CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CA0081759
ORDER R5-2025-XXXX

TENTATIVE DRAFT WASTE DISCHARGE REQUIREMENTS FOR THE UNITED STATES DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE, YOSEMITE NATIONAL PARK, EL PORTAL WASTEWATER TREATMENT FACILITY MARIPOSA COUNTY

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

Table 1. Discharger Information

Discharger:	U.S. Department of Interior, National Park Service, Yosemite National Park
Name of Facility:	El Portal Wastewater Treatment Facility
Facility Street Address:	5083 Foresta Road
Facility City, State, Zip:	El Portal, CA 95318
Facility County:	Mariposa County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Tertiary Treated Domestic Wastewater	37.668490	-119.812622	Merced River (via percolation)
002	Tertiary Treated Domestic Wastewater	37.667778	-119.8125	Merced River

Table 3. Administrative Information

This Order was Adopted on:	**<Enter Adoption Date>**
This Order shall become effective on:	**<Enter Effective Date >**
This Order shall expire on:	**<Enter Expiration Date >**
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a NPDES permit no later than:	**<1-year prior to Order expiration date>**
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:	**Major 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 **<DATE>**.

_____
PATRICK PULUPA, Executive Officer

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I. FACILITY INFORMATION

Information describing the El Portal Wastewater Treatment Facility (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.

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 H are also incorporated into this Order.

D. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections IV.B, IV.C, V.B, VI.C.4 and VI.C.6.a 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 R5-2019-0069 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.B, 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. The treatment shall not 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. Direct discharge to the Merced River when the ratio of river flow to wastewater discharge is less than 150:1, is prohibited.

F. Direct discharge to the Merced River without utilizing a diffuser, when the ratio of river flow to wastewater discharge is less than 200:1, is prohibited.

G. **Average Monthly Daily Flow.** Discharges exceeding an average monthly daily flow shall not exceed 1.0 million gallons per day (MGD).

H. Discharges of pyrethroid pesticides at concentrations that exceed any pyrethroid numeric trigger in Table 4-2 of the Basin Plan to water bodies with designated or

existing WARM and/or COLD beneficial uses are prohibited unless the Discharger is implementing a Pyrethroid Management Plan, as detailed in Section VI.C.3.b, to reduce pyrethroid levels in its discharges.

I. During Phase I of the Salt Control Program, the Discharger is prohibited from discharging salts at concentrations exceeding the salinity numeric value of 700 µmhos/cm (as a monthly average) unless the Discharger is implementing the Phase I Alternative Salinity Permitting Approach requirements of the Salt Control Program (i.e., fully participating in the P&O Study).

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points 001 and 002

1. Final Effluent Limitations – Discharge Points 001 and 002

The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 001 and 002. Unless otherwise specified, compliance shall be measured at Monitoring Locations EFF-001 and EFF-002, as described in the Monitoring and Reporting Program, 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
Biochemical Oxygen Demand, 5-day @ 20°Celcius (BOD_5)	milligrams per liter (mg/L)	10		20
Total Suspended Solids (TSS)	mg/L	10		20
Ammonia Nitrogen, Total (as N) (1 May – 31 October)	mg/L	2.8	4.8	
Ammonia Nitrogen, Total (as N) (1 November – 30 April)	mg/L	3.4	5.8	
Copper, Total Recoverable	micrograms per liter (µg/L)	2.0		4.0
Zinc, Total Recoverable	µg/L	10.		20.
Phosphorus, Total	mg/L	0.5		1.0

b. **pH:**

i. 6.5 Standard Units (SU) as an instantaneous minimum.

ii. 8.5 SU as an instantaneous maximum.

c. **Percent Removal.** The average monthly percent removal of BOD_5 and TSS shall not be less than 90 percent.

d. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following with compliance measured at UVS-001 as described in the MRP, Attachment E:

i. 2.2 most probable number per 100 milliliters (MPN/100 mL), as a 7-day median.

ii. 23 MPN/100 mL, more than once in any 30-day period.

iii. 240 MPN/100 mL, at any time.

B. Land Discharge Specifications – NOT APPLICABLE

C. Recycling Specifications – NOT APPLICABLE

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations - None

B. Groundwater Limitations

Release of waste constituents from any component of any treatment, storage, delivery system, or disposal area associated with the discharge shall not cause or contribute to groundwater containing constituent concentrations in excess of the concentrations specified below or in excess of natural background quality, whichever is greater:

1. Total coliform organism level of 2.2 MPN/100 mL over any seven-day period.
2. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity, provided the Discharger complies with Provision VI.C.3.a.
3. Contain 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 odor, producing detrimental physiological responses in human, plant, animal, or aquatic life [i.e., toxicity]).

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 or prevent any discharge or sludge use or disposal in violation of this Order which has a reasonable likelihood of adversely affecting human health or the environment.

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.2.i 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 of 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 or effluent limitation of this Order, the Discharger shall notify the Central Valley Water Board by telephone (559) 445-5116 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, and the mass effluent limitation modified (higher or lower) 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.** 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. **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, except for copper. A site-specific WER of 2.0 was used for total recoverable and dissolved copper (see section IV.C. of the Fact Sheet). 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.

f. **Ultraviolet (UV) Disinfection Operating Specifications.** The UV operating specifications in this Order are based on the UV guidelines developed by the National Water Research Institute and American Water Works Association Research Foundation titled, "Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse." If the Discharger conducts a site-specific UV engineering study that identifies site-specific UV operating specifications that will achieve the virus inactivation equivalent to Title 22 disinfected tertiary recycled water, this Order may be reopened to modify the UV operating specifications.

g. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central

Valley Water Board in 2020 with Resolution R5-2020-0057 (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf). The revisions to the Basin Plan amendments became effective on 10 November 2021. 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/)

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 endpoint greater than or equal to 50 percent.

iii. **TRE.** The Discharger is required to initiate 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 compliance test, the Executive Officer may require a TRE.

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 SEMP shall be updated as appropriate to reflect the proposed Facility upgrades.

The Discharger submitted a Notice of Intent to comply with the Salt Control Program and selected the Alternative Salinity 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 annual 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 1,200 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.

b. **Pyrethroid Management Plan.** If the Pyrethroid Pesticides Water Column Chemistry Monitoring results in an exceedance of any acute and/or chronic pyrethroid numeric trigger in Table 4-2 of the Basin Plan to water bodies with designated or existing WARM and/or COLD beneficial uses, the Discharger shall develop and submit a Pyrethroid Management Plan to the Central Valley Water Board, per the requirements described in section 4.2.2.4.12 of the Basin Plan, within one year from the date that an exceedance is identified by either the Discharger or Central Valley Water Board staff. The Discharger shall review monitoring results quarterly and the Discharger shall notify the Central Valley Water Board of any exceedances of the Pyrethroid numeric triggers as soon as possible. If an exceedance is identified, the Discharger shall notify the Central Valley Water Board in writing of the exceedance and the Discharger's intent to submit a Pyrethroid Management Plan.

The Pyrethroid Management Plan shall identify management practices to reduce discharges of pyrethroid pesticides, as outlined in section 4.5.5.2.2.3 of the Basin Plan, and to consider whether there are potential water quality concerns with replacement insecticide products. Dischargers shall begin implementing their pyrethroid management plans within 30 days after receipt of written approval of their management plan. The Pyrethroid Management Plan shall be deemed complete when it can be demonstrated that the acute and chronic pyrethroids triggers are not exceeded in the final effluent and the demonstration is approved by the Executive Officer.

If a Pyrethroid Management Plan is required, the Discharger shall provide mid-term and/or end-term progress reports, consistent with the table below, to document the management practices that have been implemented to track the effectiveness of the Pyrethroid Management Plan. Reports should be submitted electronically via CIWQS submittal by the due date in the Technical Reports Table E-14.

Table 5. Pyrethroid Management Plan
Mid-Term and End-Term Progress Reporting

Pyrethroid Management Plan required and approved by date:	Mid-Term Progress Reporting Required	End-Term Progress Reporting Required
[insert date range 2 years from permit effective date]	Yes [permit writer to insert date 18 months from PMP submittal]	Yes [permit writer to insert ROWD due date]
[insert date range > 2 years to 3rd year in permit term]	No	Yes [permit writer to insert ROWD due date]
[insert date range > 3rd year to permit expiration date]	No (see table note)	No (see table note)

Table Note:
Mid-term and end-term progress reports will be required by subsequently reissued NPDES permits until the Pyrethroid Management Plan is deemed complete.

4. Construction, Operation and Maintenance Specifications

a. **Filtration System Operating Specifications.**

i. When coagulation is used, the Discharger shall operate the treatment system to ensure the turbidity measured at Monitoring Location FIL-002, as described in the MRP (Attachment E), shall not exceed any of the following:

(a) 2 NTU as a 24-hour average;

(b) 5 NTU more than 5 percent of the time within a 24-hour period; and

(c). 10 NTU, at any time.

ii. When coagulation is not used, the Discharger shall operate the treatment system to ensure:

(a) The turbidity of the influent to the filtration unit measured at Monitoring Location FIL-001, as described in the MRP (Attachment E), shall not exceed 5 NTU for more than 15 minutes and never exceed 10 NTU; and

(b) The filter effluent turbidity measured at Monitoring Location FIL-002, as described in the MRP (Attachment E), shall not exceed 2 NTU at any time.

b. **UV Disinfection System Operating Specifications.** The UV disinfection system must be operated in accordance with an operations and maintenance program that assures adequate disinfection, and shall meet the following minimum specifications to provide virus inactivation equivalent to Title 22 Disinfected Tertiary Recycled Water:

i. **UV Dose.** The minimum hourly average UV dose in the UV reactor shall be 100 millijoules per square centimeter (mJ/cm^2).

ii. **UV Transmittance.** The minimum hourly average UV transmittance (at 254 nanometers) in the wastewater measured at UVS-001 shall not fall below 55 percent.

iii. The lamp sleeves and cleaning system components must be visually inspected per the manufacturer's operations manual for physical wear (scoring, solarization, seal leaks, cleaning fluid levels, etc.) and to check the efficacy of the cleaning system.

iv. The lamp sleeves must be cleaned periodically as necessary to meet the UV dose requirements.

v. Lamps must be replaced per the manufacturer's operations manual, or sooner, if there are indications the lamps are failing to provide adequate disinfection. Lamp age and lamp replacement records must be maintained.

c. **Percolation Pond Operating Requirements.**

i. The treatment facilities shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.

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

iii. Ponds shall be managed to prevent breeding of mosquitoes. In particular:

(a) An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

(b) Weeds shall be minimized.

(c) Dead algae, vegetation, and debris shall not accumulate on the water surface.

(d) Vegetation management operations in areas in which nesting birds have been observed shall be carried out either before or after, but not during, the 1 April to 30 June bird nesting season.

iv. The Discharger shall operate and maintain all percolation 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 10 inches (measured vertically from the lowest possible point of overflow).

v. Objectionable odors originating at this Facility shall not be perceivable beyond the limits of the wastewater treatment plant, percolation pond areas, or at the outfall to the Merced River at an intensity that creates or threatens to create nuisance conditions.

vi. As a means of discerning compliance with Discharge Prohibition III.C. and Provision VI.C.4.c.v, the dissolved oxygen (DO) content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/L for three consecutive sampling events. If the DO in any single pond is below 1.0 mg/L for three consecutive sampling events, the Discharger shall report the findings to the Central Valley Water Board in writing within 10 days and shall include a proposal that will ensure a consistent DO of at least 1.0 mg/L within 30 days.

5. Special Provisions for Treatment Works Treating Domestic Sewage

a. **Pretreatment Requirements**

Pursuant to 40 C.F.R. 122.41(e), the Discharger must properly operate and maintain all facilities of treatment and control (and related appurtenances) to achieve compliance with the conditions of this permit. Proper control includes an enforceable ordinance or memorandum of agreement with Yosemite Concession Services that ensures grease and trash disposed to the collection system does not cause sewer collection spills.

b. **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 comply with section IX.A. Biosolids of the Monitoring and Reporting Program, Attachment E.

iv. 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.

6. Other Special Provisions

a. **Disinfection Requirements.** Wastewater shall be oxidized, filtered, and adequately disinfected consistent with the State Water Board, Division of Drinking Water (DDW) reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22), or equivalent.

b. **Nitrite plus Nitrate (as N) Trigger.** The Discharger shall calculate and submit the calendar annual average nitrite plus nitrate (as N) concentration in the effluent, as monitored at EFF-001, with the Annual Operations Report. If the calendar annual average nitrite plus nitrate (as N) concentration exceeds 55 mg/L, this represents an increase over current performance-based discharge levels, and therefore the Discharger shall conduct an evaluation to determine the cause(s) for the increased nitrite plus nitrate (as N)concentrations and submit the evaluation with the Annual Operations Report. The evaluation shall also include any measures the Discharger proposes to reduce the nitrite plus nitrate (as N) concentrations and a schedule for implementation of those measures.

c. **Facility Upgrades.** The Discharger is expecting major Facility upgrades to be completed in 2028. The upgrades include new preliminary treatment, flow equalization, and secondary treatment. The new additions to the Facility will be located adjacent to the existing Facility. The existing tertiary treatment and UV disinfection will be upgraded. The Discharger also plans to add a new aerobic sludge digestion system and sludge dewatering screw press. The effluent discharge locations will remain the same. **Within sixty (60) days of completing the Facility upgrades, the Discharger shall submit evidence, certified by a California licensed professional engineer, that the Facility is operating properly and in compliance with this Order.**

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

A. BOD_5 and TSS Effluent Limitations (sections IV.A.1.a and IV.A.1.c). Compliance with the final effluent limitations for BOD_5 and TSS required in Waste Discharge Requirements section IV.A.1.a shall be ascertained by 24-hour composite samples. Compliance with effluent limitations required in Waste Discharge Requirements section IV.A.1.c for percent removal shall be calculated using the arithmetic mean of BOD_5 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. Average Monthly Daily Flow Prohibition (section III.G). The average monthly daily flow represents the daily average flow (in million gallons per day) as determined over a calendar month.

C. Total Coliform Organisms Effluent Limitations (section IV.A.1.d). 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 2.2 per 100 milliliters, the Discharger will be considered out of compliance.

D. Priority Pollutant Effluent Limitations. Compliance with effluent limitations for priority pollutants shall be determined in accordance with section 2.4.5 of the SIP, as follows:

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

2. Dischargers shall be required to conduct a Pollutant Minimization Program (PMP) in accordance with section 2.4.5.1 of the SIP when there is evidence that the priority pollutant is present in the effluent above an effluent limitation and either:

    a. sample result is reported as detected, but not quantified (DNQ) and the effluent limitation is less than the RL; or

    b. sample result is reported as non-detect (ND) and the effluent limitation is less than the method detection limit (MDL).

3. When determining compliance with an average monthly effluent limitation (AMEL) 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.

4. If a sample result, or the arithmetic mean or median of multiple sample results, is below the RL, and there is evidence that the priority pollutant is present in the effluent above an effluent limitation and the discharger conducts a PMP (as described in section 2.4.5.1), the discharger shall **not** be deemed out of compliance.

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(s)
A period of time from a day of one month 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 (e.g., from January 1 to January 31, from June 15 to July 14, or from January 31 to February 28).

Calendar Quarter
A period of time defined as three consecutive calendar months.

Calendar Year
A period of time defined as twelve consecutive calendar months.

