concentration that should not be exceeded is 1.13 mg/L (ammonia as N).

(b) **RPA Results.** The Facility is a POTW that treats domestic wastewater. Untreated domestic wastewater contains ammonia in concentrations that are harmful to aquatic life and exceed the Basin Plan narrative WQO for toxicity. Inadequate or incomplete treatment may result in the discharge of ammonia to the receiving stream, which creates the basis for the discharge to have a reasonable potential to cause or contribute to an instream excursion above the site-specific acute and chronic criteria for ammonia provided by the January 2020 Criteria Recalculation Report. Therefore, the Central Valley Water Board finds the discharge has reasonable potential for ammonia and WQBELs are required.

(c) **WQBELs.** Ammonia is a non-CTR constituent. The Central Valley Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents.

The ammonia criteria used in the development of WQBELs was calculated based on ambient receiving water conditions. Therefore, applicable upstream receiving water pH and temperature collected by the Discharger was used to determine criteria to calculate the effluent concentration allowance according to the SIP.

The CMC of 2.14 mg/L was calculated using paired upstream receiving water pH and temperature data (pH = 8.5, temperature = 19.72°C).

The CCC of 0.62 mg/L was calculated using paired 30-day rolling average upstream receiving water pH and temperature data (pH = 8.5, temperature = 20.3°C).

The SIP procedure assumes a 4-day averaging period for calculating the long-term average discharge condition (LTA). However, U.S. EPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day CCC. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA corresponding to the 30-day CCC was calculated assuming a 30-day averaging period.

The receiving water contains assimilative capacity for ammonia, therefore, as discussed further in section IV.C.2.c, acute and chronic aquatic life dilution credits of 11 and 17, respectively, was allowed in the development of the WQBELs for ammonia. This Order contains a final average monthly effluent limitation (AMEL) and average weekly effluent limitation (AWEL) for ammonia of 8.4 mg/L and 21 mg/L, respectively, based on the site-specific ammonia criteria for Lake Almanor.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows one exceedance of the applicable AMEL during the previous permit term; however, the Central Valley Water Board contends that immediate compliance with these effluent limitations is feasible. Furthermore, the one exceedance occurred during a period of discharge to land.

ii. **Chlorine Residual**

(a) **WQO.** U.S. EPA developed NAWQC for protection of freshwater aquatic life for chlorine residual. The recommended 4-day average (chronic) and 1-hour average (acute) criteria for chlorine residual are 0.011 mg/L and 0.019 mg/L, respectively. These criteria are protective of the Basin Plan's narrative toxicity objective.

(b) **RPA Results.** The concentrations of chlorine used to disinfect wastewater are high enough to harm aquatic life and violate the Basin Plan narrative toxicity objective if discharged to the receiving water. Reasonable potential therefore does exist and effluent limits are required.

The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. Although the Discharger uses a sodium bisulfite process to dechlorinate the effluent prior to discharge to Lake Almanor, the existing chlorine use and the potential for chlorine to be discharged provides the basis for the

discharge to have a reasonable potential to cause or contribute to an instream excursion above the NAWQC.

(c) **WQBELs.** The U.S. EPA's TSD for Water Quality-Based Toxics Control [EPA/505/2-90-001] contains statistical methods for converting chronic (4-day) and acute (1-hour) aquatic life criteria to average monthly and maximum daily effluent limitations based on the variability of the existing data and the expected frequency of monitoring. However, because chlorine is an acutely toxic constituent that can and will be monitored continuously, an average 1-hour limitation is considered more appropriate than an average daily limitation. This Order contains a 4-day average effluent limitation and 1-hour average effluent limitation for chlorine residual of 0.011 mg/L and 0.019 mg/L, respectively, based on U.S. EPA's NAWQC, which implements the Basin Plan's narrative toxicity objective for protection of aquatic life.

(d) **Plant Performance and Attainability.** The Discharger uses sodium bisulfite to dechlorinate the effluent prior to discharge to Lake Almanor. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iii. **Copper**

(a) **WQO.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for copper. These criteria for copper are presented in dissolved concentrations, as 1-hour acute criteria and 4-day chronic criteria. As discussed in section IV.C.2.d of this Fact Sheet, default U.S. EPA translators were used to translate dissolved concentrations to total concentrations.

(b) **RPA Results.** The maximum effluent concentration for copper, collected at LND-007 was 26.8 µg/L, based on 58 samples collected between March 2023 and March 2026. The maximum observed upstream receiving water copper concentration was 0.8 µg/L, based on two samples collected between March 2023 and March 2026. The RPA was conducted using the upstream receiving water hardness to calculate the criteria for comparison to the maximum ambient background concentration and likewise using the ambient receiving water hardness discussed in section IV.C.2.e of this Fact Sheet to compare the maximum effluent concentration. The table below shows the specific criteria used for the RPA:

Table F-11. Copper RPA Criteria

Water Type	CTR Chronic Criterion (Total)	Maximum Concentration (Total)	Criteria Exceeded? (Y/N)
Receiving Water	3.7 µg/L	0.8 µg/L	No
Effluent	4 µg/L	26.8 µg/L	Yes

Table F-11. Notes:

1. **Receiving Water.** The CTR Chronic Criterion (Total) for the receiving water is based on lowest observed upstream hardness of 34.1 mg/L (as $CaCO_3$).
2. **Effluent.** The CTR Chronic Criterion (Total) for the effluent is based on receiving water design ambient hardness of 37 mg/L (as $CaCO_3$).

   Based on the available data, the maximum effluent concentration exceeded the applicable criteria. Therefore, per section 1.3, step 6 of the SIP, copper in the discharge has a reasonable potential to cause or contribute to an instream excursion above the CTR criteria for the protection of freshwater aquatic life.

(c) **WQBELs.** This Order contains a final average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL) for copper, total recoverable of 34 µg/L and 64 µg/L, respectively. The WQBELs were calculated with the allowance of acute and chronic aquatic life criteria mixing zones and dilution credits based on the CTR criteria for the protection of freshwater aquatic life as discussed in section IV.C.2.c of this Fact Sheet.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the maximum effluent concentration of 26.8 µg/L is less than the applicable WQBELs. The Central Valley Water Board concludes that immediate compliance with these effluent limitations is feasible.

iv. **Pathogens**

(a) **WQO.** In a letter to the Central Valley Water Board dated 8 April 1999, DDW indicated it would consider wastewater discharged to water bodies with identified beneficial uses of irrigation or contact recreation and where the wastewater receives dilution of more than 20:1 to be adequately disinfected if the effluent coliform concentration does not exceed 23

MPN/100 mL as a 7-day median and if the effluent coliform concentration does not exceed 240 MPN/100 mL more than once in any 30 day period. Based on a review of data submitted by the Discharger and the period of record for the United States Geological Survey monitoring stations on Lake Almanor, there is at least a 20:1 (flow to design effluent flow) dilution available at all times.

(b) **RPA Results.** Raw domestic wastewater inherently contains human pathogens that threaten human health and life, and constitute a threatened pollution and nuisance under CWC section 13050 if discharged untreated to the receiving water. Water contact recreation is the beneficial uses of the Lake Almanor. Although the Discharger provides disinfection, inadequate or incomplete disinfection creates the potential for pathogens to be discharged. Therefore, the Central Valley Water Board finds the discharge has reasonable potential for pathogens and WQBELs are required.

(c) **WQBELs.** Pursuant to guidance from DDW, this Order includes effluent limitations for total coliform organisms of 23 MPN/100 mL as a 7-day median and 240 MPN/100 mL, not to be exceeded more than once in a 30-day period. These total coliform organisms limits are imposed to protect the beneficial uses of the receiving water, including public health through contact recreation.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows exceedances of the applicable WQBELs; however, as discussed in Section II.E of this Fact Sheet, the Discharger is planning for Facility improvements to address recent total coliform organism exceedances, and once improvements are completed, the Discharger expects to comply with the proposed limitations in this Order.

v. **Zinc**

(a) **WQO.** The CTR includes hardness-dependent criteria for the protection of freshwater aquatic life for zinc. These criteria for zinc are presented in dissolved concentrations, as 1-hour acute criteria and 4-day chronic criteria. As discussed in section IV.C.2.d of this Fact Sheet, default U.S. EPA translators were used to translate dissolved concentrations to total concentrations.

(b) **RPA Results.** The maximum effluent concentration for zinc was 89.4 µg/L based on 11 samples collected between March 2023

and March 2026. The maximum observed upstream receiving water zinc concentration was ND (< 0.3) µg/L, based on one sample collected on 22 January 2025. The RPA was conducted using the upstream receiving water hardness to calculate the criteria for comparison to the maximum ambient background concentration, and likewise using the ambient receiving water hardness shown in section IV.C.2.e of this Fact Sheet to compare the maximum effluent concentration. The table below shows the specific criteria used for the RPA:

Table F-12. Zinc RPA Criteria

Water Type	CTR Chronic Criterion (Total)	Maximum Concentration (Total)	Criteria Exceeded? (Y/N)
Receiving Water	48 µg/L	ND (< 0.3 µg/L)	No
Effluent	52 µg/L	89.4 µg/L	Yes

Table F-12 Notes:

1. **Receiving Water.** The CTR Chronic Criterion (Total) for the receiving water is based on lowest observed upstream hardness of 34.1 mg/L (as CaCO3).
2. **Effluent.** The CTR Chronic Criterion (Total) for the effluent is based on reasonable worst-case downstream hardness of 37 mg/L (as $CaCO_3$).

   Based on the available data, the maximum effluent concentration exceeded the applicable criteria. Therefore, per section 1.3, step 6 of the SIP, zinc, total recoverable in the discharge has a reasonable potential to cause or contribute to an instream excursion above the CTR criteria for the protection of freshwater aquatic life.