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 in 40 C.F.R. Part 136, Attachment 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.

Ocean Waters
The territorial marine waters of the State as defined by California law to the extent these waters are outside of enclosed bays, estuaries, and coastal lagoons. Discharges to ocean waters are regulated in accordance with the State Water Board's California Ocean Plan.

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.

Satellite Collection System
The portion, if any, of a sanitary sewer system owned or operated by a different public agency than the agency that owns and operates the wastewater treatment facility that a sanitary sewer system is tributary to.

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
Refers to section III.B and section IV.B of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California.

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 Limitation (MDEL)
For the purposes of chronic and acute aquatic toxicity, an MDEL is an effluent limitation based on the outcome of the TST approach and the resulting percent effect at the IWC.

WET Median Monthly Effluent Limit (MMEL)
For the purposes of chronic and acute aquatic toxicity, an MMEL is an effluent limitation based on a maximum of three independent toxicity tests analyzed using the TST approach during a calendar month.

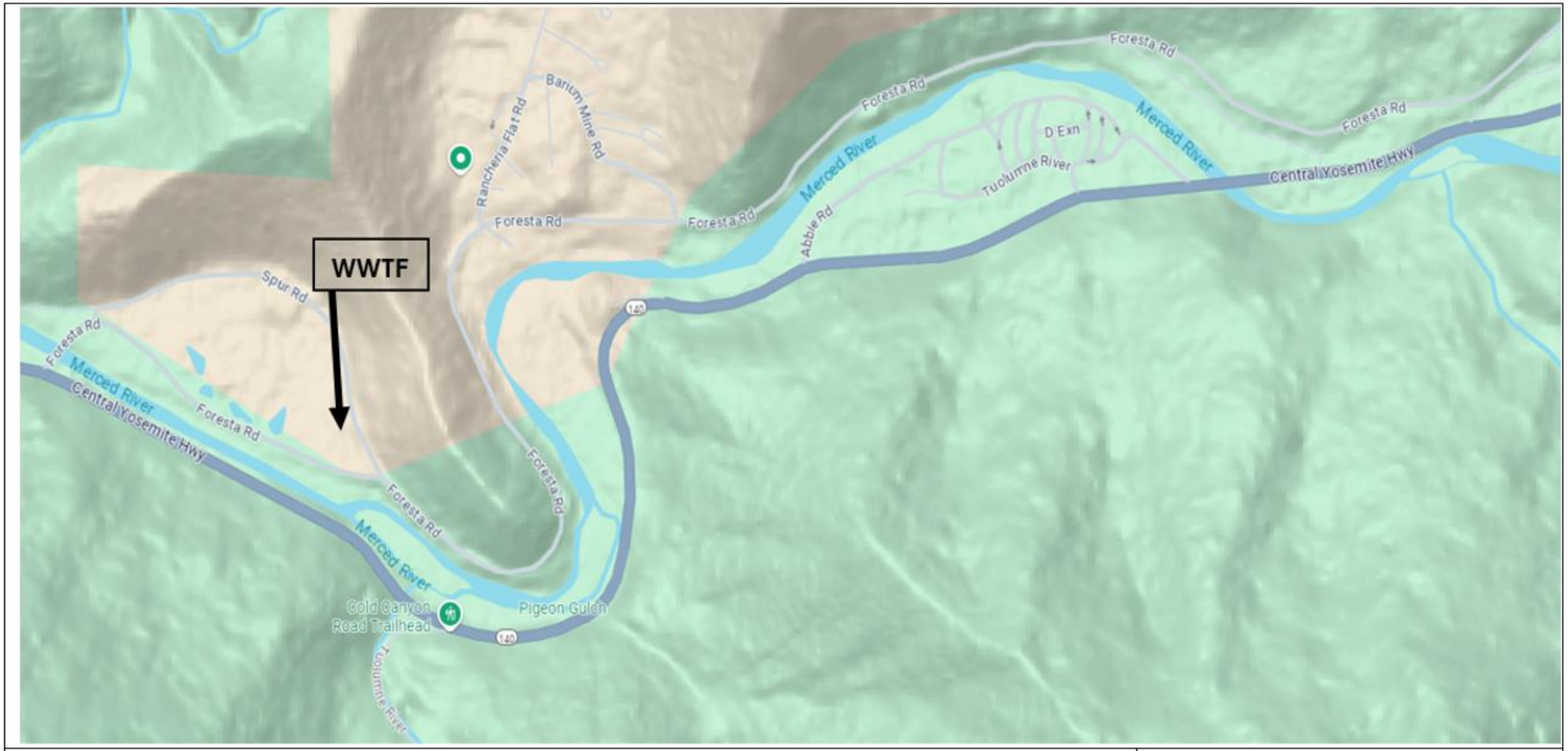
WET Maximum Daily Effluent Target (MDET)
For the purposes of chronic aquatic toxicity, an MDET is a target used to determine whether a Toxicity Reduction Evaluation (TRE) should be conducted. Not meeting the MDET is not a violation of an effluent limitation.

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 MMEL Compliance Tests
For the purposes of chronic and acute aquatic toxicity, a maximum of two tests that are used in addition to the routine monitoring test to determine compliance with the chronic and acute aquatic toxicity MMEL.

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.

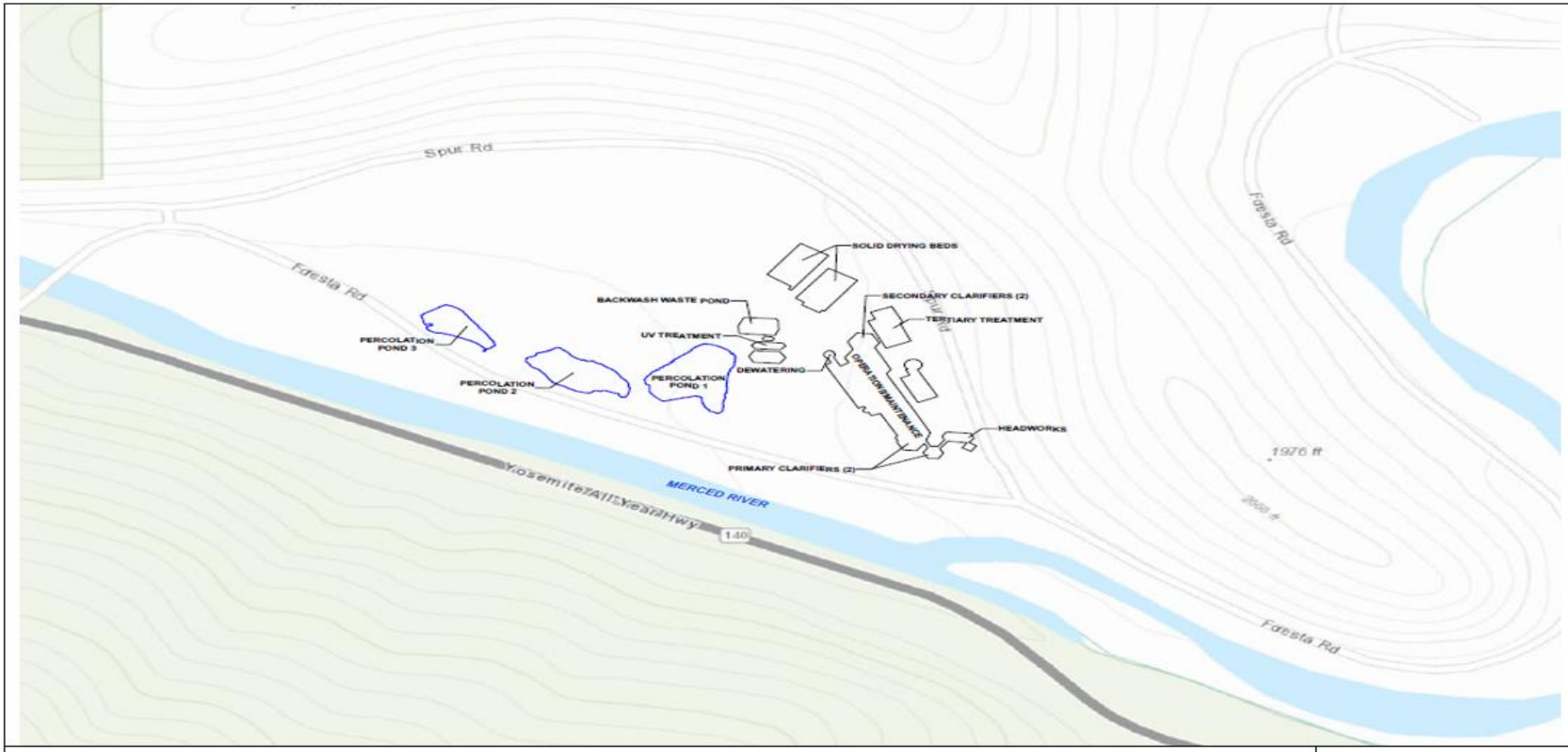
ATTACHMENT B-1 – MAP



Site Location Map – 1

USDI, NPS, YOSEMITE NATIONAL PARK
EL PORTAL WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

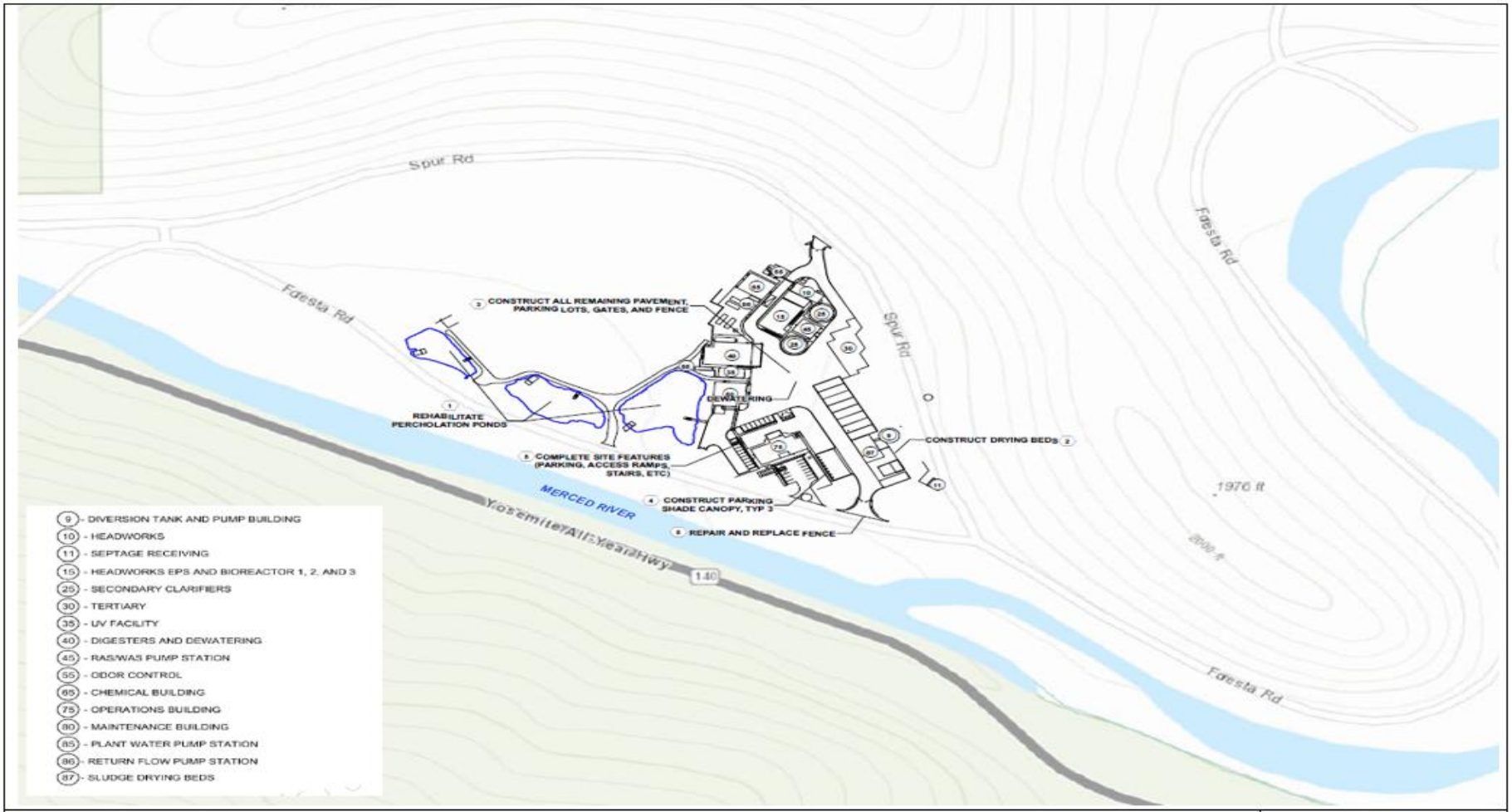
ATTACHMENT B-2 – MAP



Site Location Map – 2

USDI, NPS, YOSEMITE NATIONAL PARK
EL PORTAL WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

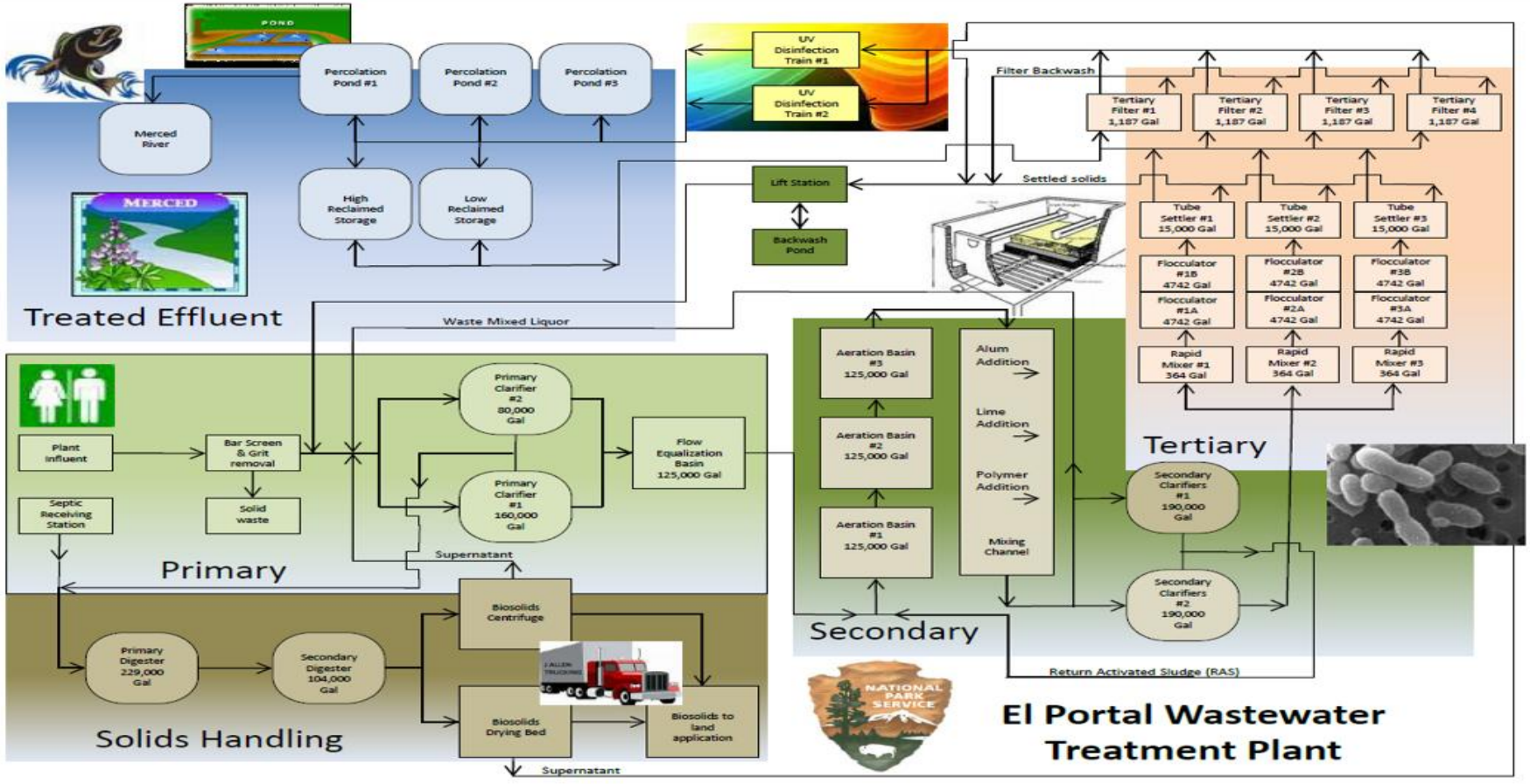
ATTACHMENT B-3 – MAP



Future Site Location Map – 2

USDI, NPS, YOSEMITE NATIONAL PARK
EL PORTAL WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

ATTACHMENT C – FLOW SCHEMATIC



Current Flow Schematic

USDI, NPS, YOSEMITE NATIONAL PARK
EL PORTAL WASTEWATER TREATMENT FACILITY
MARIPOSA COUNTY

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.2.b 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).)

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 ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Resources Control Board at the following address or electronically via email to the DMR-QA Coordinator:

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

H. 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	A location where a representative sample of the influent into the Facility can be collected prior to any plant return flows or treatment processes.
001	EFF-001	Final disinfected tertiary-treated effluent, prior to discharge to the percolation ponds, where most representative of the effluent discharged. Latitude: 37.667778, Longitude: -119.8125
002	EFF-002	Final disinfected tertiary-treated effluent, prior to discharge to the Merced River, where most representative of the effluent discharged. Latitude: 37.667778, Longitude: -119.8125
--	RSW-001	Merced River, south of El Portal supply well #2, at approximately. Latitude: 37.672778, Longitude: -119.794722
--	RSW-002	Merced River, in the vicinity of Foresta Road bridge crossing, at approximately Latitude: 37.669167, Longitude: -119.816944
--	BIO-001	Representative of the dewatered biosolids shipped offsite for disposal and/or composting
--	PND-001	A location where a representative sample of percolation pond #1 can be collected. (See Site Location Map 2 and 3, Attachment B)
--	PND-002	A location where a representative sample of percolation pond #2 can be collected. (See Site Location Map 2 and 3, Attachment B)
--	PND-003	A location where a representative sample of percolation pond #3 can be collected. (See Site Location Map 2 and 3, Attachment B)
--	SPL-001	Representative of water supply for the area served by the Facility.
--	UVS-001	Ultraviolet light disinfection system.
--	FIL-001	A location where a representative sample of the influent to the filtration system can be obtained.
--	FIL-002	A location where a representative sample of the effluent from the filtration system prior to the ultraviolet disinfection system.

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
Biochemical Oxygen Demand, 5-day @ 20°Celcius (BOD_5)	mg/L	24-hour Composite	1/Week
Electrical Conductivity @ 25 °C	µmhos/cm	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. **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 tertiary-treated wastewater at 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 – Monitoring Location EFF-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
Biochemical Oxygen Demand, 5-day @ 20°Celcius (BOD_5)	mg/L	24-hour Composite	1/Week
BOD_5	% removal	Calculate	1/Month
Total Suspended Solids (TSS)	mg/L	24-hour Composite	1/Week
TSS	% removal	Calculate	1/Month
pH	standard units	Grab	1/Day
Priority Pollutants and Other Constituents of Concern	(see section IX.E)	(see section IX.E)	(see section IX.E)
Aluminum, Total Recoverable	µg/L	24-hour Composite	1/Quarter
Ammonia Nitrogen, Total (as N)	mg/L	Grab	2/Month
Copper	µg/L	Grab	1/Month
Zinc	µg/L	Grab	1/Month
Dissolved Organic Carbon	mg/L	24-hour Composite	1/Quarter
Electrical Conductivity @ 25° Celsius	µmhos/cm	24-hour Composite	1/Week
Hardness, Total (as CaCO3)	mg/L	Grab	1/Month
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Quarter
Nitrite Nitrogen, Total (as N)	mg/L	Grab	1/Quarter
Nitrate Plus Nitrite (as N)	mg/L	Grab	1/Quarter
Phosphorus, Total (as P)	mg/L	24-hour Composite	1/Quarter
Standard Minerals	mg/L	Grab	1/Year
Temperature	Degrees F	Grab	1/Day
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.

c. **Handheld Field Meter.** A handheld field meter may be used for **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. **Standard Minerals** shall include boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series: bicarbonate, carbonate and hydroxide), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

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

h. **Aluminum.** Aluminum shall be analyzed using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.

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

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

B. Monitoring Location EFF-002

1. The Discharger shall monitor tertiary-treated wastewater at Monitoring Location EFF-002 as follows during periods of direct discharge to the Merced River, in accordance with Table E-4 and the testing requirements described in section IV.B.2 below:

Table E-4. Effluent Monitoring – Monitoring Location EFF-002

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
Biochemical Oxygen Demand, 5-day @ 20°C (BOD_5)	mg/L	24-hour Composite	2/Week
BOD_5	% removal	Calculate	1/Month
Total Suspended Solids (TSS)	mg/L	24-hour Composite	2/Week
TSS	% removal	Calculate	1/Month
pH	standard units	Grab	1/Day
Priority Pollutants and Other Constituents of Concern	(see section IX.E)	(see section IX.E)	(see section IX.E)
Aluminum, Total Recoverable	µg/L	24-hour Composite	1/Quarter
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Week
Copper	µg/L	Grab	1/Month
Zinc	µg/L	Grab	1/Month
Dissolved Organic Carbon	mg/L	24-hour Composite	1/Month
Electrical Conductivity @ 25°Celcius	µmhos/cm	24-hour Composite	1/Week
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
Nitrate Plus Nitrite (as N)	mg/L	Grab	1/Month
Phosphorus, Total (as P)	mg/L	24-hour Composite	1/Month
Standard Minerals	mg/L	Grab	1/Year
Temperature	Degrees F	Grab	1/Day
Whole Effluent Toxicity	(see section V)	(see section V)	(see section V)

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. **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.

   c. **Handheld Field Meter.** A handheld field meter may be used for **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. **Standard Minerals** shall include boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series: bicarbonate, carbonate and hydroxide), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

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

h. **Aluminum.** Aluminum shall be analyzed using either total or acid-soluble (inductively coupled plasma/atomic emission spectrometry or inductively coupled plasma/mass spectrometry) analysis methods, as supported by U.S. EPA's Ambient Water Quality Criteria for Aluminum document (EPA 440/5-86-008), or other standard methods that exclude aluminum silicate particles as approved by the Executive Officer.

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

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

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 January 1, April 1, July 1, and October 1** (i.e., from January 1 to March 31, from April 1 to June 30, from July 1 to September 30, etc.).

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 January** 1 (i.e., January 1 to December 31), 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 25 percent effluent.

2. **Routine Monitoring Frequency.** While discharging to Monitoring Location EFF-001, 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 in at least one calendar quarter.

   When discharging to Monitoring Location EFF-002, the Discharger shall perform routine chronic toxicity testing **once per calendar quarter** in quarters in which there are at least 15 days of discharge in at least one calendar quarter. Sampling shall be concurrent with effluent ammonia sampling. While the Discharger is conducting a TRE, when discharging to Monitoring Location EFF-002, the Executive Officer may authorize a reduction in the frequency of routine monitoring to a minimum of two (2) chronic aquatic toxicity tests per toxicity calendar year. The Discharger shall return to the routine monitoring schedule either at the conclusion of the TRE or one year after the initiation of the TRE, whichever occurs sooner.

3. **Chronic Toxicity MMET Testing.** If a routine chronic toxicity monitoring test results in a “fail” at the IWC, then a maximum of two chronic toxicity MMET tests shall be completed. The chronic toxicity MMET tests shall be initiated within the same toxicity calendar month that the routine chronic toxicity monitoring test was initiated that resulted in the “fail” at the IWC. 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.

4. **Additional Routine Monitoring Tests for TRE Determination.** In order to determine if a TRE is necessary, an additional routine monitoring test is required when one chronic toxicity MDET or MMET exceedance, but not two exceedances in a single toxicity calendar month. The toxicity calendar month in which the MMET or MDET exceedance occurred and the toxicity calendar month of the additional routine monitoring shall be considered “successive calendar months” for purposes of determining whether a TRE is required. This additional routine monitoring test could result in the need to conduct MMET tests per section V.B.3 above.

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

6. **Test Species.** The testing shall be conducted using the most sensitive species. The Discharger shall conduct chronic toxicity tests with *Ceriodaphnia dubia,* unless otherwise specified in writing by the Executive Officer.

7. **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/R02/013, 2002; Table IA, 40 C.F.R. part 136).

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

9. **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.10, below.

10. **Replacement Test.** When a required toxicity test for routine monitoring or MMET compliance test 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 compliance test, 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 compliance tests, as applicable, and any MMET compliance 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 compliance 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 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, all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE investigations.

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 screening to 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 four consecutive calendar quarters using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green alga (*Pseudokirchneriella subcapitata*). The tests shall be performed at 100 percent effluent. **The Discharger shall initiate a most sensitive species screening after the Facility upgrades are complete.**

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.

G. Toxicity Reduction Evaluations (TRE)

1. **TRE Implementation.** 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.

    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.

3. **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-14. 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. PERCOLATION PONDS MONITORING REQUIREMENTS

A. Monitoring Location PND-001, PND-002, and PND-003

1. The Discharger shall monitor the percolation ponds at Monitoring Locations PND-001, PND-002, and PND-003 in accordance with Table E-5 and the testing requirements described in section VI.A.2 below:

Table E-5. Percolation Pond Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved Oxygen	mg/L	Grab	1/week
pH	Standard Units	Grab	1/week

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. Dissolved oxygen samples shall be collected from each pond at a point opposite of the inlet and shall be collected between 0800 and 0900 hours.

   b. If offensive odor detected by or brought to the attention of Facility personnel, monitor dissolved oxygen in the affected pond(s) daily until dissolved oxygen > 1.0 mg/L.

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS – SURFACE WATERS

A. Monitoring Location RSW-001 and RSW-002

1. The Discharger shall monitor the Merced River at upstream Monitoring Location RSW-001 and downstream Monitoring Location RSW-002 during periods of discharge to the percolation ponds in accordance with Table E-6 and the testing requirements described in section VIII.A.2 below:

Table E-6. Receiving Water Monitoring Requirements – RSW-001 and RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	cubic feet per second	USGS gauging station @ Pohono Bridge	1/Month
pH	Standard Units	Grab	1/Month
Priority Pollutants and Other Constituents of Concern	(see section IX.E)	(see section IX.E)	(see section IX.E)
Dissolved Organic Carbon	mg/L	Grab	1/Quarter
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity @ 25° C	µmhos/cm	Grab	1/Month
Hardness (as CaCO3)	mg/L	Grab	1/Month
Nitrite plus Nitrate (as N)	mg/L	Grab	1/Quarter
Standard Minerals	mg/L	Grab	1/Year
Temperature	°C	Grab	1/Month
Turbidity	NTU	Grab	1/Quarter

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

   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. **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.

c. **Temperature** and **pH** shall be recorded at the same time.

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

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

f. **Standard Minerals** shall include boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series: bicarbonate, carbonate and hydroxide), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

g. Monitoring for priority pollutants, hardness, and standard minerals are only required at Monitoring Location RSW-001.

B. Monitoring Location RSW-001 and RSW-002

1. The Discharger shall monitor the Merced River at upstream Monitoring Location RSW-001 and downstream Monitoring Location RSW-002 during periods of direct discharge to the Merced River in accordance with Table E-7 and the testing requirements described in section VIII.B.2 below:

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

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	cubic feet per second	USGS gauging station @ Pohono Bridge	1/Day
pH	Standard Units	Grab	1/Week
Priority Pollutants and Other Constituents of Concern	(see section IX.E)	(see section IX.E)	(see section IX.E)
Dissolved Organic Carbon	mg/L	Grab	1/Quarter
Dissolved Oxygen	mg/L	Grab	1/Week
Electrical Conductivity @ 25 °C	µmhos/cm	Grab	1/Week
Hardness (as CaCO3)	mg/L	Grab	1/Month
Nitrite plus Nitrate (as N)	mg/L	Grab	1/Month
Standard Minerals	mg/L	Grab	1/Year
Temperature	°C	Grab	1/Week
Turbidity	NTU	Grab	1/Month

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 Executive Officer 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 shall be maintained at the Facility.

c. **Temperature** and **pH** shall be recorded at the same time.

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

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

f. **Standard Minerals** shall include boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series: bicarbonate, carbonate and hydroxide), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

g. Monitoring for priority pollutants, hardness, and standard minerals are only required at Monitoring Location RSW-001.

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 the Merced River. 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.

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids – Not Applicable

B. Municipal Water Supply

1. **Monitoring Location SPL-001.** The Discharger shall monitor the municipal water supply at SPL-001 in accordance with Table E- 8 and the testing requirements described in section IX.B.2. below.

Table E-8. Municipal Water Supply Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling
Total Dissolved Solids	mg/L	Grab	1/Year
Electrical Conductivity @ 25° Celsius	µmhos/cm	Grab	1/Year
Standard Minerals	mg/L	Grab	1/Year

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. **Applicable to all parameters.** Pollutants 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. If the water supply is from more than one source, the **total dissolved solids** and **electrical conductivity** shall be reported as a weighted average and include copies of supporting calculations.

   c. **Standard minerals** shall include all major cations and anions and include verification that the analysis is complete (i.e., cation/anion balance).

C. Filtration System and Ultraviolet Light (UV) Disinfection System

1. **Monitoring Locations UVS-001, FIL-001 and FIL-002.** The Discharger shall monitor the filtration system at Monitoring Location FIL-001 and FIL-002 as well as the UV disinfection system at Monitoring Location UVS-001 in accordance with Table E-9 and the testing requirements described in section IX.C.2 below:

Table E-9. Filtration System and UV Disinfection System Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Location	Minimum Sampling Frequency
Flow	MGD	Meter	UVS-001	Continuous
Turbidity	NTU	Meter	FIL-001 FIL-002	Continuous
Number of UV banks in operation	Number	Observation	N/A	Continuous
UV Transmittance	Percent (%)	Meter	UVS-001	Continuous
UV Dose	mJ/cm^2	Calculated	N/A	Continuous
Total Coliform Organisms	MPN/100mL	Grab	UVS-001	1/Day (Merced River) 1/Week (Pond) See section IX.C.2.f below

2. **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.** 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. **Continuous analyzers.** The Discharger shall report documented routine meter maintenance activities including date, time of day, and duration, in which the analyzer(s) is not in operation. If analyzer(s) fail to provide continuous monitoring for more than two hours and influent and/or effluent from the disinfection process is not diverted for retreatment, the Discharger shall obtain and report hourly manual and/or grab sample results.

   c. **Turbidity.** Report daily average and maximum turbidity. Turbidity monitoring at Monitoring Location FIL-001 is only required when the Discharger is not using coagulation.

   d. **UV Dose.** Report daily minimum hourly average UV dose and daily average UV dose. The minimum hourly average dose shall consist of lowest hourly average dose provided in any channel that had at least one bank of lamps operating during the hour interval. For channels that did not

operate for the entire hour interval, the dose will be averaged based on the actual operation time.

f. **Total Coliform Organisms.** At minimum, sampling shall be conducted weekly when discharging to ponds, and daily when discharging directly to the Merced River.