(c) **WQBELs.** This Order contains a final average monthly effluent limitation (AMEL) and maximum daily effluent limitation (MDEL) for zinc, total recoverable of 90 µg/L and 156 µg/L, respectively. The WQBELs were calculated with the allowance of acute and chronic aquatic life criteria mixing zones and dilution credits based on the CTR criteria for the protection of freshwater aquatic life as discussed in section IV.C.2.c of this Fact Sheet.

(d) **Plant Performance and Attainability.** Analysis of the effluent and LND-007 data shows that the measured zinc MEC of 89.4 µg/L is less than the final AMEL of 90 µg/L and MDEL of 156

µg/L. The Central Valley Water Board concludes that immediate compliance with these effluent limitations is feasible.

4. WQBEL Calculations

a. This Order includes WQBELs for ammonia, chlorine residual, copper, total coliform organisms, and zinc. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.4.b through e, below. Table H-1 in Attachment H summarizes the aquatic-life WQBEL calculations for ammonia, copper, and zinc. Chlorine residual and total coliform limitations are established directly as described in sections IV.C.3.c.ii and IV.C.3.c.iv, respectively.

b. **Effluent Concentration Allowance.** For each water quality criterion/objective, the ECA is calculated using the following steady-state mass balance equation from section 1.4 of the SIP:

ECA = C + D(C – B) where C>B, and
ECA = C where C≤B

where:

ECA = effluent concentration allowance
D = dilution credit
C= the priority pollutant criterion/objective
B= the ambient background concentration.

According to the SIP, the ambient background concentration (B) in the equation above shall be the observed maximum with the exception that an ECA calculated from a priority pollutant criterion/objective that is intended to protect human health from carcinogenic effects shall use the arithmetic mean concentration of the ambient background samples.

c. **Primary and Secondary MCLs.** For non-priority pollutants with primary MCLs to protect human health (e.g., nitrate plus nitrite), the AMEL is set equal to the primary MCL and the AWEL is calculated using the AWEL/AMEL multiplier, where the AWEL multiplier is based on a 98th percentile occurrence probability and the AMEL multiplier is from Table 2 of the SIP.

For non-priority pollutants with secondary MCLs that protect public welfare (e.g., taste, odor, and staining), WQBELs were calculated by setting the LTA equal to the secondary MCL and using the AMEL multiplier to set the AMEL. The AWEL was calculated using the MDEL/AMEL multiplier from Table 2 of the SIP.

d. **Aquatic Toxicity Criteria.** For priority pollutants with acute and chronic aquatic toxicity criteria, the WQBELs are calculated in accordance with section 1.4 of the SIP. The ECAs are converted to equivalent long-term averages (i.e. LTA_{acute} and $LTA_{chronic}$) using statistical multipliers and the lowest LTA is used to calculate the AMEL and MDEL using additional statistical multipliers. For non-priority pollutants, WQBELs are calculated using similar procedures, except that an AWEL is determined utilizing multipliers based on a 98th percentile occurrence probability.

e. **Human Health Criteria.** For priority pollutants with human health criteria, the WQBELs are calculated in accordance with section 1.4 of the SIP. The AMEL is set equal to the ECA and the MDEL is calculated using the MDEL/AMEL multiplier from Table 2 of the SIP. For non-priority pollutants with human health criteria, WQBELs are calculated using similar procedures, except that an AWEL is established using the MDEL/AMEL multiplier from Table 2 of the SIP.

$$AMEL = mult_{AMEL}\left[\min\left(\overbrace{M_A ECA_{acute}}^{LTA_{acute}}, M_C ECA_{chronic}\right)\right]$$

$$MDEL = mult_{MDEL}\left[\min\left(M_A ECA_{acute}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}}\right)\right]$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

where:

$mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting acute ECA to LTA_{acute}
M_C = statistical multiplier converting chronic ECA to $LTA_{chronic}$

Summary of Water Quality-Based Effluent Limitations
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Table F-13. Summary of Water Quality-Based Effluent Limitations

Parameter	Units	Average Monthly Effluent Limitations	Average Weekly Effluent Limitations	Maximum Daily Effluent Limitations
Ammonia Nitrogen, Total (as N)	mg/L	8.4	21	--
Chlorine, Total Residual	mg/L	--	0.011	0.019
Copper, Total Recoverable	µg/L	34	--	64
Total Coliform Organisms	MPN/100 mL	--	23	240
Zinc, Total Recoverable	µg/L	90	--	156

Table F-13. Notes:

1. **Chlorine, Total Residual** – Average Weekly Effluent Limitation is applied as a 4- day average effluent limitation.
2. Chlorine, Total Residual – Maximum Daily Effluent Limitation is applied as a 1- hour average effluent limitation
3. Total Coliform Organisms – Maximum Daily Effluent Limitation is applied as: Not to exceed 240 MPN/100mL more than once in any 30-day period.
4. Total Coliform Organisms – Average Weekly Effluent Limitation is applied as a 7-day median.

5. Whole Effluent Toxicity (WET)

a. **Chronic Toxicity.** The chronic aquatic toxicity water quality objective is expressed as a null hypothesis and an alternative hypothesis with a regulatory management decision (RMD) of 0.75, where the following null hypothesis, Ho, shall be used

Ho: Mean response (ambient water) ≤ 0.75 • mean response (control)

And where the following alternative hypothesis, Ha, shall be used:

Ha: Mean response (ambient water) > 0.75 • mean response (control)

Attainment of the water quality objective is demonstrated by conducting chronic aquatic toxicity testing and rejecting this null hypothesis in accordance with the Test of Significant Toxicity (TST) statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East

Coast Methods) and Appendix B, Table B-1. When the null hypothesis is rejected, the alternative hypothesis is accepted in its place, and there is no exceedance of the chronic aquatic toxicity water quality objective. Failing to reject the null hypothesis (referred to as a "fail") is equivalent to an exceedance of the chronic aquatic toxicity water quality objective.

To evaluate compliance with the Statewide Toxicity Provisions aquatic toxicity numeric objectives, acute and chronic whole effluent toxicity testing data has been evaluated in the development of this Order.

Tables F-14 through Table F-16 below are the Facility's most recent and only chronic WET testing results performed by the Discharger on 21 February 2017.

Table F-14. Chronic WET Testing Results – *Pimephales promelas*

Date	***Pimephales promelas* Survival TST (Pass/Fail)**	***Pimephales promelas* Survival Percent Effect**	***Pimephales promelas* Growth TST (Pass/Fail)**	***Pimephales promelas* Growth Percent Effect**
2/21/2017	Pass	1.7%	Pass	1.9%

Table F-15. Chronic WET Testing Results – *Selenastrum capricornutum*

Date	***Selenastrum capricornutum* Growth TST (Pass/Fail)**	***Selenastrum capricornutum* Growth Percent *Effect***
2/21/2017	Pass	-28%

Table F-16. Chronic WET Testing Results – *Ceriodaphnia dubia (C. dubia)*

Date	***C.dubia* Survival TST (Pass/Fail)**	***C.dubia* Survival Percent Effect**	***C.dubia* Reproduction TST (Pass/Fail)**	***C.dubia* Reproduction Percent Effect**
2/21/2017	NA	10%	Pass	-12%

i. **RPA.** No dilution has been granted for chronic whole effluent toxicity. Therefore, chronic toxicity testing has been conducted at an instream waste concentration (IWC) of 100 percent effluent. A test result that fails the Test of Significant Toxicity (TST) or has a percent effect of greater than 10 percent at the IWC demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Statewide Toxicity Provisions aquatic toxicity numeric objectives. Based on one and only available chronic toxicity testing conducted on 21 February 2017, there were no fails of the TST and the percent effect was exactly 10 percent, therefore, at this time, the discharge does not have reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions' numeric chronic aquatic toxicity objective and Basin Plan's narrative toxicity objective.

ii. **WQBELs.** Effluent limitations have not been established for chronic whole effluent toxicity because there is no reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions numeric chronic aquatic toxicity objective. Chronic toxicity MMETs and MDETs have been established to protect toxicity objectives in the receiving water.

D. Final Effluent Limitation Considerations

1. Mass-based Effluent Limitations

40 C.F.R section 122.45(f)(1) requires effluent limitations be expressed in terms of mass, with some exceptions, and 40 C.F.R. section 122.45(f)(2) allows pollutants that are limited in terms of mass to additionally be limited in terms of other units of measurement. Pursuant to the exceptions to mass limitations provided in 40 CF.R. section 122.45(f)(1), some effluent limitations are not expressed in terms of mass, such as pH and temperature, and when the applicable standards are expressed in terms of concentration (e.g., CTR criteria and MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

2. Averaging Periods for Effluent Limitations

40 C.F.R. section 122.45 (d) requires average weekly and average monthly discharge limitations for POTWs unless impracticable. For copper and zinc, average weekly effluent limitations have been replaced with maximum daily effluent limitations in accordance with section 1.4 of the SIP. Furthermore for pH, chlorine residual, and total coliform organisms, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in section IV.C.3 of this Fact Sheet.

3. Satisfaction of Anti-Backsliding Requirements

The CWA specifies that a revised permit may not include effluent limitations that are less stringent than the previous permit unless a less stringent limitation is justified based on exceptions to the anti-backsliding provisions contained in CWA sections 402(o) or 303(d)(4), or, where applicable, 40 C.F.R. section 122.44(l).

The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of effluent limitations for acute whole effluent toxicity, electrical conductivity, and zinc. The effluent limitations for these pollutants are less stringent than those in Order R5-2021-0022. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

a. **CWA section 402(o)(1) and 303(d)(4).** CWA section 402(o)(1) prohibits the establishment of less stringent water quality-based effluent limits "*except in compliance with section 303(d)(4)*." CWA section 303(d)(4) has two parts: paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters.

i. For waters where standards are not attained, CWA section 303(d)(4)(A) specifies that any effluent limit based on a TMDL or other WLA may be revised only if the cumulative effect of all such revised effluent limits based on such TMDLs or WLAs will assure the attainment of such water quality standards.

ii. For attainment waters, CWA section 303(d)(4)(B) specifies that a limitation based on a water quality standard may be relaxed where the action is consistent with the antidegradation policy.