D. Pyrethroid Pesticides Monitoring

1. **Water Column Chemistry Monitoring Requirements.** The Discharger shall conduct effluent and receiving water (Merced River) baseline monitoring in accordance with Table E-10. Quarterly monitoring shall be conducted for **one year beginning with the third quarter of 2028** concurrent with the Effluent and Receiving Water Characterization Monitoring. The Discharger shall also collect a minimum of one quality assurance/quality control (QA/QC) sample during the year to be analyzed for the constituents listed in Table E-10.

   The monitoring shall be conducted in the effluent at monitoring location EFF-001 or EFF-002 and downstream receiving water at monitoring location RSW-002 and the results of such monitoring be submitted to the Central Valley Water Board with the quarterly self-monitoring reports. The Discharger shall use one of the Environmental Laboratory Accreditation Program (ELAP)-accredited laboratories with analytical methods that have been approved by the Central Valley Water Board's Executive Officer for use in assessing compliance with the Basin Plan. A current list of ELAP-approved laboratories and points of contact can be found on the Central Valley Water Board's Pyrethroid Pesticides TMDL and Basin Plan Amendment Webpage, (https://waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/pyrethroid_control_program/).

   Monitoring can either be conducted by the Discharger or can be done as part of a group monitoring effort. If the Discharger chooses to participate in a group monitoring effort, the timing and the other study requirements of the monitoring can be modified by the Executive Officer.

Table E-10. Pyrethroid Pesticides Monitoring

Parameter	CAS Number	Sample Units	Sample Type	Analytical Method	Reporting Level
Total Bifenthrin	82657-04-3	ng/L	Grab	See Table Note 1	1.3
Total Cyfluthrin	68359-37-5	ng/L	Grab	See Table Note 1	1.3
Total Cypermethrin	52315-07-8	ng/L	Grab	See Table Note 1	1.7
Total Esfenvalerate	51630-58-1	ng/L	Grab	See Table Note 1	3.3

Parameter	CAS Number	Sample Units	Sample Type	Analytical Method	Reporting Level
Total Lambda-cyhalothrin	91465-08-6	ng/L	Grab	See Table Note 1	1.2
Total Permethrin	52645-53-1	ng/L	Grab	See Table Note 1	10
Freely Dissolved Bifenthrin	82657-04-3	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Cyfluthrin	68359-37-5	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Cypermethrin	52315-07-8	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Esfenvalerate	51630-58-1	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Lambda-cyhalothrin	91465-08-6	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Permethrin	52645-53-1	ng/L	Calculated	Calculated from total concentration	--
Dissolved Organic Carbon (DOC)		mg/L	24-hour Composite	--	--
Total Organic Carbon (TOC)		mg/L	24-hour Composite	--	--

Table Notes:

1. The Discharger shall use ELAP-accredited laboratories and methods validated by Central Valley Water Board staff for pyrethroid pesticides water column chemistry monitoring. A current list of ELAP-approved laboratories and points of contact can be found on the Central Valley Water Board's Pyrethroid Pesticides TMDL and Basin Plan Amendment Webpage: https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/central_valley_pesticides/pyrethroid_tmdl_bpa/index.html.

   The freely dissolved concentration of each quantified pyrethroid pesticide in a sample may be directly measured or estimated using partition coefficients. Methods for direct measurement must be approved by the Executive Officer before they are used to determine the freely dissolved pyrethroid concentrations that are used for determining exceedances of the pyrethroid pesticides numeric triggers in Table 4-2 of the Basin Plan.

   To estimate the freely dissolved concentration of a pyrethroid pesticide with partition coefficients, the following equation shall be used:

$$C_{dissolved} = \frac{C_{total}}{1 + (K_{OC} \times [POC]) + (K_{DOC} \times [DOC])}$$

Where:

C dissolved = concentration of a an individual pyrethroid pesticide that is in the freely dissolved phase (ng/L),

C total = total concentration of an individual pyrethroid pesticide in water (ng/L),

KOC = organic carbon-water partition coefficient for the individual pyrethroid pesticide (L/kg),

[POC] = concentration of particulate organic carbon in the water sample (kg/L), which can be calculated as [POC]=[TOC]-[DOC],

[TOC] = total organic carbon in the sample (kg/L)

KDOC = dissolved organic carbon-water partition coefficient (L/kg),

[DOC] = concentration of dissolved organic carbon in the sample (kg/L).

Site-specific or alternative study-based partition coefficients approved by the Executive Officer may be used for KOC and KDOC in the above equation. If site-specific or alternative study-based partition coefficients are not available or have not been approved, the following partition coefficients shall be used for KOC and KDOC in the above equation:

Table E-11. Pyrethroid Pesticide Partition Coefficients

Pyrethroid Pesticide	Receiving water KOC (L/kg)	Receiving water KDOC (L/kg)	Effluent KOC (L/kg)	Effluent KDOC (L/kg)
Bifenthrin	4,228,000	1,737,127	15,848,932	800,000
Cyfluthrin	3,870,000	2,432,071	3,870,000	2,432,071
Cypermethrin	3,105,000	762,765	6,309,573	200,000
Esfenvalerate	7,220,000	1,733,158	7,220,000	1,733,158
Lambda-cyhalothrin	2,056,000	952,809	7,126,428	200,000
Permethrin	6,075,000	957,703	10,000,000	200,000

2. **Water Column Toxicity Monitoring Requirements.** When discharging to the Merced River, the Discharger shall monitor the toxicity of the downstream receiving water using U.S. EPA method EPA-821-R-02-012 (Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition, USEPA, October 2002, or most recent edition). Except as specified in this order, water column toxicity testing shall follow the measurement quality objectives provided in the Surface Water Ambient Monitoring Program (SWAMP) Quality Assurance Program Plan (SWRCB,

2018). When feasible, the Discharger shall use the Southern California Coastal Water Research Project (SCCWRP) guidance (Schiff and Greenstein, 2016) on test organism age and size for *Hyalella azteca*.

For consistency with U.S. EPA Method EPA-821-R-02-012 and ELAP accreditation, *Hyalella azteca* water column toxicity testing for baseline monitoring must be performed at 20 degrees Celsius.

Quarterly monitoring shall be conducted for one year concurrent with the Pyrethroid Pesticides Water Column Chemistry Monitoring during Effluent and Receiving Water Characterization Monitoring (see section IX.D of this MRP for specific dates). Downstream receiving water monitoring shall be conducted at monitoring location RSW-002 and the results of such monitoring be submitted to the Central Valley Water Board with the quarterly self-monitoring reports. Monitoring can either be conducted by the Discharger or can be done as part of a group monitoring effort. If the Discharger chooses to participate in a group monitoring effort, the timing of the monitoring can be modified by the Executive Officer.

3. **Exceedance of Numeric Triggers.** If the Pyrethroid Pesticides Water Column Chemistry Monitoring identifies an exceedance of any pyrethroid pesticides numeric trigger, the Discharger shall notify the Central Valley Water Board in writing of the exceedance and the Discharger's intent to submit a Pyrethroid Management Plan. Monitoring results should be reviewed quarterly, and the Discharger shall notify the Central Valley Water Board of any exceedances of the Pyrethroid numeric triggers as soon as possible. The Pyrethroid Management Plan, as outlined in section VI.C.3.b of this Order, shall be submitted to the Central Valley Water Board within one year from the date that an exceedance is identified by either the Discharger or Central Valley Water Board staff. Pyrethroid concentrations that exceed the acute and/or chronic pyrethroid numeric triggers, as outlined in Table 4-2 of the Basin Plan, constitute an exceedance of a numeric trigger. In the absence of a pyrethroid numeric trigger exceedance, observed toxicity in the water column does not constitute a violation of the pyrethroid conditional prohibition.

   Identification of an exceedance provides the information that the Pyrethroid Pesticides Water Column Chemistry Monitoring was designed to collect, per Chapter V of the Basin Plan; therefore, once an exceedance is identified, the Discharger may cease conducting subsequent Pesticides Water Column Chemistry Monitoring.

E. Effluent and Receiving Water Characterization

1. **Monitoring Frequency**

   a. **Effluent Sampling.** Samples shall be collected from the effluent (Monitoring Location EFF-001 when discharging to Discharge Point 001 and Monitoring

Location EFF-002 when discharging to Discharge Point 002) **quarterly beginning 1 July 2028 through 30 June 2029.**

b. **Receiving Water Sampling.** Samples shall be collected from the upstream receiving water (Monitoring Location RSW-001) **quarterly beginning 1 July 2028 through 30 June 2029.**

2. **Analytical Methods.** Constituents shall be collected and analyzed consistent with the Discharger's Analytical Methods Report (MRP, X.D.2) 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.

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-14.

4. The Discharger shall conduct effluent and receiving water characterization monitoring in accordance with Table E-12 and the testing requirements described in section IX.E.5 below.

Table E-12. 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

CTR Number	Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
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
21	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-Organic Volatile 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

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
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
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	7429-90-5	µg/L	24-hour Composite
1	Antimony, Total	7440-36-0	µg/L	24-hour Composite
2	Arsenic, Total	7440-38-2	µg/L	24-hour Composite
15	Asbestos	1332-21-4	µg/L	24-hour Composite
3	Beryllium, Total	7440-41-7	µg/L	24-hour Composite
4	Cadmium, Total	7440-43-9	µg/L	24-hour Composite
5a	Chromium, Total	7440-47-3	µg/L	24-hour Composite
6	Copper, Total	7440-50-8	µg/L	24-hour Composite
14	Iron, Total	7439-89-6	µg/L	24-hour Composite
7	Lead, Total	7439-92-1	µg/L	24-hour Composite
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	24-hour Composite
9	Nickel, Total	7440-02-0	µg/L	24-hour Composite
10	Selenium, Total	7782-49-2	µg/L	24-hour Composite
11	Silver, Total	7440-22-4	µg/L	24-hour Composite
12	Thallium, Total	7440-28-0	µg/L	24-hour Composite
13	Zinc, Total	7440-66-6	µg/L	24-hour Composite

NON-METALS/MINERALS

CTR Number	Non-Metal/Mineral Parameters	CAS Number	Units	Effluent Sample Type
NL	Boron	7440-42-8	µg/L	24-hour Composite
NL	Chloride	16887-00-6	mg/L	24-hour Composite
14	Cyanide, Total (as CN)	57-12-5	µg/L	Grab
NL	Sulfate	14808-79-8	mg/L	24-hour Composite
NL	Sulfide (as S)	5651-88-7	mg/L	24-hour Composite

PESTICIDES/PCBs/DIOXINS

CTR Number	Pesticide/PCB/Dioxin Parameters	CAS Number	Units	Effluent Sample Type
110	4,4-DDD	72-54-8	µg/L	24-hour Composite
109	4,4-DDE	72-55-9	µg/L	24-hour Composite
108	4,4-DDT	50-29-3	µg/L	24-hour Composite
112	alpha-Endosulfan	959-98-8	µg/L	24-hour Composite
103	alpha-BHC (Benzene hexachloride)	319-84-6	µg/L	24-hour Composite
102	Aldrin	309-00-2	µg/L	24-hour Composite
113	beta-Endosulfan	33213-65-9	µg/L	24-hour Composite
104	beta-BHC (Benzene hexachloride)	319-85-7	µg/L	24-hour Composite

CTR Number	Pesticide/PCB/Dioxin Parameters	CAS Number	Units	Effluent Sample Type
107	Chlordane	57-74-9	µg/L	24-hour Composite
106	delta-BHC (Benzene hexachloride)	319-86-8	µg/L	24-hour Composite
111	Dieldrin	60-57-1	µg/L	24-hour Composite
114	Endosulfan Sulfate	1031-07-8	µg/L	24-hour Composite
115	Endrin	72-20-8	µg/L	24-hour Composite
116	Endrin Aldehyde	7421-93-4	µg/L	24-hour Composite
117	Heptachlor	76-44-8	µg/L	24-hour Composite
118	Heptachlor Epoxide	1024-57-3	µg/L	24-hour Composite
105	gamma-BHC (Benzene hexachloride or Lindane)	58-89-9	µg/L	24-hour Composite
119	Polychlorinated Biphenyl (PCB) 1016	12674-11-2	µg/L	24-hour Composite
120	PCB 1221	11104-28-2	µg/L	24-hour Composite
121	PCB 1232	11141-16-5	µg/L	24-hour Composite
122	PCB 1242	53469-21-9	µg/L	24-hour Composite
123	PCB 1248	12672-29-6	µg/L	24-hour Composite
124	PCB 1254	11097-69-1	µg/L	24-hour Composite
125	PCB 1260	11096-82-5	µg/L	24-hour Composite
126	Toxaphene	8001-35-2	µg/L	24-hour Composite
16	2,3,7,8-TCDD (Dioxin)	1746-01-6	mg/L	24-hour Composite

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	Foaming Agents (MBAS)	MBAS	mg/L	24-hour Composite
NL	Hardness (as CaCO3)	471-34-1	mg/L	Grab
NL	Specific Conductance (Electrical Conductivity or EC)	EC	µmhos /cm	24-hour Composite
NL	Total Dissolved Solids (TDS)	TDS	mg/L	24-hour Composite
NL	Dissolved Organic Carbon (DOC)	DOC	mg/L	24-hour Composite

NUTRIENTS

CTR Number	Nutrient Parameters	CAS Number	Units	Effluent Sample Type
NL	Ammonia (as N)	7664-41-7	mg/L	24-hour Composite
NL	Nitrate (as N)	14797-55-8	mg/L	24-hour Composite

CTR Number	Nutrient Parameters	CAS Number	Units	Effluent Sample Type
NL	Nitrite (as N)	14797-65-0	mg/L	24-hour Composite
NL	Phosphorus, Total (as P)	7723-14-0	mg/L	24-hour Composite

OTHER CONSTITUENTS OF CONCERN

CTR Number	Other Constituents of Concern	CAS Number	Units	Effluent Sample Type
NL	Chlorpyrifos	2921-88-2	µg/L	24-hour Composite
NL	Diazinon	333-41-5	µg/L	24-hour Composite

5. **Table E-12 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-12:
    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 and E-4, with the exception of hardness which shall be sampled concurrently with the hardness-dependent metals (cadmium, 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-12.
    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 and1631 (Revision E), respectively, with a reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury.

i. **TCDD-Dioxin Congener Equivalents** shall include all 17 of the 2,3,7,8 TCDD dioxin congeners as listed in section 3 of the SIP.

j. **Ammonia (as N).** Sampling is only required in the upstream receiving water.

k. **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.

l. **Iron and Manganese.** Prior to analysis, samples shall be filtered through a 1.5-micron filter.

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 – Not Applicable**

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 IX. 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 occurs during the month, the monitoring report must be submitted stating that there has been no discharge.

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

Table E-13. 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/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
2/Month	Permit effective date	1st day of calendar month through last day of calendar month	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
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
1/Year	Permit effective date	1 January through 31 December	1 February of following year
2/Year (Chronic Toxicity)	Permit effective date	1 January through 30 June 1 July through 31 December	Within 30 days following completion of tests

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 Limitations.** For constituents with effluent limitations specified as “calendar annual average” the Discharger shall report the calendar annual average in the December SMR. The annual average shall be calculated as the average of the samples gathered for the calendar year.

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.C of the Waste Discharge Requirements.

d. **Dissolved Oxygen Receiving Water Concentrations.** The Discharger shall report monthly in the self-monitoring report the dissolved oxygen concentrations in the effluent (EFF-001 or EFF-002) and the receiving water (Monitoring Location RSW-001 and RSW-002).

e. **Turbidity Receiving Water Calculations.** The Discharger shall calculate and report the turbidity increase in the receiving water applicable to the natural turbidity condition.

f. **Temperature Receiving Water Calculations.** The Discharger shall calculate and report the temperature increase in the receiving water based

on the difference in temperature at Monitoring Locations RSW-001 and RSW-002.

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-14. 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, 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-14:

    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. 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. **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-14:

   a. Report of Waste Discharge (Form 200);

   b. 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.

   f. **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.

7. **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-14 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-14. 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	<1 YEAR PRIOR TO PERMIT EXPIRATION DATE>	ROWD
2	Analytical Methods Report	<WITHIN 1 year OF PERMIT EFFECTIVE DATE>	MRP X.D.1
3	Analytical Methods Report Certification	<3 MONTHS PRIOR TO START OF CHARACTERIZATION MONITORING>	MRP IX.E.3
4	Annual Operations Report	1 February 2026	MRP X.D.2
5	Annual Operations Report	1 February 2027	MRP X.D.2
6	Annual Operations Report	1 February 2028	MRP X.D.2
7	Annual Operations Report	1 February 2029	MRP X.D.2
8	Annual Operations Report	1 February 2030	MRP X.D.2
Intentionally left blank	**Other Reports**	**Intentionally left blank**	**Intentionally left blank**
9	Toxicity Reduction Evaluation (TRE) Workplan	Within 90 days of triggering a TRE	WDR VI.C.2.a
10	Salinity Evaluation and Minimization Plan	<DATE> with the ROWD	WDR VI.C.3.a
11	Most Sensitive Species Screening	<DATE> with the ROWD	MRP V.F.1-2
12	Pyrethroids Management Plan (if required)	<PERMIT EXPIRATION DATE>	WDR VI.C.3.b
13	Pyrethroids Management Plan Mid-Term Progress Report (if required)	<PERMIT EXPIRATION DATE>	WDR VI.C.3.b
14	Pyrethroids Management Plan End-Term Progress Report (if required)	<PERMIT EXPIRATION DATE>	WDR VI.C.3.b

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:	5C220701002
CIWQS Facility Place ID:	222491
Discharger:	U.S. Department of the Interior, National Park Service, Yosemite National Park
Name of Facility:	El Portal Wastewater Treatment Facility
Facility Address:	5083 Foresta Road
Facility City, State Zip:	El Portal, CA 95318
Facility County:	Mariposa County
Facility Contact, Title and Phone Number:	Jim Allen, Facilities Operations Specialist, (209) 379 - 1039
Authorized Person to Sign and Submit Reports:	Cicely Muldoon, Superintendent, (209) 372-0201
Mailing Address:	P.O. Box 700, El Portal, CA 95318
Billing Address:	Same as Mailing Address
Type of Facility:	Domestic Wastewater Treatment Plant
Major or Minor Facility:	Major
Threat to Water Quality:	1
Complexity:	B
Pretreatment Program:	No
Recycling Requirements:	None
Facility Permitted Flow:	1.0 million gallons per day (MGD)
Facility Design Flow:	1.0 MGD
Watershed:	Yosemite Hydrologic Area
Receiving Water:	Merced River
Receiving Water Type:	Inland surface water

A. The U.S. Department of the Interior, National Park Service, Yosemite National Park (hereinafter Discharger) is the owner and operator of El Portal Wastewater Treatment Facility (hereinafter Facility), a domestic wastewater treatment plant.

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 wastewater to the Merced River, a water of the United States, and a Wild Scenic River within the Yosemite Hydrologic Area. The Discharger was previously regulated by Order R5-2019-0069 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0081759 adopted on 11 October 2019 and expired on 30 November 2024. Attachment B provides a map of the area around 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 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 waste discharge requirements (WDRs) and NPDES permit on 10 October 2023.

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 community of El Portal and the Yosemite Valley in Yosemite National Park, and serves a population of approximately 2,200 permanent residents and up to 20,000 visitors per day to the Park during peak summer months. The design daily average flow capacity of the Facility is 1.0 MGD.

A. Description of Wastewater and Biosolids Treatment and Controls

The treatment system at the Facility consists of preliminary, primary, secondary, and tertiary treatment. Preliminary treatment consists of bar screening, grit removal, and

grinders. Primary treatment consists of two circular primary clarifiers which are followed by a 125,000-gallon flow equalization basin. Secondary treatment consists of activated sludge (three 125,000-gallon aeration tanks) and secondary clarification (two 50-foot diameter clarifiers). Tertiary treatment consists of coagulation, flocculation, tube settling, and sand filtration. The tertiary-treated effluent is then disinfected by ultraviolet light. Dried biosolids are stored onsite at the location(s) identified in Attachment C and are hauled off-site by Liberty Composting Inc. The Facility produces approximately 85 dry metric tons of dried biosolids annually. Transportation and disposal/reuse of the biosolids is regulated by U.S. EPA under 40 C.F.R. part 503.

B. Discharge Points and Receiving Waters

1. The Facility is located in section 18, T3S, R20E, MDB&M, as shown in Attachment B, a part of this Order.

2. Treated municipal wastewater is discharged to percolation ponds at Discharge Point 001 (via percolation), which is hydraulically connected to the Merced River, or Discharge Point 002 (Direct Discharge) to the Merced River, a water of the United States at a point latitude 37.667778 and longitude -119.8125.

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

Effluent limitations contained in Order R5-2019-0069 for discharges from Discharge Points 001 (Monitoring Location EFF-001) and 002 (Monitoring Location EFF-002) and representative monitoring data from the term of Order R5-2019-0069 are included in Table F-2, below. No discharges occurred at Discharge Point 002 during the term of Order R5-2019-0069; therefore, monitoring data reported in the following table represent monitoring data only collected at Monitoring Location EFF-001:

Table F-2 Historic Effluent Limitations

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Daily Discharge
BOD_5	mg/L	AMEL: 10 MDEL: 20	3.6	6
BOD_5	% Removal	AMEL Minimum: 90	94.0	
TSS	mg/L	AMEL: 10 MDEL: 20	2	5
TSS	% Removal	AMEL Minimum: 90	93.6	
pH	standard units	6.5-8.5	5.7 – 8.0	

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Daily Discharge
Ammonia Nitrogen, Total (as N) (1 May – 31 October)	mg/L	AMEL: 1.9 MDEL: 4.9	0.21	0.37
Ammonia Nitrogen, Total (as N) (1 May – 31 October)	lbs/day	AMEL: 16 MDEL:41	0.70	1.2
Ammonia Nitrogen, Total (as N) (1 November – 30 April)	mg/L	AMEL: 2.8 MDEL: 5.6	0.33	0.6
Ammonia Nitrogen, Total (as N) (1 November – 30 April)	lbs/day	AMEL: 23 MDEL:47	1.0	1.9
Phosphorus, Total	mg/L	AMEL: 0.5 MDEL: 1.0	0.34	0.34
Phosphorus, Total	lbs/day	AMEL: 4.2 MDEL: 8.4	1.0	1.0
Electrical Conductivity @ 25°C	µmhos/cm	Annual average: 925	Annual average: 977	
Acute Whole Effluent Toxicity	% Survival	70%, minimum for 1 bioassay 90%, median for 3 consecutive bioassays		100 (see Note 1)
Total Coliform organisms	MPN/100 mL	7 day median: 2.2 30 day max: 23 Instantaneous. Max: 240		2

Table F-2 Notes:

1. Represents the minimum observed percentage survival.

D. Compliance Summary

Since the effective date of previous Order R5-2019-0069, the Discharger reported 48 violations via CIWQS. The effluent violations consisted of low pH, other self-reported violations included deficient monitoring, turbidity, malfunctioning influent flow meter and late reports.

E. Planned Changes

The Discharger is expecting major Facility upgrades to be completed in 2028. The upgrades include new preliminary treatment, flow equalization and secondary treatment. Once the upgrades are complete, the Facility will be capable of denitrification. The new additions to the Facility will be located adjacent to the existing Facility. The existing tertiary treatment and UV disinfection will be upgraded. The Discharger also plans to add a new aerobic sludge digestion system and sludge dewatering screw press. The effluent discharge locations will remain the same.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

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

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

1. **Water Quality Control Plan.** 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, Fifth Edition, February 2019 (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Mariposa Public Utility District has a municipal water supply intake on the Merced River downstream of the Facility's discharge points. Beneficial uses applicable to Merced River are as follows:

Table F-3 Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 002	Merced River	Existing: Municipal and domestic water supply (MUN); Agricultural supply, including irrigation (AGR); Hydropower Generation (POW); Water Contact recreation, including canoeing and rafting (REC-1); Non-contact water recreation (REC-2); Warm freshwater habitat (WARM); Cold freshwater habitat (COLD); and Wildlife habitat (WILD)

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. Portions of the ISWEBE Plan, including the Toxicity Provisions, remain in effect as state policy for water quality control.

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.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California") (State Anti-Degradation Policy). The State Anti-Degradation Policy is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. The State Anti-Degradation 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 permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy. The Board finds this order is consistent with the Federal and State Water Board 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.

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 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".

The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this Facility. Therefore, a reasonable potential analysis based on information from EPCRA cannot be conducted. Based on information from EPCRA, there is no reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to Water Code section 13263.6(a).

However, as detailed elsewhere in this Order, available effluent data indicate that there are constituents present in the effluent that have a reasonable potential to cause or contribute to exceedances of water quality standards and require inclusion of effluent limitations based on federal and state laws and regulations.

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 Resources Control Board Water Quality Order 2014-0057-DWQ, General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES General Permit No. CAS000001), does not require facilities to obtain coverage if discharges of storm water are regulated under another individual or general NPDES permit adopted by the State Water Board or Regional Water Board (Finding I.B.20). All storm water at the Facility is captured and directed to the Facility headworks for treatment and disposal under this Order. Therefore, coverage under the General Storm Water Permit is not required.

10. **Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.** The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on 2 May 2006. The State Water Board amended the MRP for the General Order through Order WQ 2013-0058-EXEC on 6 August 2013. The State Water Board renewed the General Order and adopted Order 2022-0103-DWQ on 6 December 2022, which became effective on 5 June 2023. The General Order requires public agencies that own or operate sanitary sewer

systems with greater than 1 mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

The Discharger is subject to the requirements of, and must comply with, State Water Board Order 2006-0003-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, as amended by State Water Board Order WQ 2013-0058-EXEC, and renewed by State Water Board Order 2022-0103-DWQ and any subsequent order.

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.

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

1. Under section 303(d) of the 1972 CWA, states, territories, and authorized tribes 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 6 April 2018 U.S. EPA gave final approval to California's 2014 – 2016 section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (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 Merced River from its source to McClure Lake is not listed as a WQLS on the 303(d) list of impaired water bodies.

2. Total Maximum Daily Loads (TMDLs). At the time of this permit renewal, there are no approved TMDLs with waste load allocations (WLAs) that apply to this Facility.

E. Other Plans, Polices 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.

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 assure 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)**. This prohibition is based on CCR, title 22, section 66261.1 et seq, that prohibits discharge of hazardous waste.

5. **Prohibition III.E (Direct discharge to the Merced River is prohibited unless the ratio of river flow to wastewater discharge is 150:1 or greater).** This Order prohibits direct discharges to the Merced River that do not receive at least 150:1 (receiving water: effluent) dilution. This prohibition is carried over from R5-2019-0069.

6. **Prohibition III.F (Direct discharge to the Merced River without utilizing a diffuser is prohibited unless the ratio of river flow to wastewater discharge is 200:1 or greater).** This Order prohibits direct discharges to the Merced River that do not receive at least 200:1 (receiving water: effluent) dilution without utilizing a diffuser. This prohibition is carried over from R5-2019-0069.

7. **Prohibition III.G (Average Monthly Daily Flow)**. This prohibition is based on the design average monthly daily flow limitation treatment capacity rating for the Facility and ensures the Facility is operated within its treatment capacity.

8. **Prohibition III.H (Discharges of Pyrethroid Pesticides)**. This prohibition is based on Resolution R5-2017-0057, which adopted the Basin Plan Amendment (BPA) for the Control of Pyrethroid Pesticide Discharges.

9. **Prohibition III.I (Discharge of salinity)**. This prohibition is part of the overall implementation of the Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt accumulation in the Central Valley, known as the Central Valley Salinity Alternatives for Long-Term Sustainability or CV-SALTS.

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 Best Professional Judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

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 BOD_5, TSS, and pH.

40 C.F.R. 403.3 defines a POTW as a treatment works that is owned by a state or municipality. Since the Facility is federally owned, it does not meet the definition of a POTW. Consequently, the secondary treatment standards at 40 C.F.R. part 133 are not directly applicable to the Facility.

2. Applicable Technology-Based Effluent Limitations – Not Applicable

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. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The rationale for these requirements, which consist of tertiary treatment, is discussed in section IV.C.3.b.iii of this Fact Sheet.

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(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 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 obtained 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 April 2021 through March 2024, which includes

effluent and ambient background data submitted in eSMRs and the ROWD.

c. **Assimilative Capacity/Mixing Zone.** This Order includes a dilution ratio of 45:1 for non-CTR human health constituents based on the Merced River harmonic mean flow of 45 MGD and a discharge flow of 1 MGD.

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 thorough 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.****"*

The Discharger has not determined whether complete mixing occurs or conducted a mixing zone study, as required by the SIP for priority pollutants. In the absence of this information, the worst-case dilution for priority pollutants is assumed to be zero. The impact of assuming zero assimilative capacity within the receiving water is the discharge limitations are end-of-pipe limitations with no allowance for dilution within the receiving water. Should the Discharger submit an approved dilution/mixing zone study that meets the requirements of section 1.4.2.2. of the SIP, the Central Valley Water Board may reopen this Order to include effluent limitations for priority pollutants based on an appropriate dilution factor.

The SIP is not applicable to non-priority pollutants; therefore, mixing zones and dilution credits may be considered for non-CTR constituents (e.g., nitrite plus nitrate (as N) and total dissolved solids). Flow data were available for the Merced River from the U.S. Geological Survey stream gauge station at the Pohono Bridge, which is upstream of the Facility's discharge points. Based on flows from January 1988 to March 2019, the harmonic mean flow is 45 MGD, and both the 1Q10 and 7Q10 flow is 10 cubic feet per second. Using the average monthly daily discharge flow limit of 1.0 MGD and the receiving water harmonic mean flow, the available dilution is 45:1 for human health criteria. At least 6.5:1 dilution is potentially available for acute and chronic aquatic life-based criteria.