Lake Almanor is considered an attainment water for acute whole effluent toxicity, electrical conductivity, and zinc because the receiving water is not listed as impaired on the 303(d) list for this constituent. The exceptions in section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list. As discussed in section IV.D.4, below, relaxation or removal of the effluent limits complies with federal and state antidegradation requirements. Thus, relaxation of effluent limitations for acute whole effluent toxicity, electrical conductivity, and zinc from Order R5-2021-0022 meets the exception in CWA section 303(d)(4)(B).

b. **CWA section 402(o)(2).** CWA section 402(o)(2) provides several exceptions to the anti-backsliding regulations. CWA 402(o)(2)(B)(i) allows a renewed, reissued, or modified permit to contain a less stringent effluent limitation for a pollutant if information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

As described further in sections IV.C.5 (toxicity), IV.C.3.a.ii (electrical conductivity), and IV.C.3.c.v (zinc) of this Fact Sheet, updated information that was not available at the time Order R5-2021-0022 was issued indicates that acute whole effluent toxicity and electrical conductivity do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. Additionally, updated information that was not available at the time Order R5-2021-0022 was issued indicates that less stringent effluent limitations for zinc based on available dilution credits satisfy requirements in CWA section 402(o)(2). The updated information that supports the relaxation of effluent limitations for these constituents includes the following:

i. **Acute whole effluent toxicity.** This Order removes the effluent limitation for acute whole effluent toxicity per standard approach under the new Statewide Toxicity Provisions, because chronic toxicity testing is generally protective of both acute and chronic toxicity. This Order includes whole effluent toxicity monitoring and MMET and MDET targets, consistent with the Statewide Toxicity Provisions.

ii. **Electrical Conductivity (EC).** Effluent monitoring data collected from March 2023 through March 2026 indicate that EC in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Secondary MCL WQO. The Discharger is participating in the CV-SALTS Salt Control Program's Alternative Pathway and is expected to follow best management practices. This Order removes the effluent limitation for EC and establishes a performance-based effluent trigger for EC in accordance with the Alternative Pathway.

iii. **Zinc.** As described in section IV.C.3.c.v of this Fact Sheets, criteria for total recoverable zinc are hardness-dependent. Based on updated effluent and receiving water hardness data from March 2023 through March 2026, this Order includes a less stringent AMEL for zinc.

c. **Ammonia.** For ammonia, the AWEL has changed from the previous Order. However, the effluent limit is not less stringent. In this case, the waste load allocation (WLA) in this Order and the previous Order are identical. The WLA provides a definition of effluent quality that is necessary to meet the water quality standards of the receiving water and is used to derive WQBELs that are used to enforce the WLA.

The TSD warns that, "*Direct use of a WLA as a permit limit creates a significant risk that the WLA will be enforced incorrectly, since effluent variability and the probability basis for the limit are not considered specifically.*" (TSD, p. 96) The SIP and TSD include identical procedures for calculating WQBELs that use the statistical variability of the effluent to convert the WLA to AMELs and MDELs.

The new effluent data used to calculate WQBELs for this Order has different statistical variability (i.e., coefficient of variation (CV) is different) than used in the previous Order. Changes in the CV can result in small changes to the effluent limits. However, the slight changes in effluent limits do not allow for an increase in the pollutants discharged. The TSD states, "*Since effluents are variable and permit limits are developed based on a low probability of exceedance, the permit limits should consider effluent variability and ensure that the requisite loading from the WLA is not exceeded under normal conditions. In effect then, the limits must "force" treatment plant performance, which, after considering acceptable effluent variability, will only have a low statistical probability of exceeding the WLA*

and will achieve the desired loadings." (TSD, p. 97) Therefore, although there are slight differences in the effluent limit, the WLA is identical, so the level of treatment needed to maintain compliance with the effluent limit remains the same. Consequently, the effluent limit is not less stringent than the previous Order, and there is no backsliding.

WQBELs for ammonia were calculated based on monitoring data collected between March 2023 and March 2026, which is representative of current treatment plant performance. Therefore, Central Valley Water Board staff considers this effluent data to be the most representative and reliable dataset to use to determine current Facility performance and development of WQBELs.

The AWEL for ammonia in this Order was calculated as a higher value than in previous Order R5-2021-0022. However, the AMEL remains the same. The WQBELs in both Orders are based on the same WLA (i.e., the WLA is based on the aquatic life ambient water quality criteria for ammonia). The reason for the change in the AWEL is due to a change in the variability of the effluent data for ammonia. The WQBELs, however, are equally protective of the beneficial uses. The level of treatment needed to maintain compliance with the effluent limits remains the same. Consequently, the effluent limits are not less stringent than the previous permit, and there is no backsliding.

This Order removes generalized receiving surface water limitations contained in the discharger's prior waste discharge requirements. The removal of this requirement is consistent with the U.S. Supreme Court's holding in the case of the *City and County of San Francisco vs. U.S. Environmental Protection Agency* (2025) 145 U.S. 604. However, as discussed in Attachment F, section V.A, the Board has included additional requirements to ensure the discharge complies with Clean Water Act section 301(b)(1)(C) (33 U.S.C. § 1311(b)(1)(C)). As a result, the discharge does not authorize violations of water quality standards, and the removal of the generalized receiving surface water limitations does not authorize the additional discharge of pollutants or authorize the violation of water quality standards. The order does not, therefore, authorize either backsliding or further degradation of water quality.

4. Antidegradation Policies

This Order removes effluent limitations for acute whole effluent toxicity based on updated monitoring data demonstrating that the effluent does not cause or contribute to an exceedance of the applicable water quality criteria or objectives in the receiving water. This Order relaxes effluent limitations for zinc based on the allowance of mixing zones in accordance with the Basin Plan, the SIP, U.S. EPA's Water Quality Standards Handbook, and the TSD. The removal and relaxation of WQBELs for these parameters will not result in an increase in

pollutant concentration or loading, a decrease in the level of treatment or control, or a reduction of water quality. Therefore, the Central Valley Water Board finds that the removal and relaxation of the effluent limitations does not result in an increase in pollutants or any additional degradation of the receiving water. Thus, the removal and relaxation of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

This Order also removes MDELs and mass-based effluent limitations for BOD_5 and TSS, and the mass-based effluent limitation for ammonia based on 40 CFR parts 122.45 (d) and (f). The removal of the MDELs and mass-based effluent limits for BOD_5 and TSS, and the mass-based effluent limit for ammonia will not result in a decrease in the level of treatment or control or a reduction in water quality.

Furthermore, both concentration-based AMELs and AWELs remain for ammonia, BOD_5 and TSS. The combination of concentration-based effluent limits and a flow prohibition in this Order are equivalent to mass-based effluent limitations, which were redundant limits contained in previous Orders by multiplying the concentration-based effluent limits and permitted average dry weather flow by a conversion factor to determine the mass-based effluent limitations. The Central Valley Water Board finds that the removal of the MDELs and mass-based effluent limits for BOD_5 and TSS, and the mass-based effluent limit for ammonia does not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of the MDELs and mass-based effluent limits for BOD_5 and TSS, and the mass-based limit for ammonia is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

a. **Surface Water.** The permitted surface water discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy. Compliance with these requirements will result in the use of BPTC of the discharge. The impact on existing water quality will be insignificant.

b. **Groundwater.** The Discharger utilizes constructed wetland ponds for disposal of municipal wastewater. Domestic wastewater contains constituents such as total dissolved solids (TDS), specific conductivity, pathogens, nutrients, organics, metals, and oxygen-demanding substances (BOD). Percolation from the constructed wetland ponds may result in an increase in the concentration of these constituents in groundwater.

The State Antidegradation Policy generally prohibits the Central Valley Water Board from authorizing activities that will result in the degradation of high-quality waters unless it has been shown that:

i. The degradation will not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;

ii. The degradation will not unreasonably affect present and anticipated future beneficial uses;

iii. This permit requires the discharger to employ the Best Practicable Treatment or Control (BPTC) to minimize degradation; and

iv. The degradation is consistent with the maximum benefit to the people of the state.

Compliance with this Order will result in the use of best practicable treatment or control to prevent impacts to groundwater. Groundwater limitations have been included in this Order for protection of the MUN beneficial use of groundwater. Additionally, this Order includes land application requirements, monitoring and reporting requirements, pond operating specifications, sludge and biosolid specifications, and compliance with the CV-SALTS Basin Plan Amendment. Finally, this Order requires evaluation of the groundwater monitoring network; implementation of a groundwater monitoring well installation work plan, if necessary. Any increase in pollutant concentrations in groundwater, despite these controls, is consistent with maximum benefit to the people of the State given the necessity of wastewater utility service to accommodate housing and economic expansion in the area. Accordingly, the permitted discharge is consistent with Resolution No. 68-16.

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD5, pH, TSS, and percent removal requirements for BOD5 and TSS. Restrictions on BOD5, pH, TSS and percent removal requirements for BOD5 and TSS are discussed in section IV.B.2 of the Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. For BOD5, pH, and TSS, both technology-based effluent limitations and water quality-based effluent limitations are applicable. The more stringent of these effluent limitations are implemented by this Order. These limitations are not more stringent than required by the CWA.WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the

applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on 18 May 2000. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Summary of Final Effluent Limitations
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Table F-17. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations	Basis
Ammonia, Total (as Nitrogen)	mg/L	AMEL 8.4 AWEL 21	NAWQC
BOD5	mg/L	AMEL 30 AWEL 45	CFR
BOD5	% Removal	Average Monthly Minimum 85%	CFR
Chlorine, Total Residual	mg/L	0.011 (as 4-day average) 0.019 (as 1-hour average)	NAWQC
Copper, Total Recoverable	µg/L	AMEL 34 MDEL 64	CTR
pH	SU	Instantaneous Max 9.0 Instantaneous Min 6.0	CFR
Total Coliform Organisms	MPN/100mL	23 (as 7 day median) 240 (more than once in a 30-day Period)	Title 22
TSS	mg/L	AMEL 30 AWEL 45	CFR
TSS	% Removal	Average Monthly Minimum 85%	CFR
Zinc, Total Recoverable	µg/L	AMEL 90 MDEL156	CTR

Table F-17. Notes:

1. CFR – Based on secondary treatment standards contained in 40 CFR part 133.
   CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
   NAWQC – Based on U.S. EPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
   Title 22 – Based on State Water Board Division of Drinking Water Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).