Dilution was considered in the reasonable potential analyses for nitrite plus nitrate (as N) as described in Fact Sheet sections IV.C.3.a.ii. The following findings apply to the Central Valley Water Board's consideration of a mixing zone for nitrite plus nitrate (as N):

i. The Merced River contains assimilative capacity for nitrite plus nitrate (as N).

ii. The nearest drinking water intake, which supplies the Mariposa Public Utility District, is approximately 15 miles downstream.

iii. The Central Valley Water Board is allowing a mixing zone for human health constituents only and has determined allowing such mixing zone will not cause acutely toxic conditions to aquatic life passing through the mixing zone.

iv. The discharge will not adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under the

federal or State endangered species laws, because the mixing zone is for human health criteria only, is relatively small, and acutely toxic conditions will not occur in the mixing zone. The discharge will not produce undesirable or nuisance aquatic life, result in floating debris, oil, or scum, produce objectionable odor, taste, or turbidity, cause objectionable bottom deposits, or cause nuisance, because the proposed Order establishes end-of-pipe effluent limitations (e.g., for BOD5 and TSS) and discharge prohibitions to prevent these conditions from occurring.

v. The mixing zone complies with the Basin Plan for non-priority pollutants. The Basin Plan requires a mixing zone not adversely impact beneficial uses. Beneficial uses will not be adversely affected for the same reasons discussed above. In determining the size of the mixing zone, the Central Valley Water Board has considered the procedures and guidelines in Section 5.1 of U.S. EPA's Water Quality Standards Handbook, 2nd Edition (updated July 2007) and Section 2.2.2 of the TSD.

vi. This Order does not authorize an increase in flow or mass to the Merced River from the previous Order R5-2019-0069.

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. Furthermore, a conservative dissolved-to-total metal translator of 1 has been used when developing effluent limitations. Per the Reopener Provisions of this Order, if the Discharger performs studies to determine site-specific 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 based on the hardness of the receiving water (actual ambient hardness) as required by the SIP and the CTR.

Beginning October 2022, the average effluent hardness decreased from around 206 mg/L to approximately 45 mg/L. The minimum hardness detected in the effluent was 12 mg/L. As a result, the water quality objectives for hardness dependent metals reduced significantly from previous Order R5-2019-0069.

The ambient hardness for the Merced River ranges from 2 mg/L to 40 mg/L based on collected ambient data from December 2019 through July 2024. Given the high variability in ambient hardness values, there is no single hardness value that describes the ambient receiving water for all possible scenarios (e.g., minimum, maximum). Because of this variability, staff has determined that based on the ambient hardness concentrations measured in the receiving water, the Central Valley Water Board has discretion to select ambient hardness values within the range of 2 mg/L (minimum) up to 40 mg/L (maximum).

The Central Valley Water Board finds that the use of the ambient hardness values and associated acute and chronic criteria shown in Table F-4 to conduct the reasonable potential analysis (RPA) and calculate WQBELs protect beneficial uses under all ambient receiving water conditions and comply with the SIP, CTR, and Basin Plan.

Table F-4. 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	12	4.0	3.0
Chromium III	12	306	37
Cadmium	12 (acute) 12 (chronic)	0.4	0.5
Lead	10	4.4	0.2
Nickel	12	78	8.7
Silver	6	0.03	--
Zinc	12	20	20

Table F-4 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-4 represent actual observed receiving water hardness measurements.
3. **Copper.** This Order allows a site-specific WER of 2.0 for copper to calculate the criteria (see section IV.C.2.d).

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(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, 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. **Salinity**

(a) **WQO.** The Basin Plan contains a chemical constituent objective that incorporates state MCLs, contains a narrative objective, and contains numeric water quality objectives for certain specified water bodies for electrical conductivity, total dissolved solids, sulfate, 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 electrical conductivity, total dissolved solids, and 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 interpret the narrative chemical constituent Basin Plan objective. The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply. Table F-5, below, contains various recommended levels for EC or TDS, sulfate, and chloride.

Table F-5 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 977	EC 1,428 TDS 770

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
Sulfate (mg/L)	250	500	600	N/A	130	--
Chloride (mg/L)	250	500	600	860 1-hour / 230 4-day	48	--

Table F-5 Notes:

1. **Agricultural Water Quality Objectives.** Applicable agricultural water quality objectives vary. Procedures for establishing the applicable numeric limitation to implement the narrative chemical constituent objective can be found in the Policy for Application of Water Quality Objectives, section 4.2.2.1.9 of the Basin Plan. However, 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.
3. **Chloride.** The Secondary MCL for chloride is 250 mg/L, as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.
4. **Electrical Conductivity or Total Dissolved Solids.** The Secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum, or when expressed as TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum.
5. **Sulfate.** The Secondary MCL for sulfate is 250 mg/L as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.

(b) **RPA Results.**

(1) **Chloride.** Chloride concentrations in the effluent ranged from 30 mg/L to 48 mg/L, with an average of 39 mg/L, based on three samples. These levels do not exceed the Secondary MCL. Background concentrations in the Merced River ranged from 1.0 mg/L to 1.6 mg/L, with an average of 1.4 mg/L, for three samples collected by the Discharger from April 2021 through March 2024.

(2) **Electrical Conductivity or Total Dissolved Solids.** A review of the Discharger's monitoring reports shows a maximum average annual effluent EC of 977 µmhos/cm, with a range from 202 µmhos/cm to 1,428 µmhos/cm. These levels do not exceed the Secondary MCL. The background receiving water EC averaged 33 µmhos/cm. The average TDS effluent concentration was 580 mg/L (maximum annual calendar average) with concentrations ranging from 570 mg/L to 770 mg/L. These levels do not exceed the Secondary MCL. The background receiving water TDS ranged from 19 mg/L to 35 mg/L, with an average of 26 mg/L.

(3) **Sulfate.** Sulfate concentrations in the effluent ranged from 53 mg/L to 130 mg/L, with an average of 80 mg/L. These levels do not exceed the Secondary MCL. Sulfate concentrations were not detected in the Merced River.

(c) **WQBELs.**

As discussed above, the discharge does not have reasonable potential to cause or contribute to an in-stream excursion of water quality objectives 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, 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) rather than the application of conservative discharge limits.

The Discharger submitted a Notice of Intent for the Salinity 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.

ii. **Nitrite and Nitrate**

(a) **WQO.** State Water Board, Division of Drinking Water (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 nitrite and nitrate, 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).

(b) **RPA Results.** Federal regulations at 40 C.F.R. section 122.44(d)(1)(i) require 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. Nitrate and nitrite are not priority pollutants. 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 these non-priority pollutant constituents.

U.S. EPA's September 2010 NPDES Permit Writer's Manual recommends using a mass-balance approach to determine the expected critical downstream receiving water concentration using a steady-state approach. The downstream receiving water concentration is then compared to the applicable water quality objectives to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion. This approach allows assimilative capacity and dilution to be factored into the RPA. This U.S. EPA recommended approach has been used to assess the reasonable potential for nitrate and nitrite in the

Facility's effluent to cause or contribute to an in-stream excursion above the applicable

$$Cr = \frac{Q_s C_s + Q_d C_d}{Q_s + Q_d}$$ (Equation 1)

water quality objectives. The critical downstream receiving water concentration is calculated using Equation 1.

Where:

Q_s = Critical stream flow

Q_d = Critical effluent flow from discharge flow data (maximum permitted discharge)

C_s = Critical upstream pollutant concentration

C_d = Critical effluent pollutant concentration

C_r = Critical downstream receiving water pollutant concentration

Although the Primary MCL for nitrite plus nitrate (as N) is a human health-based criterion, it is designed to be protective of human health for short-term exposure. Therefore, a critical stream flow (Qs) of 10 cfs (6.5 MGD) was used for the RPA for nitrite plus nitrate (as N). The critical effluent flow (Qd) is 1.5 cfs (1 MGD), which is the maximum permitted flow allowed by this Order. The critical effluent pollutant concentration (Cd) is 66 mg/L, based on the maximum observed effluent concentration between April 2021 through March 2024. During the same time frame, all receiving water concentrations were non-detects. Thus, the critical upstream pollutant concentration (C_s) of 0.23 mg/L was used, based on the method detection level. Using Equation 1, above, the calculated critical downstream receiving water nitrite plus nitrate (as N) concentration (Cr) is 8.8 mg/L, which does not exceed the Primary MCL of 10 mg/L. Therefore, the discharge does not have reasonable potential to cause or contribute to an in-stream excursion above the applicable water quality objective for nitrite plus nitrate (as N).

(c) **WQBEL's.** Since the discharge does not have reasonable potential to exceed the applicable water quality objective as described above, WQBEL's are not included in this Order. However, this Order contains an annual average effluent trigger

for nitrite plus nitrate (as N) of 55 mg/L, which is carried over from the previous order (R5-2019-0069). The annual average effluent trigger for nitrite plus nitrate (as N) was calculated using the maximum rolling four quarter average effluent concentration of 48 mg/L and adding 15 percent to account for uncertainty and possible water conservation efforts. If the trigger is exceeded, this Order requires the Discharger to investigate the cause of the exceedance. The effluent trigger is included in this Order to ensure the Discharger implements a proactive nitrogen control effort should the effluent quality significantly change. The effluent trigger along with the dilution in the Merced River is protective of the nearest drinking water intake approximately 15 miles downstream.

b. **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 (as N), copper, pathogens, pH, phosphorus, 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 National Ambient Water Quality Criteria (NAWQC) for the protection of freshwater aquatic life for total ammonia (2013 Criteria), recommends acute (1-hour average; criteria maximum concentration or CMC) and chronic (30-day average; criteria continuous concentration or 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 2013 Criteria 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 2013 Criteria 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 implements the Basin Plan's narrative toxicity objective to protect aquatic life beneficial uses of the receiving water.

Site-specific Criteria for Merced River. The recalculated site-specific criteria developed in the Criteria Recalculation Report for the acute and chronic criteria are presented based on 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 Merced River 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 that can be implemented for receiving waters where salmonid species are present. Because the Merced River has a beneficial use of cold freshwater habitat and the presence of salmonids in the Merced River is well-documented, the criteria equations for waters where salmonids are present were used.

Due to the variability of pH and especially temperature in the receiving water throughout the year, seasonal acute and chronic ammonia criteria were calculated. The pH and temperature within a specified "season" were used to derive seasonal acute and chronic criteria.

The acute (1-hour average) criterion or CMC was calculated using paired effluent pH and temperature data, collected during the period from April 2021 and March 2024. For the summer season, the most stringent CMC of 5.6 mg/L (ammonia as N) calculated has been implemented in this Order. For the winter season, the most stringent CMC of 6.8 mg/L (ammonia as N) calculated has been implemented in this Order.

The chronic (30-day average) criterion or CCC was calculated using paired downstream receiving water pH and temperature data, collected during the period from April 2021 and March 2024. For the summer season, the most stringent 30-day rolling average CCC of 2.4 mg/L (ammonia as N) has been implemented in this Order. For the winter season, the most stringent 30-day rolling average CCC of 2.9 mg/L (ammonia as N) has been implemented in this Order.

The chronic (4-day average) concentration is derived in accordance with the U.S. EPA criterion as 2.5 times the 30-day CCC. For the summer season, based on the 30-day CCC of 2.4 mg/L (ammonia as N), the 4-day average concentration that should not be exceeded is 6.0 mg/L (ammonia as N). For the winter season, based on the 30-day CCC of 2.9 mg/L (ammonia as N), the 4-day average concentration that should not be exceeded is 7.2 mg/L (ammonia as N).

(b) **RPA Results.** The Facility is a domestic wastewater treatment facility that treats domestic wastewater. Untreated domestic wastewater contains ammonia in concentrations that is harmful to aquatic life and exceed the Basin Plan narrative toxicity objective. The Discharger currently uses nitrification to remove ammonia from the waste stream. 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.** The Central Valley Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents, and ammonia is a non-CTR constituent. 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.

For the summer season, this Order contains a final average monthly effluent limitation (AMEL) and average weekly effluent limitation (AWEL) for ammonia of 2.8 mg/L and 4.8 mg/L, respectively, based on the site-specific ammonia criteria for the Merced River. For the winter season, this Order contains a final AMEL and AWEL for ammonia of 3.4 mg/L and 5.8 mg/L, respectively, based on the site-specific ammonia criteria for the Merced River.

(d) **Plant Performance and Attainability.** The Facility is designed to provide tertiary treatment and fully nitrify the wastewater. Therefore, the Central Valley Water Board finds that immediate compliance with the effluent limits for ammonia is feasible.

ii. **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. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default U.S. EPA translators were used for the effluent and receiving water.

The Discharger submitted a *Water Effects Ratio Study for Copper Compliance El Portal Wastewater Treatment Facility at Yosemite National Park* (Analytical Environmental Services) on 1 November 2013. The Discharger conducted the study per U.S. EPA's Streamlined Water-Effect Ratio Procedure for Dischargers of Copper (EPA-822-R-01-005). Based on the results of the study, the Central Valley Water Board concludes that a dissolved and total recoverable Water-Effect Ratio of 2.0 is applicable to the Facility's discharge to the Merced River.

Using a Water-Effect Ratio of 2.0 and a reasonable worst-case measured hardness as described in section IV.C.2.e of this Fact Sheet, the applicable acute and chronic criteria for total copper in the effluent are 4.0 µg/L and 3.0 µg/L, respectively.

(b) **RPA Results.** The MEC for copper in the effluent was 11 µg/L based on three samples collected between April 2021 and March 2024. The maximum observed upstream receiving water total copper concentration was 0.79 µg/L based on three samples collected between April 2021 and March 2024. 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 AMEL and MDEL for copper of 2.0 µg/L and 4.0 µg/L, respectively, based on the CTR criteria for the protection of freshwater aquatic life, calculated using the reasonable worst-case downstream ambient hardness as discussed in section IV.C.2.e of this Fact Sheet.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows the MEC of 11 µg/L is greater than the applicable WQBELs.

The Discharger submitted a 24 January 2024 Infeasibility Analysis, which documented the compliance strategy for meeting final effluent limits for copper and provided information to support the request for a compliance schedule. Therefore, the Discharger is subject to TSO R5-2025-XXXX and any subsequent amendment Order which extends the time schedule to achieve compliance with the final effluent limitations for copper by 31 July 2029.

iii. **Pathogens**

(a) **WQO.** DDW has developed reclamation criteria, CCR, Division 4, Chapter 3 (Title 22), for the reuse of wastewater. Title 22 requires that for spray irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, wastewater be adequately disinfected, oxidized, coagulated, clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 mL as a 7-day median; 23 MPN/100 mL, not to be exceeded more than once in a 30-day period; and 240 MPN/100 mL, at any time.

Title 22 is not directly applicable to surface waters; however, the Central Valley Water Board finds the stringent disinfection criteria are appropriate since the receiving water is used for the irrigation of food crops and for body-contact water recreation. The stringent disinfection criteria of Title 22 are appropriate since 1) the receiving water is used for the irrigation of food crops and for body-contact water recreation and 2) the Merced River is designated under the National Wild and Scenic Rivers system, as authorized by the 1968 Wild and Scenic Rivers Act, because of its outstandingly remarkable value. Coliform organisms are intended as an indicator of the effectiveness of

the entire treatment train and the effectiveness of removing other pathogens.