F. Land Discharge Specifications

The Land Discharge Specifications are necessary to protect the beneficial uses of groundwater.

1. **TSS and BOD5**. The land discharge specifications for TSS and BOD5 are based on specifications that are achievable by the Discharger with the facultative treatment lagoons when the Discharger is sending effluent to LND-007.

2. **Total Coliform Organisms.** The land discharge specifications for total coliform organisms are established to protect the municipal beneficial use of the underlying groundwater.

G. Recycling Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

On 4 March 2025, the U.S. Supreme Court issued a decision in the case of the *City and County of San Francisco v. U.S. Environmental Protection Agency* (2025) 145 U.S. 604, which challenged some of the limits in NPDES permits. The Court ruled that "end result" provisions (e.g. receiving water limitations) are not allowed by the federal Clean Water Act and that NPDES permits must have specific requirements to meet water quality objectives and protect beneficial uses. Based on this ruling, no receiving water limitations are included in this Order. The Clean Water Act and implementing regulations specify that effluent limitations are required when there is reasonable potential for a discharge to cause or contribute to an exceedance of any applicable water quality standard. A Reasonable Potential Analysis (RPA) is a key step taken by permit writers to determine if a discharge has the potential to violate water quality standards. An RPA includes characterization of the effluent and receiving waters and an assessment of the water quality standards to see if projected concentrations in the receiving water after mixing with the effluent have the "reasonable potential" (RP) to exceed the water quality criteria. Effluent limitations and other permit conditions are prescribed based on an evaluation of this information. RPAs and effluent limitation calculations follow established NPDES program procedures and requirements (State Water Resources Control Board, 2005 and U.S. Environmental Protection Agency, 1991). This Order also requires regular effluent and receiving water sampling to document any potential effects to the receiving water. In addition, this Order requires characterization monitoring of priority pollutants in the upstream receiving water and effluent during the permit term. All Central Valley NPDES permits contain a general re-opener provision that allows the Central Valley Water Board to amend the permit and include conditions, effluent limitations, provisions, or prohibitions. This would include scenarios where monitoring data indicate the need for new effluent limitations to ensure receiving water quality objectives are met. As an additional assurance, this Order prohibits

operational changes that would significantly impact the character of the waste discharge. Nonetheless, the question remains as to whether an NPDES permit is adequately protective of water quality when the receiving water limitations are removed; or alternatively, whether additional conditions should be considered when removing receiving water limitations.

1. **Summary of the specific considerations for the removal of receiving water limitations.** These considerations include associated effluent limitations, best management practices (BMPs) and/or water quality monitoring requirements.

    a. **Bacteria.** On 7 August 2018 the State Water Board adopted Resolution No. 2018-0038 establishing Bacteria Provisions, which are specifically titled *"Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Bacteria Provisions and a Water Quality Standards Variance Policy*" and "*Amendment to the Water Quality Control Plan for Ocean Waters of California—Bacteria Provisions and a Water Quality Standards Variance Policy.*" The Bacteria Water Quality Objectives established in the Bacteria Provisions supersede any numeric water quality objective for bacteria for the REC-1 beneficial use contained in a water quality control plan before the effective date of the Bacteria Provision. However, the Statewide Bacteria Provisions provide that where a permit, waste discharge requirement (WDR), or waiver of WDR includes an effluent limitation or discharge requirement that is derived from a water quality objective or other guidance to control bacteria (for any beneficial use) that is more stringent than the Bacteria Water Quality Objective, the Bacteria Water Quality Objective would not be implemented in the permit, WDR, or waiver of WDR. Since this Order includes effluent limitations and discharge requirements equivalent to the DDW Title 22 disinfected tertiary reclamation criteria that are more stringent than the Statewide Bacteria Objectives, the Statewide Bacteria Objectives have not been implemented in this Order.

    The Facility is a POTW that treats total coliform limitations to meet Title 22 disinfection or equivalent standards. This Order contains total coliform effluent limitations based on the Title 22 disinfection or equivalent reclamation criteria, which are more stringent than the Statewide Bacteria Objectives described above.

    b. **Biostimulatory Substances and Dissolved Oxygen.** The Basin Plan contains a biostimulatory narrative water quality objective (WQO) and dissolved oxygen numeric water quality objectives that have been incorporated into previous permits as receiving water limitations. Biostimulatory substances and low dissolved oxygen can cause eutrophication and excessive algal growth in the receiving water along with other water quality issues related to taste, odor, color and toxicity. Discharges with high Biochemical Oxygen Demand (BOD) and/or

Chemical Oxygen Demand (COD) may contribute to dissolved oxygen problems downstream.

There is no RP for dissolved oxygen, but the permit requires frequent monitoring of dissolved oxygen in the receiving water as well as visual monitoring of the receiving water for fungi, slimes, or objectionable growths. This Order includes effluent limitations for BOD and percent removal of BOD5 and TSS along with regular monitoring of Dissolved Organic Carbon (DOC) in the receiving water.

c. **Chemicals, Pesticides, and Radioactive.** The Basin Plan has narrative and numeric water quality objectives for chemicals, pesticides, and radionuclides that are typically used as receiving water limitations in NPDES permits. As with other water quality constituents, NPDES regulations require effluent limitations where existing data indicate reasonable potential to cause or contribute to an exceedance in the receiving water. Attachments G and H provide details regarding the specific chemical constituents with reasonable potential and associated effluent limitations. These effluent limitations ensure the protection of beneficial uses in the receiving water. There is no RP based on existing data for any radioactive constituents or pesticides on the characterization monitoring list. There is RP for total copper and zinc in the effluent. This Order includes effluent limitations and effluent monitoring for total copper and zinc.

d. **Color, Taste, and Odors.** The Basin plan has a narrative water quality objective for color as well as one for taste and odors. These have been incorporated into previous permits as receiving water limitations. This Order requires visual monitoring of the discharge and receiving water for discoloration, objectionable odors, and other nuisance conditions.

e. **pH.** The Basin Plan has numeric water quality objectives for pH that have been used as receiving water limitations in previous permits. A pH that is too high or too low can influence the solubility of metals and nutrients in the receiving water and impact the overall health of aquatic life. This Order includes technology-based effluent limitations for pH and requires receiving water monitoring upstream and downstream of the discharge. These requirements are sufficient to protect aquatic life and other beneficial uses; therefore, the separate receiving water limitation for pH from the previous Order is not retained.

f. **Temperature.** The Basin Plan has numeric receiving water objectives for receiving waters with beneficial uses of COLD or WARM to ensure the wastewater does not significantly increase the receiving water temperature above the natural receiving water temperature. Significant changes in temperature can affect the ability of aquatic organisms to

survive in the receiving water. There is no RP for temperature based on existing data. This Order includes frequent effluent and receiving water temperature monitoring.

g. **Toxicity.** The Basin Plan contains a narrative water quality objective for toxicity that has been incorporated into previous permits as a receiving water limitation. However, with the adoption of the Statewide Toxicity Provisions (State Water Resources Control Board, 2021) in 2023, numeric aquatic toxicity water quality objectives were established along with required effluent limitations and/or targets for non-stormwater NPDES permits to ensure the protection of aquatic life beneficial uses in receiving waters.

This Order includes chronic whole effluent toxicity numeric targets and requires frequent monitoring of chronic whole effluent toxicity. This Order also has effluent limitations for Ammonia Nitrogen, Total (as N). Elevated levels of ammonia are known to be toxic to aquatic organisms, so effluent limitations ensure that the aquatic life beneficial use is protected in the receiving water body.

h. **Turbidity.** The Basin Plan includes numeric turbidity water quality objectives that are based on existing turbidity in the receiving waters. These have been incorporated into previous permits as receiving water limitations. The discharge does not have RP or effluent limitations for turbidity; however, the Order requires visual observations of receiving water conditions under MRP section VIII.A.3 and includes TSS effluent limitations.

i. **Floating Material, Oil and Grease, Suspended Sediments, Suspended Material, and Settleable Substances.** The previous permit contained receiving water limitations relative to narrative water quality objectives in the Basin Plan for Floating Material, Oil and Grease, Suspended Sediments, Suspended Material and Settleable Substances. These constituents can affect water quality by reducing water clarity and light penetration which can ultimately lead to increased water temperatures, decreased dissolved oxygen levels, and eutrophication. Contamination from these substances can impact both aquatic and human health. This Order requires visual monitoring of the discharge and receiving water for floating material, visible films or sheens, suspended matter, discoloration, and objectionable bottom deposits, and includes effluent limitations for TSS.

2. **Review of Other Relevant Factors.** In addition to the considerations listed in Section V.A.1 above, the Central Valley Water Board also considered the other relevant factors below in the review of receiving water limitations.

a. **Synergistic effects.** *Is there a known concern that the discharge will combine with the receiving water and produce adverse synergistic effects? For example, surface water discharges may be fully compliant with dissolved oxygen and narrative objectives, but may combine with poor conditions in the receiving water to cause harmful algal blooms (HABs), eutrophication, dissolved oxygen sag, toxic effects, taste and odor, and other harmful conditions. Is there the concern that the discharge when combined with the receiving water would have color concerns (e.g., mine discharge, floc due to pH change, etc.)?*

There are no known concerns for adverse synergistic effects in the receiving water.

b. **Limitations enforced within the receiving water.** *Are there specific chemicals or pesticides that have Basin Plan objectives that are not enforced through effluent limitations? For example, certain organochlorine pesticides effluent limitations are based on numeric water quality objectives consistent with applicable regulations. However, more stringent Basin Plan objectives require the receiving water to be "non-detect" for these materials. In these circumstances, removing the receiving water limitation would result in reduced protections that are required under federal and state regulations.*

The discharge does not demonstrate exceedances of the Basin Plan's receiving water quality objectives for this category of chemicals and/or pesticides.

c. **Other site-specific information.** *Are there any special studies that have been conducted in the receiving water body/watershed or impairments that relate to existing receiving water limitations?*

This Order considers the Clean Water Act 303(d) List of Impaired Water Bodies when they are developed. The receiving water has no Total Maximum Daily Load (TMDL) requirements.

Salinity constituents are also a concern in Central Valley water bodies. The permit requires continued implementation of a Salinity Evaluation and Minimization Plan (SEMP) to identify salinity sources and reduce salinity in discharges, consistent with the requirements of the Salt Control Program.

d. **Data Characterization.** *Have the effluent and receiving water been fully characterized?*

This Order requires characterization monitoring in the effluent and receiving water every permit term. A full scan of priority pollutant and other constituents of concern is required.

e. **Compliance History.** *Has the facility had any compliance issues meeting receiving water limitations during the most recent permit term (e.g., received a Notice of Violation for exceeding a receiving water limitation)?*

Overall, does the facility have any ongoing compliance issues (e.g., frequent operational upsets). The Facility does not have ongoing compliance issues.

3. **Review of Receiving Water Limitations**. Based on Central Valley Water Board staff review of the considerations presented above, existing permit provisions are adequate to ensure the Facility discharge consistently meets federal and state regulations for the protection of beneficial uses in the receiving water. The effluent limitations and receiving water monitoring in this Order along with the permit prohibitions and reopener provisions provide a multi-pronged approach to ensuring water quality standards are met. As such, receiving water limitations from the previous permit can be removed without the inclusion of additional conditions. Table F-18 below provides a summary of the considerations in removing the receiving water limitations.

Table F-18. Receiving Water (RW) Limitations Review

Parameter	Objective	Effluent Limitations and/or Monitoring
Bacteria	Numeric	Reasonable potential exists for pathogens. Total coliform effluent limitations are included.
Biostimulatory Substances	Narrative	No RP based on effluent data, but Biochemical Oxygen Demand (BOD), BOD percent removal effluent limitations are included. Dissolved Organic Carbon monitoring (monthly) is required in RW.
Chemical Constituents	Narrative	RPA and water quality-based effluent limitations where required; priority pollutant and other chemical monitoring; reopener provisions.
Color	Narrative	Visual monitoring of the discharge and receiving water for discoloration and other objectionable conditions.
Dissolved Oxygen	Numeric	No RP. Order includes receiving water monitoring for DO and visual observations of low DO effects.
Floating Material	Narrative	Order includes receiving water monitoring for visual observations of floating material.
Oil and Grease	Narrative	No RP. Order includes receiving water monitoring for visible films, sheens, or coatings.
pH	Numeric	No RP, Order includes effluent limits for pH. Order includes effluent and receiving water monitoring for pH.
Pesticides	Narrative/ Numeric	No RP for pesticides in the characterization monitoring list.
Radioactivity	Narrative/ Numeric	No RP for radioactive constituents in the characterization monitoring list. Order includes characterization monitoring of the effluent and receiving water every permit term.

Parameter	Objective	Effluent Limitations and/or Monitoring
Suspended Sediments	Narrative	TSS effluent limitations and visual monitoring of the discharge and receiving water for sediment and changes in clarity.
Settleable Substances	Narrative	TSS effluent limitations and visual monitoring of the discharge and receiving water for settleable and suspended material.
Suspended Material	Narrative	TSS effluent limitations and visual monitoring of the discharge and receiving water.
Taste and Odors	Narrative	Monitoring of potential nuisance conditions is required in the receiving water.
Temperature	Numeric	Effluent and upstream and downstream receiving water temperature monitoring; discharge prohibited from 1 June through 30 September.
Toxicity	Narrative	No RP, Order includes effluent limits and monitoring for ammonia. Order also includes Chronic Whole Effluent Toxicity effluent numeric targets.
Turbidity	Numeric	No RP. Order includes visual observations of receiving water conditions and TSS effluent limitations.

B. Groundwater

1. The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply. Groundwater limitations are included in this Order to ensure that wastewater treatment, storage, and disposal activities do not impair beneficial uses or cause groundwater to exceed applicable Basin Plan water quality objectives.

2. Basin Plan WQOs include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituents objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical WQOs for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100mL. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or

bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.

3. Groundwater limitations are required to protect the beneficial uses of the underlying groundwater. Groundwater beneath the Facility may be affected by percolation from the treatment and constructed wetland ponds. Municipal wastewater contains constituents such as total dissolved solids, nutrients, pathogens, organic matter, metals, and oxygen-demanding substances that may adversely affect groundwater quality. Groundwater monitoring wells RGW-001, RGW-002 and RGW-003 located around the pond system provide information used to evaluate groundwater quality and compliance with groundwater limitations.

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. **Mercury.** This provision allows the Central Valley Water Board to reopen this Order in the event mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted. In addition, this Order may be reopened if the Central Valley Water Board determines that a mercury offset program is feasible for dischargers subject to NPDES permits.

b. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 17 January 2020, certain Basin Plan Amendments to

incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley became effective. Other provisions subject to U.S. EPA approval became effective on 2 November 2020, when approved by U.S. EPA. As the Central Valley Water Board moves forward to implement those provisions that are now in effect, this Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

c. **Water Effects Ratio (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating criteria for applicable inorganic constituents. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total when developing effluent limitations for copper and zinc. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

d. **Whole Effluent Toxicity.** This Order may be reopened for modification to revise the aquatic toxicity provisions if the California Supreme Court determines that the test of significant toxicity cannot be used in NPDES permits and the State Water Board suspends or revises the aquatic toxicity water quality standards. See Fact Sheet Section III.C.1.c for more information.

The Order may also be reopened if new data and information demonstrate that the discharge has reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions' numeric chronic aquatic toxicity objective and Basin Plan's narrative toxicity objective. In this case, effluent limitations may be added for acute and/or chronic toxicity.

2. Special Studies and Additional Monitoring Requirements

a. **Groundwater Monitoring.** To determine compliance with the groundwater limitations contained in section V.B. of this Order, the Discharger is required to evaluate the adequacy of its groundwater monitoring network **due within 12 months following effective date of this Order**. This provision requires the Discharger to evaluate its groundwater monitoring network to ensure there are one or more background monitoring wells and a sufficient number of designated monitoring wells downgradient of every treatment, storage, and disposal unit that does or may release waste constituents to groundwater. The Discharger must install new groundwater monitoring wells, if necessary,

collect monitoring data, and submit a report evaluating the underlying groundwater **with the ROWD** If the monitoring shows that any constituent concentrations are increased above background water quality.

b. **Toxicity Reduction Evaluation (TRE).** Pursuant to the Toxicity Provisions, the Discharger is required to initiate a TRE when any combination of two or more **MMET or MDET exceedances** occur within a single toxicity calendar month or within two successive toxicity calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity), the Central Valley Water Board may require a TRE. A TRE may also be required when there is no effluent available to complete a routine monitoring test or **MMET** test. MRP Section V.G. provides additional details regarding the TRE.

3. Best Management Practices and Pollution Prevention

a. **Salinity Evaluation and Minimization Plan (SEMP).** The Basin Plan includes a Salt Control Program for discharges to groundwater and surface water. The Salt Control Program is a phased approach to address salinity in the Central Valley Region. During Phase I the focus will be on conducting a Prioritization and Optimization (P&O) Study to provide information for subsequent phases of the Salt Control Program. During Phase I, the Salt Control Program includes two compliance pathways for dischargers to choose; a Conservative Salinity Permitting Approach and an Alternative Salinity Permitting Approach.

The Discharger submitted a notice to intent for the Salt Control Program in 2021, indicating its intent to meet the Alternative Salinity Permitting Approach. Under the Alternative Permitting Approach, the Basin Plan requires dischargers implement salinity minimization measures to maintain existing salinity levels and participate in the P&O Study. The Discharger's NOI demonstrated adequate participation in the P&O and this Order requires continued participation to meeting the requirements of the Alternative Salinity Permitting Approach. This Order also requires continued implementation of the Discharger's SEMP and includes a performance-based salinity trigger to ensure salinity levels do not increase. In accordance with the Basin Plan, the salinity trigger was developed based on existing facility performance and considers possible temporary increases that may occur due to water conservation and/or drought.

4. Construction, Operation, and Maintenance Specifications

a. The operation and maintenance specifications for the treatment ponds and wetland ponds are necessary to protect the beneficial uses of the groundwater. The specifications included in this Order are retained from Order R5-2021-0022. In addition, reporting requirements related to use of

the treatment ponds and constructed wetland ponds are required to monitor their use and the potential impact on groundwater.

5. Special Provisions for POTWs

a. **Sludge/Biosolids Treatment or Discharge Specifications.** Sludge in this Order means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the wastewater treatment plant. Biosolids refer to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 C.F.R. part 503. This Order does not regulate offsite use or disposal of biosolids, which are regulated instead under 40 C.F.R. part 503; administered by U.S. EPA. The Sludge/Biosolids Treatment or Discharge Specifications in this Order implement the California Water Code to ensure sludge/biosolids are properly handled onsite to prevent nuisance, protect public health, and protect groundwater quality.