(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. The beneficial uses of Merced River include municipal and domestic supply, water contact recreation, and agricultural irrigation supply, and there is, at times, less than 20:1 dilution. To protect these beneficial uses, the Central Valley Water Board finds that the wastewater must be disinfected and adequately treated to prevent disease. 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.** Special Provisions VI.C.6.a of this Order requires, "Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the State Water Board, DDW reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22), or equivalent." In accordance with the requirements of Title 22, this Order includes effluent limitations for total coliform organisms of 2.2 MPN/100 mL as a 7-day median; 23 MPN/100 mL, not to be exceeded more than once in a 30-day period; and 240 MPN/100 mL as an instantaneous maximum.

The tertiary treatment process, or equivalent, is capable of reliably treating wastewater to a turbidity level of 2 nephelometric turbidity units (NTU) as a daily average. Failure of the filtration system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity. Turbidity has a major advantage for monitoring filter performance. Coliform testing, by comparison, is not conducted continuously and requires several hours, to days, to identify high coliform concentrations. Therefore, in addition to total coliform organisms effluent limitations, this Order includes operational specifications for turbidity of 2 NTU as a daily average; 5 NTU, not to be exceeded more than 5 percent of the time within a 24-hour period; and 10 NTU as an instantaneous maximum.

Final WQBELs for BOD_5 and TSS are also required based on the technical capability of the tertiary process. The tertiary treatment standards for BOD_5 and TSS are indicators of the effectiveness of the tertiary treatment process. The principal

design parameter for wastewater treatment plants is the daily BOD_5 and TSS loading rates and the corresponding removal rate of the system. The application of tertiary treatment processes results in the ability to achieve lower levels for BOD_5 and TSS than the technology-based secondary standards. Therefore, this Order requires AMELs for BOD_5 and TSS of 10 mg/L, which is technically based on the capability of a tertiary system.

This Order contains effluent limitations for BOD_5, total coliform organisms, and TSS and requires a tertiary level of treatment, or equivalent, necessary to protect the beneficial uses of the receiving water. The Central Valley Water Board has previously considered the factors in Water Code section 13241 in establishing these requirements.

(d) **Plant Performance and Attainability.** The Facility is designed to provide tertiary treatment and ultraviolet disinfection to achieve compliance with the effluent limitations for BOD5, total coliform, TSS, and BOD5 and TSS percent removal. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iv. **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.** Raw domestic wastewater inherently has variable pH. Additionally, some wastewater treatment processes can increase or decrease wastewater pH which if not properly controlled, would violate the Basin Plan's numeric objective for pH in the receiving water. Therefore, reasonable potential exists for pH and WQBELs are required.

(c) **WQBELs.** Effluent limitations for pH of 6.5 as an instantaneous minimum and 8.5 as an instantaneous maximum are included in this Order based on protection of the Basin Plan objectives for pH.

(d) **Plant Performance and Attainability.** Based on the available effluent data, the Central Valley Water Board concludes that immediate compliance with these effluent limitations is feasible.

v. **Phosphorus**

(a) **WQO.** There are no applicable State or U.S. EPA numeric criteria or MCLs for phosphorus. However, the Basin Plan does contain a narrative water quality objective for biostimulatory

substances. During the late 1980s, the Discharger conducted studies concerning potential algal growth on the Merced River near the Facility. Order R5-2019-0069 included a total phosphorus AMEL and MDEL of 0.5 mg/L and 1.0 mg/L, respectively, based on an evaluation by the California Department of Water Resources of the data generated from these studies. The California Department of Water Resources indicated that control of phosphorus from the Facility's effluent to a level below 0.5 mg/L would accomplish sufficient nutrient removal as not to induce algal growth in the Merced River.

(b) **RPA Results.** The MEC for total phosphorus was 0.34 mg/L based on 13 samples collected from April 2021 and March 2024. The Discharger uses aluminum sulfate in the treatment system to remove phosphorus. Therefore, to ensure the Discharger provides adequate phosphorus removal in the treatment system, this Order carries over effluent limitations for phosphorus from previous Order R5-2019-0069.

(c) **WQBELs.** Consistent with Order R5-2019-0069, this Order contains a final AMEL and MDEL for phosphorus of 0.5 mg/L and 1.0 mg/L, respectively.

(d) **Plant Performance and Attainability**. The Discharger actively treats phosphorus by adding aluminum sulfate. Therefore, the Central Valley Water Board concludes that immediate compliance with these effluent limitations is feasible.

vi. **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. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default U.S. EPA translators were used for the effluent and receiving water.

Using a reasonable worst-case measured hardness as described in section IV.C.2.e of this Fact Sheet, the applicable acute and chronic criteria for total zinc in the effluent are both 20 µg/L.

(b) **RPA Results.** The MEC for zinc in the effluent was 58 µg/L based on three samples collected between April 2021 and March 2024. The maximum observed upstream receiving water total zinc concentration was 0.73 µg/L based on three samples collected between April 2021 and March 2024. Based on the

available data, the maximum effluent concentration exceeded the applicable criteria. Therefore, per section 1.3, step 6 of the SIP, zinc 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 AMEL and MDEL for zinc of 10 µg/L and 20 µg/L, respectively, based on the CTR criteria for the protection of freshwater aquatic life, calculated using the reasonable worst-case downstream ambient hardness as discussed in section IV.C.2.e of this Fact Sheet.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows the MEC of 58 µg/L is greater than the applicable WQBELs.

The Discharger submitted a 24 January 2024 Infeasibility Analysis, which documented the compliance strategy for meeting final effluent limits for zinc and provided information to support the request for a compliance schedule. Therefore, the Discharger is subject to TSO R5-2025-XXXX and any subsequent amendment Order, which extends the time schedule to achieve compliance with the final effluent limitations for zinc by 31 July 2029.

4. WQBEL Calculations

a. This Order includes WQBELs for ammonia, coper, BOD_5, pH, phosphorus, total coliform, zinc, TSS, and BOD_5 and TSS percent removal. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.5.b through e, below. See Attachment H for the WQBEL calculations.

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.

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

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

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

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
Discharge Points 001 and 002

Table F-6 Summary of Water Quality-Based Effluent Limitations

Parameter	Units	Average Monthly Effluent Limitations	Average Weekly Effluent Limitations	Maximum Daily Effluent Limitations
Biochemical Oxygen Demand (5-day @ 20˚C)	mg/L	10		20
Total Suspended Solids	mg/L	10		20
pH	Standard Units	--	--	6.5 - 8.5 (see table notes below)
Ammonia Nitrogen, Total (as N) (1 May – 31 October)	mg/L	2.8	4.8	
Ammonia Nitrogen, Total (as N) (1 November – 30 April)	mg/L	3.4	5.8	--
Phosphorus, Total	mg/L	0.5	--	1.0
Copper, Total Recoverable	µg/L	2.0	--	4.0
Zinc, Total Recoverable	µg/L	10	--	20

Table F-6 Notes:

1. **Percent Removal.** The average monthly percent removal of BOD_5 and TSS shall not be less than 90 percent.

2. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following with compliance measured at Monitoring Location UVS-001 as described in the MRP, Attachment E:
    i. 2.2 most probable number per 100 milliliters (MPN/100 mL), as a 7-day median
    ii. 23 MPN/100 mL, more than once in any 30-day period
    iii. 240 MPN/100 mL, at any time.
3. **pH**. Effluent Limitations. Applied as a range from instantaneous minimum to instantaneous maximum.

5. Whole Effluent Toxicity (WET)

The State Water Board's toxicity provisions, which include numeric objectives for acute and chronic aquatic toxicity, are applicable to this discharge and are hereafter referred to as the Toxicity Provisions.

a. **Chronic Toxicity**

i. **WQO.** 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.

The Basin Plan contains a narrative toxicity objective that states, "All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life." (Basin Plan at page section 3.1.20.) To evaluate compliance with the Statewide Toxicity Provisions aquatic toxicity numeric objectives and Basin Plan's narrative toxicity objective, acute and chronic whole

effluent toxicity testing data has been evaluated in the development of this Order.

The table below is chronic WET testing performed by the Discharger from September 2020 through June 2024.

Table F-7 Chronic Whole Effluent Toxicity Testing Results - Test of Significant Toxicity at the IWC (25 Percent Effluent)

Date	Fathead Minnow (*Pimephales promelas)* Survival		Fathead Minnow (*Pimephales promelas)* Growth		Water Flea (*Ceriodaphnia dubia)* Survival		Water Flea (*Ceriodaphnia dubia)* Reproduction		Green Algae (*Pseudokirchneriella subcapitata)* Growth	
	Pass/ Fail	Percent Effect	Pass/ Fail	Percent Effect	Pass/ Fail	Percent Effect	Pass/ Fail	Percent Effect	Pass/ Fail	Percent Effect
9/21/20	--	-5.3	Pass	6.8	--	0	Pass	3.51	Pass	-21.6
10/18/21	--	-2.6	Pass	-8.3	--	-7.85	Pass	0	Pass	3.5
9/19/22	--	2.59	Pass	1.67	--	0	Pass	-7.94	Pass	-3.96
7/10/23	--	0	Pass	2.61	--	0	Pass	10	Pass	-21.52
6/10/24	--	-11.1	Pass	-14.11	--	0	Pass	1.34	Pass	-41.26

ii. **RPA.** A dilution ratio of 3:1 is available for chronic whole effluent toxicity. Therefore, chronic toxicity testing has been conducted at an instream waste concentration (IWC) of 25 percent effluent. A test result that fails the Test of Significant Toxicity (TST) or has a percent effect 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 and Basin Plan's narrative toxicity objective. Based on chronic toxicity testing conducted between September 2020 and June 2024 there were no fails of the TST and the percent effect did not exceed 10 percent, therefore, 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.

iii. **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.

b. **Acute Toxicity.** The table below is acute WET testing performed by the Discharger from February 2020 through April 2024.

i. **WQO**. The acute aquatic toxicity water quality objective is expressed as a null hypothesis and an alternative hypothesis with a regulatory management decision (RMD) of 0.80, where the following null hypothesis, Ho, shall be used:

Ho: Mean response (ambient water) ≤ 0.80 • mean response (control)

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

Ha: Mean response (ambient water) > 0.80 • mean response (control)

Attainment of the water quality objective is demonstrated by conducting acute aquatic toxicity testing and rejecting this null hypothesis in accordance with the TST statistical approach. When the null hypothesis is rejected, the alternative hypothesis is accepted in its place, and there is no exceedance of the acute aquatic toxicity water quality objective. Failing to reject the null hypothesis (referred to as a "fail") is equivalent to an exceedance of the acute aquatic toxicity water quality objective.

The table below is acute WET testing performed by the Discharger from February 2020 through April 2024.

Table F-8 Acute Whole Effluent Toxicity Testing Results

Test of Significant Toxicity

Date	**Fathead Minnow (*Pimephales promelas*) Survival**	
	Pass/Fail	Percent Effect
2/24/2020	Pass	100%
4/27/2020	Pass	100%
8/10/2020	Pass	100%
10/26/2020	Pass	100%
1/25/2021	Pass	100%
5/17/2021	Pass	100%
8/9/2021	Pass	100%
11/3/2021	Pass	100%
4/4/2022	Pass	100%
7/11/2022	Pass	100%
10/3/2022	Pass	100%
3/22/2023	Pass	100%
9/7/2023	Pass	100%
11/6/2023	Pass	100%
2/12/2024	Pass	100%
4/8/2024	Pass	100%

ii. **RPA.** In accordance with section III.C.3.b of the Statewide Toxicity Provisions, an RPA for acute aquatic toxicity was conducted. The basis for the decision to conduct an RPA for acute aquatic toxicity was due to the following reasons: 1) a chronic WET test using an IWC of 25% does not ensure that the aquatic life beneficial use is fully protected from acute aquatic toxicity; 2) the Facility discharges to a designated National Wild and Scenic River; and 3) the Discharger has not conducted a mixing zone study.

No dilution has been granted for acute whole effluent toxicity. Therefore, acute 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) demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Statewide Toxicity Provisions aquatic toxicity numeric objectives and Basin Plan's narrative toxicity objective. Based on acute toxicity testing conducted between February 2020 and April 2024 there were no fails of the TST, therefore, the discharge does not have reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions' acute aquatic toxicity numeric objectives and Basin Plan's narrative toxicity objective.

iii. **WQBELs.** Effluent limitations have not been established for acute whole effluent toxicity because there is no reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions' numeric acute aquatic toxicity objective.

D. Final Effluent Limitation Considerations

1. Mass-based Effluent Limitations – Not Applicable

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. For phosphorus, average weekly effluent limitations have been replaced with maximum daily effluent limitations as explained in section IV.C.3.b.v of this Fact Sheet. Furthermore, for pH and total coliform, 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, ammonia, electrical conductivity, and mass-based effluent limits for ammonia and phosphorus. The effluent limitations for these pollutants are less stringent than those in Order R5-2019-0069. 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.

   The Merced River is considered an attainment water for acute whole effluent toxicity, ammonia, electrical conductivity, and mass-based effluent limits for ammonia and phosphorus 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 ammonia and removal of the effluent limitations for acute whole effluent toxicity, electrical conductivity, and mass-based effluent limits for ammonia and phosphorus from Order R5-2019-0069 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 section IV.C.3.b of this Fact Sheet, updated information that was not available at the time Order R5-2019-0069 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 and justifies relaxation of ammonia effluent limitations. 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. Furthermore, effluent monitoring data collected from September 2020 through June 2024 indicates that acute toxicity in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance per the Toxicity Provisions.

ii. **Ammonia.** WQBELs for ammonia were calculated based on monitoring data collected between April 2021 through March 2024, 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 AMEL and AWEL for ammonia in this Order resulted in different values than in previous Order R5-2019-0069. The reason for the change in AMEL and AWEL is due to a change in the variability of the effluent data for ammonia, use of the 2013 U.S. EPA National Ambient Water Quality Criteria, and updated pH and temperature monitoring data collected between April 2021 through March 2024. 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.

iii. **Electrical Conductivity (EC).** Effluent monitoring data collected between April 2021 through December 2024 indicates that EC in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives. The previous effluent limitation was based on a performance based effluent limitation to be applied as an annual average. This effluent limitation was removed with the adoption of the Central Valley Salt and Nitrate Control Program Basin Plan Amendment that went into effect since adoption of the previous Order. The effluent limitation for electrical conductivity will

be replaced with a performance-based salinity trigger to ensure salinity levels do not increase.

Thus, removal or relaxation of the effluent limitations for acute whole effluent toxicity, ammonia, and electrical conductivity from Order R5-2019-0069 is in accordance with CWA section 402(o)(2)(B)(i), which allows for less stringent effluent limitations based on information that was not available at the time of permit issuance.

4. Antidegradation Policies

This Order does not authorize lowering water quality as compared to the level of discharge authorized in the previous order, which is the baseline by which to measure whether degradation will occur. This Order does not allow for an increase in flow or mass of pollutants to the receiving water. The Order requires compliance with applicable federal technology-based standards and with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. Accordingly, the permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy.