6. Other Special Provisions – Not applicable

7. Compliance Schedules – Not applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 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 sections 13267 and 13383 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The burden, including costs, of these monitoring and reporting requirements bears a reasonable relationship to the need for the reports and the benefits to be obtained therefrom. The Discharger, as owner and operator of the Facility, is required to comply with these requirements, which are necessary to determine compliance with this Order. The following provides additional rationale for the monitoring and reporting requirements contained in the MRP for this facility.

Water Code section 13176, subdivision (a), states: “The analysis of any material required by [Water Code sections 13000-16104] shall be performed by a laboratory that has accreditation or certification pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code.” The DDW accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

Section 13176 cannot be interpreted in a manner that would violate federal holding time requirements that apply to NPDES permits pursuant to the CWA. (Wat. Code sections 13370, subd. (c), 13372, 13377.). Section 13176 is inapplicable to NPDES permits to the extent it is inconsistent with CWA requirements. (Wat. Code section 13372, subd. (a).) Lab accreditation is not required for field tests such as tests for color, odor, turbidity, pH, temperature, dissolved oxygen, electrical conductivity, and disinfectant residual. The holding time requirements are 15 minutes for dissolved oxygen, pH, sulfite, temperature, and total residual chlorine (40 C.F.R. section 136.3(e), Table II). Due to the location of the Facility, it is both legally and factually impossible for the Discharger to comply with section 13176 for constituents with short holding times.

A. Influent Monitoring

1. Influent monitoring is required to characterize wastewater entering the Facility, evaluate treatment performance, and calculate compliance with the BOD5 and TSS percent removal requirements. The minimum monitoring frequencies for flow, pH, BOD5, and TSS are retained from Order R5-2021-0022. The BOD5 and TSS sample types have been changed from grab samples to 24-hour flow-proportional composite samples to provide a more representative measure of daily influent quality. Weekly calculated mass loading monitoring for BOD5 and TSS has been removed because this Order does not include mass-based BOD5 or TSS limitations; the underlying flow and concentration data remain available if a mass loading calculation is needed.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 C.F.R. section 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring at EFF-001 is necessary to determine compliance with the surface water effluent limitations, assess treatment performance, and evaluate the quality of wastewater discharged to Lake Almanor.

2. The minimum monitoring frequencies, sample types and parameters at EFF-001 have been retained from Order R5-2021-0022, except as noted in Table F-19, below:

Table F-19. Revised Effluent Monitoring at EFF-001

Parameter	Units	Order R5-2021-0022 Sample Frequency	Revised Sample/ Frequency	Reason for Change
Acute Whole Effluent Toxicity	% Survival	1/Quarter, during permissible discharge to surface water	Removed	Toxicity Provisions
BOD5	lbs/day	1/Week	Removed	40 C.F.R section 122.45(f)(1) and (2)

Parameter	Units	Order R5-2021-0022 Sample Frequency	Revised Sample/ Frequency	Reason for Change
BOD5	mg/L	Grab sample	Provide representative daily BOD5 data to evaluate compliance with surface water effluent limitations.	BOD5
Copper, Dissolved	µg/L	--	1/Month	support evaluation of potential aquatic life toxicity, and assist groundwater protection assessments where seepage may occur from the earthen outfall.
Zinc, Dissolved	µg/L	--	1/Month	Required support evaluation of potential aquatic life toxicity, and assist groundwater protection assessments where seepage may occur from the earthen outfall.
Chronic Whole Effluent Toxicity	% Effect and TST	Not Required	2/year, during permissible discharge to surface water, with at least 15 days expected discharge to surface water	Toxicity Provisions

Parameter	Units	Order R5-2021-0022 Sample Frequency	Revised Sample/ Frequency	Reason for Change
Temperature	°F/°C	Degrees Fahrenheit	Degrees Celsius	Units have been revised from degrees Fahrenheit to degrees Celsius to standardize reporting and ensure consistency with the units used to calculate temperature-dependent ammonia criteria.
Total Dissolved Solids	mg/L	1/Month	Removed	The Discharger monitors for Electrical Conductivity; thus, the total dissolved solids monitoring is redundant and unnecessary.
TSS	lbs/day	1/Week	Removed	40 C.F.R section 122.45(f)(1) and (2)

C. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess receiving water quality and the impacts of the discharge on Lake Almanor and its upstream receiving water station. Receiving surface water monitoring frequencies and sample types have been retained from Order R5-2021-0022, except as noted in Table F-20, below:

Table F-20. Revised Surface Water Monitoring at RSW-001 and RSW-002

Parameter	Units	Order R5-2021-0022 Sample/ Frequency	Revised Sample/ Frequency	Reason for Change
Electrical Conductivity	µmhos/cm	1/year	1/Week	CV-Salts
Temperature	°F/°C	Degrees Fahrenheit	Degrees Celsius	Units have been revised from degrees Fahrenheit to degrees Celsius to standardize reporting and ensure consistency with the units used to calculate temperature-dependent ammonia criteria.
Priority pollutants and other constituents of concern	Varies	Sampled only if discharging to surface water	Sample RSW-001 concurrently with effluent characterization at EFF-001 or LND-007, according to MRP sections IX.E.1.a and IX.E.1.b.	If no surface water discharge occurs, receiving water sampling concurrent with land discharge characterization provides ambient water quality data to support future reasonable potential analyses and permit development.

2. Groundwater

a. Water Code section 13267 states, in part, "(a) A Regional Water Board, in establishing waste discharge requirements may investigate the quality of any waters of the state within its region" and "(b)(1) In conducting an investigation, the Regional Water Board may require that any person who discharges waste that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports." The burden, including costs, of these reports shall bear a reasonable relationship to the

need for the report and the benefits to be obtained from the reports. In requiring those reports, a Regional Water Board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports. The Monitoring and Reporting Program is issued pursuant to Water Code section 13267. The groundwater monitoring and reporting program required by this Order and the Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements. The Discharger is responsible for the discharges of waste at the facility subject to this Order.

b. Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide BPTC to comply with the State Antidegradation Policy. Economic analysis is only one of many factors considered in determining BPTC. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified. Until groundwater monitoring is sufficient, this Order contains Groundwater Limitations that allow groundwater quality to be degraded for certain constituents when compared to background groundwater quality, but not to exceed water quality objectives. If groundwater quality has been degraded by the discharge, the incremental change in pollutant concentration (when compared with background) may not be increased

c. Order R5-2021-0022 required quarterly groundwater elevation, pH, electrical conductivity, total dissolved solids, bacteria, and nitrogen monitoring, with standard minerals monitored annually. The expanded parameters are necessary to evaluate redox conditions, organic loading, salinity, nitrogen transformation, metals mobility, and potential migration of chlorinated wastewater constituents.

d. Groundwater monitoring frequencies and parameters have been retained from Order R5-2021-0022, except as noted in Table F-21, below:

Table F-21. Summary of Monitoring Changes at Groundwater Monitoring Wells RGW-001, RGW-002 and RGW-003

Parameter	Units	Previous Sample Frequency	Revised Sample Frequency
Dissolved oxygen	mg/L	Not required	1/Quarter
Oxidation-Reduction Potential	mV	Not required	1/Quarter
Temperature	Degrees Celsius	Not required	1/Quarter
Turbidity	NTU	Not required	1/Quarter
Total Organic Carbon	mg/L	Not Required	1/Quarter
Dissolved/filtered metals	µg/L	Not Required	1/Quarter
Standard Minerals	Varies	1/Year	1/Quarter
Total trihalomethanes	µg/L	Not Required	1/Quarter
Well purging, stabilization maintenance, and replacement	--	Three-volume purge; limited maintenance language	Low-flow or no-purge sampling with stabilization criteria; replacement work plan for dry or damaged wells

Table F-21. Notes:

1. Dissolved oxygen, oxidation-reduction potential, temperature, and turbidity monitoring are necessary to characterize well stabilization and redox conditions that influence nitrogen transformation and metals mobility.

2. Total Organic Carbon evaluates migration of wastewater-related organic matter and conditions that may mobilize metals.

3. Dissolved/filtered metals evaluates whether land discharge or pond seepage is affecting groundwater and distinguishes dissolved metal concentrations from suspended material.

4. An increase in standard mineral monitoring frequency will provide seasonal data to evaluate salinity trends, major-ion chemistry, and cation-anion balance.

5. Total trihalomethanes monitoring will help evaluate potential migration of disinfection byproducts associated with chlorinated treated wastewater.

D. Whole Effluent Toxicity Testing Requirements

Aquatic toxicity testing is necessary to evaluate the aggregate toxic effect of a mixture of toxicants in the effluent on the receiving water. Acute toxicity testing is

conducted over a short time period and measures mortality, while chronic toxicity testing is conducted over a short or longer period and may measure mortality, reproduction, and growth. For this permit, aquatic toxicity testing is to be performed following methods identified in the Code of Federal Regulations, title 40, part 136, or other U.S. EPA-approved methods, or included in the following U.S. EPA method manuals: Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013)

1. The discharge is subject to determination of “Pass” or “Fail” from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1.

2. The null hypothesis (Ho) for the TST statistical approach is:

   Mean discharge IWC response ≤ RMD x Mean control response, where the chronic RMD = 0.75.

   A test result that rejects this null hypothesis is reported as “Pass.” A test result that does not reject this null hypothesis is reported as “Fail.”

3. The relative “Percent Effect” at the discharge IWC is defined and reported as:

   Percent Effect = ((Mean control response – Mean discharge IWC response) / Mean control response) x 100.

   This is a t-test (formally Student’s t-Test), a statistical analysis comparing two sets of replicate observations, i.e., a control and IWC. The purpose of this statistical test is to determine if the means of the two sets of observations are different (i.e., if the IWC differs from the control, the test result is “Fail”). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

4. Sensitivity Screening. The Discharger conducted an initial species sensitivity screening resulting in *Ceriodaphnia dubia* as the most sensitive species.

   Under the Toxicity Provisions, the Discharger shall perform subsequent species sensitivity screening to re-evaluate the most sensitive species if the effluent used in the initial species sensitivity screening is no longer representative of the effluent or if a species sensitivity screening has not been performed in the last fifteen years. Subsequent species sensitivity screening may also be required prior to every order issuance, renewal or reopening, if reopening to address aquatic toxicity.

Pursuant to Section V.F of the MRP, the Discharger is required to perform species sensitivity screening and submit the results with the **ROWD**. Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing quarterly for one year in each quarter in which at least 15 days of discharge are expected, with two sets of testing in that quarter if discharge occurs in only one quarter using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green algae (*Pseudokirchneriella subcapitata*). The tests shall be performed at an IWC of no less than 100 percent effluent and one control. For subsequent species sensitivity screening, if the first two species sensitivity screening events result in no change in the most sensitive species, the Discharger may cease the subsequent species sensitivity screening and the most sensitive species will remain unchanged.

The most sensitive species to be used for chronic toxicity testing was determined in accordance with the process outlined in the MRP section V.F. Based on the Discharger's last 10 years of chronic toxicity data, there were no results of "Fail" at the IWC using the TST statistical approach. The species that exhibited the highest percent effect was the water flea (*Ceriodaphnia dubia*), with a percent effect of 10 percent. Consequently, *Ceriodaphnia dubia* has been established as the most sensitive species for chronic WET testing.

5. **Toxicity Reduction Evaluation (TRE).** The Monitoring and Reporting Program of this Order requires chronic WET testing to demonstrate compliance with the numeric chronic toxicity effluent target. The Discharger is required to initiate a TRE when there is any combination of two or more chronic toxicity MDET or MMET exceedances within a single toxicity calendar month or within two successive toxicity calendar months has occurred. In addition, if other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity), the Central Valley Water Board may require a TRE. A TRE may also be required when there is no effluent available to complete a routine monitoring test or MMET test.

E. Other Monitoring Requirements

1. **Pond Monitoring**.

   a. Pond monitoring is required to verify adequate containment, evaluate treatment and storage conditions, identify maintenance needs, and protect groundwater. Order R5-2021-0022 required the same monthly water quality and visual monitoring at all ten ponds. Detailed monthly operational monitoring is focused on primary ponds 1 and 2 (PND-001 and PND-002) and constructed wetland pond 1, (PND-007) because these locations represent the preliminary treatment process and the first pond receiving treated wastewater from LND-007. Monthly freeboard and berm condition inspections are retained for the remaining treatment and wetland ponds to

identify seepage, erosion, animal burrows, vegetation, and other conditions that could compromise containment.

b. Pond monitoring frequencies and parameters have been retained from Order R5-2021-0022, except as noted in Table F-22, below:

Table F-22. Summary of Pond Monitoring Changes

Parameter	Units	Pond Location	Previous Sampling	Revised Sample
Dissolved Oxygen	mg/L	PND-003, PND-004, PND-005, PND-006, PND-008, PND-009, PND-010	1/Month	Remove
Electrical Conductivity @ 25°C	µmhos/cm	PND-003, PND-004, PND-005, PND-006, PND-008, PND-009, PND-010	1/Month	Remove
Oxidation-Reduction Potential	mV	PND-001, PND-002 and PND-007	Not Required	1/Month
pH	SU	PND-003, PND-004, PND-005, PND-006, PND-008, PND-009, PND-010	1/Month	Remove
Temperature	Degrees Celsius	PND-001, PND-002 and PND-007	Not Required	1/Month
Settled Matter Depth	Feet, inches	PND-001 and PND-002	Not Required	1/Permit Term

Table F-22. Notes:

1. Monthly dissolved oxygen, electrical conductivity, and pH, have been removed from ponds PND-003 through PND-006, and PND-008 through PND-010 to focus operational data collection at the preliminary treatment ponds (PND-001 and PND-002) and the first constructed wetland (PND-007).
2. Temperature and ORP were added to the monitoring program for PND-001, PND-002, and PND-007 to better evaluate treatment conditions, identify potential pond stratification or process upsets, and ensure consistent performance as wastewater is routed through the primary treatment ponds and into the first constructed wetland.

3. A once-per-permit-term monitoring requirement for Settled Matter Depth at PND-001 and PND-002 was added to assess sludge accumulation, support long-term pond capacity management, and ensure the primary treatment ponds continue to operate effectively.

2. **Land Discharge Monitoring (LND-007).**

a. Land discharge monitoring at LND-007 is required to determine compliance with the land discharge specifications for BOD5, TSS, and total coliform organisms. The monitoring will also be used to evaluate treatment and disinfection performance, and characterize the quality of wastewater discharged to the constructed wetland ponds.

Table F-23. Summary of Monitoring Changes at Discharge to Land (LND-007)

Parameter	Units	Previous Sample/ Frequency	Revised Sample/ Frequency
BOD5	lbs/day	1/week	Removed
BOD5	mg/L	Grab sample	Revised to 24-hour composite sampling to account for variability in effluent quality throughout the day and provide representative data for evaluating organic loading/ compliance with land discharge specifications.
TSS	lbs/day	1/week	Removed
Total trihalomethanes	µg/L	Not Required	1/Year
Temperature Units	--	Degrees Fahrenheit	Degrees Celsius

Parameter	Units	Previous Sample/ Frequency	Revised Sample/ Frequency
Priority pollutants and other constituents of concern	Varies	Not Required	Sample LND-007 when applicable according to the effluent characterization schedule in MRP section IX.E.1.a, with concurrent upstream sampling under section IX.E.1.b.

Table F-23. Notes:

1. Total metals monitoring requirement characterizes constituents that may migrate from the land disposal system and affect groundwater and/or surface water.
2. Total trihalomethanes characterizes disinfection byproducts in chlorinated wastewater applied to land.
3. An increase in standard mineral monitoring frequency will provide seasonal data to evaluate salinity trends, major-ion chemistry, and cation-anion balance.
4. If no discharge to surface water occurs during the first two years of the permit term, the Discharger shall conduct monitoring for priority pollutants and other constituents of concern at LND-007 during the third year of the permit term.

3. **Effluent and Receiving Water Characterization Monitoring**.

This Order requires characterization monitoring of the effluent and receiving water to compare parameters with their respective water quality objectives. The effluent and receiving water characterization monitoring will aid in determining any changes to current or future effluent and/or monitoring.

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

Under the authority of section 308 of the CWA (33 U.S.C. section 1318), U.S. EPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a

DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S. EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from their own laboratories or their contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall submit annually the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

VIII. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDRs that will serve as an NPDES permit for Chester Sewage Treatment Plant. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Persons

The Central Valley 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. Additionally, consistent with Water Code section 189.7, the Central Valley Water Board conducted outreach to potentially affected disadvantaged and/or tribal communities concerning tentative WDRs. Notification was provided through the following: direct mailing to agencies and known interested parties; posting of a Notice of Public Hearing at the Facility entrance, and nearest post office. Additionally, the NOPH was posted on the Central Valley Water Board's Tentative Orders webpage.

The public had access to the agenda and any changes in dates and locations through the Central Valley Water Board's website (http://www.waterboards.ca.gov/centralvalley/board_info/meetings/).

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Central Valley Water Board at the address on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due at the Central Valley Water Board office **by 5:00 p.m. on <Date>**.

C. Public Hearing

The Central Valley Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **11 February 2027**
Time: **8:30 a.m.**
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670
Physical meeting with remote meeting option.

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

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and CCR, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

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

Or by email at waterqualitypetitions@waterboards.ca.gov

Instructions on how to file a petition for review (http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml) are available on the Internet.

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (530) 224-4845.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Valley Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this Order should be directed to Marisol Gonzalez at 530-224-4204, or Marisol.Gonzalez@waterboards.ca.gov.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	RP
Ammonia (as Nitrogen)	mg/L	8.5	0.01	0.45	9.6	0.45	NA	NA	NA	NA	Yes, POTW
Chloride	mg/L	10.6	NA	230	NA	NA	860	230	NA	250	No
Copper (Total Recoverable)	µg/L	26.8	0.8	4.0	5.5	4.0	1300	NA	NA	1000	Yes
Electrical Conductivity	µmhos/ cm	196	92	900	NA	NA	NA	NA	NA	900	No
Nitrate plus Nitrite, Total (as N)	mg/L	0.441	ND (<0.1)	10	NA	NA	10	600	NA	10 (Primary MCL)	No
Sulfate	mg/L	NA	NA	250	NA	NA	NA	NA	NA	250	NA
TDS	mg/L	133	50	500	NA	NA	NA	NA	NA	500	No
Zinc, (Total Recoverable)	µg/L	89.4	ND (<0.30)	52	52	52	7400	26000	NA	5000	Yes

Attachment G Table Notes:

Data date range: 1 March 2023 to 31 March 2026, unless noted otherwise.

1. All inorganic concentrations are given as a total concentration.
2. LND-007 data collected during the permissible discharge period (1 October through 31 May) were used along with EFF-001 data as representative effluent data for the reasonable potential analysis.
3. The maximum effluent concentrations (MECs) presented in Attachment G are based on May 2023 Effluent and LND-007 monitoring results during permissible discharge periods.
4. Ammonia CMC calculated from paired effluent temperature and pH (lower of observed or permitted pH). On 5/15/2023, effluent pH was 7.7 and temperature was reported at 18 degrees Celsius.

5. Ammonia CCC calculated using 30-day paired downstream receiving water pH (8.7) and temperature (19.5 degrees Celsius). Only one 30-day window of paired receiving-water data was available, from the May 2023 discharge event collected on 5/31/2023.
6. Total zinc and total copper were not sampled at EFF-001 during the May 2023 discharge to Lake Almanor, therefore, only LND-007 data were used to characterize these constituents.
7. An ambient hardness value of 37 mg/L of CaCO3 was used to calculate the hardness-dependent metals criteria for copper.
8. An ambient hardness value of 37 mg/L of CaCO3 was used to calculate the hardness-dependent metals criteria for zinc.
9. The EC and TDS MECs and B values are maximum annual averages.
10. Nitrate plus Nitrite concentrations are below the 10 mg/L primary MCL, and Lake Almanor does not have the MUN beneficial use; therefore, Nitrate plus Nitrite does not have RP.

Abbreviations used in this table:

MEC =	Maximum Effluent Concentration
B =	Maximum Receiving Water Concentration or lowest detection level, if non-detect
C =	Criterion used for Reasonable Potential Analysis
CMC =	Criterion Maximum Concentration (CTR or NTR)
CCC =	Criterion Continuous Concentration (CTR or NTR)
Water & Org =	Human Health Criterion for Consumption of Water & Organisms (CTR or NTR)
Org Only =	Human Health Criterion for Consumption of Organisms Only (CTR or NTR)
Basin Plan =	Numeric Site-Specific Basin Plan Water Quality Objective
MCL =	Drinking Water Standards Maximum Contaminant Level
NA =	Not Available
ND =	Non-detect
RP =	Reasonable Potential

ATTACHMENT H – CALCULATION OF WQBELS

TABLE H-1. HUMAN HEALTH WQBELS CALCULATIONS

TABLE H. AQUATIC LIFE WQBELS CALCULATIONS

Parameter	Units	CMC Criteria	CCC Criteria	B	Effluent CV	CMC Dilution Factor	CCC Dilution Factor	ECA Multiplier$_{acute}$	LTA$_{acute}$	ECA Multiplier$_{chronic}$	LTA$_{chronic}$	AMEL Multiplier$_{95}$	AWEL Multiplier	MDEL Multiplier$_{99}$	AMEL	AWEL	MDEL
Ammonia Nitrogen, Total (as N)	mg/L	2.1	0.62	0.01	0.7	11	17	0.4	6.9	0.8	6.9	1.2	3	3.5	8.4	21	--
Copper, Total Recoverable	µg/L	5	3.7	0.8	0.5	14	12.5	0.36	23	0.57	23	1.5	2.4	2.8	34	--	64
Zinc, Total Recoverable	µg/L	48	48	ND (<0.3)	0.43	2.3	1.2	0.4	65	0.6	65	1.4	2.1	2.4	90	--	156

Attachment H-2 Table Notes:

1. AMEL calculated according to section 1.4 of the SIP using a 95th percentile occurrence probability.
2. AWEL calculated according to section 1.4 of the SIP using a 98th percentile occurrence probability.
3. MDEL calculated according to section 1.4 of the SIP using a 99th percentile occurrence probability.
4. LND-007 data collected during the permissible discharge period (1 October through 31 May) were used in addition to EFF-001 data as representative effluent for WQBEL calculations.
5. An ambient water hardness value of 34 mg/L of $CaCO_3$ was used due to calculate the hardness-dependent metals criteria for copper and zinc.

7. Upstream pH and temperature data was used to develop the ammonia AMEL and AWEL.
8. Ammonia CMC calculated using paired upstream receiving water temperature (19.7 degrees Celsius) and pH (8.5) (5/10/2023).
9. Ammonia CCC calculated using 30-day paired upstream receiving water pH (8.75) and temperature (21.11 degrees Celsius) (5/24/2023).

Abbreviations used in Table H-2:

B = Maximum Receiving Water Concentration or lowest detection level, if non-detect
CMC = Criterion Maximum Concentration (CTR or NTR)
CCC = Criterion Continuous Concentration (CTR or NTR)
CV = Coefficient of Variation (established in accordance with section 1.4 of the SIP)
ECA Effluent Concentration Allowance
LTA Aquatic Life Calculations – Long-Term Average
MDEL = Maximum Daily Effluent Limitation
AMEL = Average Monthly Effluent Limitation
MDEL = Maximum Daily Effluent Limitation
AWEL = Average Weekly Effluent Limitation

ATTACHMENT I – MONITORING WELL INSTALLATION STANDARD REQUIREMENTS

Prior to installation of groundwater monitoring wells, the Discharger shall submit a work plan containing, at a minimum, the information listed in Section I, below. Upon installation, the Discharger shall submit a well installation report that includes the information contained in Section II, below. All work plans and reports must be prepared under the direction of, and certified by, a California registered geologist or California registered civil engineer.

I. MONITORING WELL INSTALLATION WORK PLAN

The monitoring well installation work plan shall contain, at a minimum, the following information:

A. General Information

1. Purpose of the well installation project.
2. Brief description of local geologic and hydrogeologic conditions.
3. Proposed monitoring well locations and rationale for well locations.
4. Topographic map showing facility location, roads, and surface water bodies.
5. Large-scaled site map showing all existing on-site wells, proposed wells, surface water bodies and drainage courses, buildings, waste handling facilities, utilities, and major physical and man-made features.

B. Drilling Details

1. On-site supervision of drilling and well installation activities.
2. Description of drilling equipment and techniques.
3. Equipment decontamination procedures.
4. Cutting disposal methods.
5. Soil sampling intervals (if appropriate); logging methods; number and location of soil samples and rationale; and sample collection, preservation, and analytical methods.

C. Monitoring Well Design (in graphic form with rationale provided in narrative form)

1. Borehole diameter.
2. Casing and screen material, diameter, and centralizer spacing (if needed).

3. Type of well caps (bottom cap either screw on or secured with stainless steel screws).

4. Anticipated depth of well, length of well casing, and length and position of perforated interval.

5. Thickness, position and composition of surface seal, sanitary seal, and sand pack.

6. Anticipated screen slot size and filter pack.

D. Well Development (not to be performed until at least 48 hours after sanitary seal placement)

1. Method of development to be used (i.e., surge, bail, pump, etc.).

2. Parameters to be monitored using development and record keeping technique.

3. Method of determining when development is complete.

4. Disposal method of development water.

E. Well Survey (precision of vertical survey data shall be at least 0.01 foot)

1. Identify the Licensed Land Surveyor or Licensed Civil Engineer that will perform the survey.

2. Datum for survey measurements.

3. List well features to be surveyed (i.e., top of casing, horizontal and vertical coordinates, etc.)

F. Schedule for Completion of Work

G. Appendix: Groundwater Sampling and Analysis Plan (SAP)

The Groundwater SAP, a guidance document that is referred to by individuals responsible for conducting groundwater monitoring and sampling activities, shall contain, at a minimum, a detailed written description of standard operating procedure for:

1. Equipment to be used during sampling.

2. Equipment decontamination procedures.

3. Water level measurement procedures.

4. Well purging (include a discussion of procedures to follow if three casing volumes cannot be purged).

5. Monitoring and record keeping during water level measurement and well purging (including copies of record keeping logs to be used).

6. Purge water disposal.

7. Analytical methods and required reporting limits.

8. Sample containers and preservatives.

9. Sampling:

   a. General sampling techniques

   b. Record keeping during sampling (include copies of record keeping logs to be used)

   c. QA/QC samples

10. Chain of Custody.

11. Sample handling and transport.

II. MONITORING WELL INSTALLATION REPORT

The monitoring well installation report shall contain the information listed below. In addition, the report shall also clearly identify, describe, and justify any deviations from the approved work plan.

A. General Information

1. Purpose of the well installation project.

2. Number of monitoring wells installed and identifying label(s) for each.

3. Brief description of geologic and hydrogeologic conditions encountered during well installation.

4. Topographic map showing facility location, roads, surface water bodies.

5. Large-scale site map showing all previously existing wells, newly installed wells, surface water bodies and drainage courses, buildings, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details (in narrative and/or graphic form)

1. On-site supervision of drilling and well installation activities.

2. Drilling contractor and driller's name.

3. Description of drilling equipment and techniques.

4. Equipment decontamination procedures.

5. Well boring log (provide for each well):

    a. Well boring number and date drilled.

    b. Borehole diameter and total depth.

    c. Total depth of open hole (i.e., total depth drilled if no caving or back-grouting occurs).

    d. Depth to first encountered groundwater and stabilized groundwater depth.

    e. Detailed description of soils encountered, using the Unified Soil Classification System.

C. Well Construction Diagram (required for each well)

1. Monitoring well number and date constructed.

2. Casing and screen material, diameter, and centralizer spacing (if needed).

3. Length of well casing.

4. Length and position of slotted casing and size of perforations.

5. Thickness, position and composition of surface seal, sanitary seal, and sand pack.

6. Type of well caps (bottom cap either screw on or secured with stainless steel screws).

D. Well Development (required for each well)

1. Date(s) and method of development.

2. How well development completion was determined.

3. Volume of water purged from well and method of development water disposal.

E. Well Survey (required for each well)

1. Present the well survey report data in a table.

2. Reference elevation at the top rim of the well casing with the cap removed (feet above mean sea level to within 0.01 foot).

3. Ground surface elevation (feet above mean sea level to within 0.01 foot).

4. Horizontal geodetic location, where the point of beginning shall be described by the California State Plane Coordinate System, 1983 datum, or acceptable alternative (provide rationale).

F. Water Sampling

1. Present water sampling data in a table.

2. Date(s) of sampling.

3. Sample identification.

4. How well was purged.

5. How many well volumes purged.

6. Levels of temperature, EC, and pH at stabilization.

7. Sample collection, handling, and preservation methods.

8. Analytical methods used.

9. Laboratory analytical data sheets.

10. Water level elevation(s).

11. Groundwater contour map.

G. Soil sampling (if applicable)

1. Present soil sampling data in a table.

2. Date(s) of sampling.

3. Sample collection, handling, and preservation methods.

4. Sample identification.

5. Analytical methods used.

6. Laboratory analytical data sheets.

H. Well Completion Report(s)

As defined in California Water Code section 13751. Blank forms are available from the California Department of Water Resources' website. Section shall be submitted under separate cover.

I. Appendix

Shall include at a minimum, copies of the following:

1. County-issued well construction permits.
2. Registered engineer or license surveyor's report and field notes.
3. Field notes from well development.