This Order removes effluent limitations for electrical conductivity and acute whole effluent toxicity. The Central Valley Water Board has included a performance-based electrical conductivity trigger in this Order in lieu of an electrical conductivity effluent limit given the Discharger's participation in the CV-SALTS Salinity Control Program. Acute whole effluent toxicity effluent limits are removed 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. Therefore, the Central Valley Water Board finds that the removal and revision of the effluent limitation for electrical conductivity and acute whole effluent toxicity does not result in an increase in pollutants or any additional degradation of the receiving water. Thus, the removal and revision of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy.

This Order removes mass-based effluent limitations for phosphorus based on 40 CFR part 122.45(f). The removal of the mass-based effluent limits for phosphorus will not result in a decrease in the level of treatment or control or a reduction in water quality. This Order also relaxes effluent limitations for ammonia based on updated information (i.e., coefficient of variation, 2013 Ammonia Criteria, and temperature/pH data), which can result in small changes to the effluent limits. 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 waters. 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 Anti-Degradation Policy.

This Order also removes MDELs and mass-based effluent limitations for ammonia based on 40 CFR parts 122.45 (d) and (f). The removal of the MDELs and mass-based effluent limits 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 as well as an average monthly daily flow prohibition that limits the amount of flow that can be discharged to the receiving water. The combination of concentration-based effluent limits and 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 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 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 ammonia is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

5. Stringency of Requirements for Individual Pollutants

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.

This Order contains pollutant restrictions that are more stringent than applicable federal requirements and standards. Specifically, this Order includes effluent limitations for biochemical oxygen demand, total suspended solids, and total coliform organisms that are more stringent than applicable federal standards, but that are nonetheless necessary to meet numeric objectives or protect beneficial uses. The rationale for including these limitations are explained in section IV.C.3 of this Fact Sheet. The Central Valley Water Board has previously considered the factors in Water Code section 13241 in establishing these requirements.

Summary of Final Effluent Limitations
Discharge Points 001 and 002

Table F-9 Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations	Basis[1]
Biochemical Oxygen Demand (5-day @ 20˚C)	mg/L	AMEL 10 MDEL 20	TTC
Biochemical Oxygen Demand (5-day @ 20˚C)	% Removal	90	TTC
Total Suspended Solids	mg/L	AMEL 10 MDEL 20	TTC
Total Suspended Solids	% Removal	90	TTC
pH	Standard Units	Instantaneous Max 8.5 Instantaneous Min 6.5	BP
Ammonia Nitrogen, Total (as N) (1 May – 31 October)	mg/L	AMEL 2.8 AWEL 4.8	NAWQC
Ammonia Nitrogen, Total (as N) (1 November – 30 April)	mg/L	AMEL 3.4 AWEL 5.8	NAWQC
Phosphorus, Total	mg/L	AMEL 0.5 MDEL 1.0	PO, BP
Total Coliform Organisms	MPN/100 mL	7-day median 2.2 30-day period 23 Instantaneous Max 240	Title 22
Copper, Total Recoverable	µg/L	AMEL 2.0 MDEL 4.0	CTR
Zinc, Total Recoverable	µg/L	AMEL 10 MDEL 20	CTR

Table F-9 Notes:

1. **TTC** – Based on tertiary treatment capability. These effluent limitations reflect the capability of a properly operated tertiary treatment plant.
   BP – Based on water quality objectives contained in the Basin Plan.
   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.
   PO – Based on effluent limitations contained in previous Order R5-2019-0069.
   Title 22 – Based on State Water Board Division of Drinking Water Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22) or equivalent.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications - Not Applicable

G. Recycling Specifications - Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water Limitations- On 4 March 2025, the U.S. Supreme Court issued a decision in the case of the *City and County of San Francisco vs. U.S. Environmental Protection Agency (2025)* 145 U.S. 704, 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 Central Valley Water Board developed a technical memorandum, *A Review of Receiving Water Limitations in Six National Pollutant Discharge Elimination System (NPDES) Tentative Permits* (dated 6 May 2025) which describes the existing permit provisions that ensure the protection of beneficial uses in the receiving water.

B. Groundwater

1. The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, and agricultural supply.

2. Basin Plan water quality objectives 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 constituent 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 water quality objectives 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/100 mL. 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.

Groundwater limitations are required to protect the beneficial uses of the underlying groundwater.

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).** The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central Valley Water Board in 2020 with Resolution R5-2020-0057 (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf). The revisions to the Basin Plan amendments became effective on 10 November 2021. 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, except for copper. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total when developing effluent limitations. 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. **Ultraviolet Light (UV) Disinfection Operating Specifications.** UV system operating specifications are required to ensure that the UV system is operated to achieve the required pathogen removal. UV disinfection system specifications and monitoring and reporting requirements are required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens (e.g., viruses) in the wastewater. UV dosage is dependent on several factors such as UV transmittance, UV power setting, wastewater turbidity, and wastewater flow through the UV disinfection system. The UV specifications in this Order are based on the National Water Research Institute (NWRI) and American Water Works Association Research Foundation (AWWRF) “Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse” first published in December 2000 and revised as a Third Edition dated August 2012 (NWRI guidelines). If the Discharger conducts a site-specific UV engineering study that identifies site-specific UV operating specifications that will achieve the virus inactivation required by Title 22 for disinfected tertiary recycled water, this Order may be reopened to modify the UV specifications, in accordance with Reopener Provision VI.C.1.e.

e. **Whole Effluent Toxicity (WET).** This Order requires the Discharger to investigate the causes of, and identify corrective actions to reduce or eliminate, effluent toxicity through a site-specific Toxicity Reduction Evaluation (TRE). This Order may be reopened to include revised chronic toxicity limitations, revised acute toxicity limitations, and/or limitations for a specific toxicant identified in the TRE.

f. **Drinking Water Policy.** On 26 July 2013, the Central Valley Water Board adopted Resolution R5-2013-0098, amending the Basin Plan and establishing a Drinking Water Policy. The State Water Board approved the Drinking Water Policy on 3 December 2013. This Order may be reopened

to incorporate monitoring of drinking water constituents to implement the Drinking Water Policy.

2. Special Studies and Additional Monitoring Requirements

a. **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 compliance 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 of Intent for the Salt Control Program in September 2023 indicating its intent to meet the Alternative Salinity Permitting Approach. Under the Alternative Salinity 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 Notice of Intent demonstrated adequate participation in the P&O Study 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.

b. Pyrethroid Management Plan. On 8 June 2017, the Central Valley Water Board adopted Resolution R5-2017-0057, which adopted the Basin Plan Amendment (BPA) for the Control of Pyrethroid Pesticide Discharges. Per

the Basin Plan, section 4.2.2.4.12), if concentrations of pyrethroids are found to exceed the acute and/or chronic pyrethroid triggers (Table 4.2 of the Basin Plan), the Discharger must submit a draft Pyrethroid Management Plan for approval by the Executive Officer within one year from the date that an exceedance is identified by either the Discharger or Central Valley Water Board staff and comply with progress reporting requirements.

4. Construction, Operation, and Maintenance Specifications

a. **Filtration System Operating Specifications.** Turbidity is included as an operational specification as an indicator of the effectiveness of the filtration system for providing adequate disinfection. The tertiary treatment process utilized at this Facility is capable of reliably meeting a turbidity limitation of 2 NTU as a daily average. Failure of the treatment system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity and could impact UV dosage. Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. The operational specification requires that turbidity prior to disinfection shall not exceed 2 NTU as a daily average; 5 NTU, more than 5 percent of the time within a 24-hour period, and an instantaneous maximum of 10 NTU.

b. **UV Disinfection System Operating Specifications.** This Order requires that wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the DDW reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22), or equivalent. To ensure that the UV disinfection system is operated to achieve the required pathogen removal, this Order includes effluent limits for total coliform organisms, filtration system operating specifications, and UV disinfection system operating specifications. Compliance with total coliform effluent limits alone does not ensure that pathogens in the domestic wastewater have been deactivated by the UV disinfection system. Compliance with the effluent limits and the filtration system and UV disinfection operating specifications demonstrates compliance with the equivalency to Title 22 disinfection requirement.

The NWRI guidelines include UV operating specifications for compliance with Title 22. For water recycling in accordance with Title 22, the UV system shall be an approved system included in the Treatment Technology Report for Recycled Water, December 2009 (or a later version, as applicable) published by the DDW. The UV system shall also conform to all requirements and operating specifications of the NWRI guidelines. A memorandum dated 1 November 2004 issued by DDW to Regional Water Board executive officer recommended that provisions be included in permits for water recycling treatment plants employing UV disinfection requiring dischargers to establish fixed cleaning frequency of

lamp sleeves, as well as, include provisions that specify minimum delivered UV dose that must be maintained (per the NWRI Guidelines).

For granular media filtration, the NWRI Guidelines recommend a minimum hourly average UV dose of 100 mJ/cm^2. Therefore, this Order includes UV operating specifications requiring a minimum hourly average UV dose of 100 mJ/cm^2 and a minimum hourly average UV transmittance of 55%, per the NWRI Guidelines. If the Discharger conducts a site-specific UV engineering study that demonstrates a lower UV dose meets a Title 22 equivalent virus removal, this Order may be reopened to revise the UV operating specifications accordingly.

c. **Percolation Pond Operating Requirements.** The operation and maintenance specifications for the treatment ponds are included to prevent flooding and nuisance conditions. The specifications include in this Order are retained from Order R5-2019-0069.

5. Special Provisions for Treatment Works Treating Domestic Sewage

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

a. **Disinfection Requirements.** Consistent with previous Order R5-2019-0069, this Order requires wastewater to be oxidized, filtered, and adequately disinfected consistent with DDW reclamation criteria, CCR, Title 22, division 4, chapter 3 (Title 22), or equivalent. The disinfection requirements are discussed in detail above in section IV.C.3, Determining the Need for WQBELs (see Pathogens).

b. **Nitrite plus Nitrate (as N).** This Order contains an annual average effluent trigger for nitrite plus nitrate (as N) of 55 mg/L, based on the

Facility's performance. If the trigger is exceeded, the Discharger is required to investigate the cause of the exceedance, and the Discharger shall conduct an evaluation to determine the cause(s) for the increased nitrite plus nitrate (as N) concentrations and submit the evaluation with the Annual Operations Report. The effluent trigger is included in this Order to ensure the Discharger implements a proactive nitrogen control effort should the effluent quality significantly change.

c. **Facility Upgrades.** The Discharger is expecting major Facility upgrades to be completed in 2028. The upgrades include new preliminary treatment, flow equalization, and secondary treatment. Once the upgrades are complete, the Facility will be capable of denitrification. The new additions to the Facility will be located adjacent to the existing Facility. The existing tertiary treatment and UV disinfection will be upgraded. The Discharger also plans to add a new aerobic sludge digestion system and sludge dewatering screw press. The effluent discharge locations will remain the same. The Discharger must comply with the provisions in section VI.C.6.c of this Order once Fancily upgrades are complete.

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 and immediate analysis is required for temperature (40 C.F.R. section 136.3(e), Table II).

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). The monitoring frequencies and sample types have been retained from Order R5-2019-0069.

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 is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

2. Effluent monitoring frequencies and sample types have been retained from Order R5-2019-0069, except as noted in Table F-10, below.

3. **Pyrethroid Pesticides Monitoring.** A Basin Plan Amendment and TMDL for the Control of Pyrethroid Pesticide Discharges in the Sacramento and San Joaquin River basins (Resolution R5-2017-0057) was approved by the Central Valley Water Board on 8 June 2017 and is now effective. The Pyrethroids Control Program, Section 5.1.16 of the Basin Plan, requires monitoring by domestic and municipal wastewater dischargers discharging at least 1 MGD for the concentrations of pyrethroid pesticides, total and dissolved organic carbon in the water column, and water column toxicity testing. Monitoring is required to evaluate the potential impacts of discharges of pyrethroid pesticides to receiving waters.

C. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess the impacts of the discharge on the receiving stream. Receiving surface water monitoring frequencies and sample types have been retained from Order R5-2019-0069.

2. Groundwater – Not Applicable

Table F-10 Summary of Monitoring Changes

Parameter	Type of Monitoring	Prior Sample Frequency	Revised Sample Frequency	Reason for Change
Copper, Total Recoverable	EFF-001 EFF-002	--	1/Month	Copper exhibits reasonable potential.
Zinc, Total Recoverable	EFF-001 EFF-002	--	1/Month	Zinc exhibits reasonable potential.
Chronic Toxicity	EFF-001	1/year	Note 1	Note 3
Chronic Toxicity	EFF-002	1/year	Note 2	Note 3

1. **Twice per toxicity calendar year** in years in which there are at least 15 days of discharge in at least one toxicity calendar quarter.
2. **Once per toxicity calendar quarter** in quarters in which there are at least 15 days of discharge.
3. The increase in frequency is consistent with the requirements in the Statewide Toxicity Provisions.

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).

Quarterly or biannually chronic whole effluent toxicity testing is required to demonstrate compliance with the toxicity effluent limitations/targets.

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. **Sensitive Species Screening.** The Discharger shall perform rescreening to re-evaluate the most sensitive species once the Facility upgrades are complete. A rescreening must be performed prior to permit reissuance and results submitted with the Report of Waste Discharge. Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing four consecutive calendar quarters using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green alga (*Pseudokirchneriella subcapitata*). The tests shall be performed at 100 percent effluent and one control. For rescreening, if the first two species sensitivity re-screening events result in no change in the most sensitive species, the Discharger may cease the species sensitive re-screening testing 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 five 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 are not met within a single calendar month or within two successive 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.

E. Other Monitoring Requirements

1. Biosolids Monitoring

Biosolids monitoring for compliance with 40 C.F.R. part 503 regulations is not included in this Order since it is a program administered by U.S. EPA's part 503 Biosolids Program (https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws)

2. Water Supply Monitoring

Water supply monitoring is required to evaluate the source of constituents in the wastewater.

3. Filtration System Monitoring

Filtration system monitoring and reporting are required to determine compliance with the operation specifications for turbidity in Special Provision VI.C.4.a. Consistent with Order R5-2019-0069, this Order requires continuous turbidity monitoring at a compliance point following the tertiary filters and prior to the UV disinfection system (Monitoring Location FIL-001) in order to ensure the operational specifications for turbidity are being met prior to the disinfection process.

4. UV Disinfection System Monitoring

UV system monitoring and reporting are required to ensure that the UV system is operated to adequately inactivate pathogens in the wastewater. UV disinfection system monitoring is imposed to achieve equivalency to requirements established by the DDW, and the NWRI Guidelines.

5. Percolation Pond Monitoring

Percolation pond monitoring is required to ensure proper operation of the percolation ponds and to identify potential nuisance conditions. Weekly monitoring for pH and dissolved oxygen and daily monitoring for odors has been retained from Order No. R5-2019-0069.

6. Effluent and Receiving Water Characterization Monitoring

In accordance with section 1.3 of the SIP, periodic monitoring is required for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires effluent and receiving water monitoring for priority pollutants and other constituents of concern beginning the fourth year of the permit term (1 July 2028 through 30 June 2029). The data obtained from the effluent and receiving water characterization

monitoring is needed to conduct an RPA for the next permit renewal. See section IX.E of the MRP (Attachment E) for more detailed requirements related to performing priority pollutant monitoring.

7. **Pyrethroid Pesticides Monitoring**

   On 8 June 2017, the Central Valley Water Board adopted Resolution R5-2017-0057, which adopted the Basin Plan Amendment (BPA) for the Control of Pyrethroid Pesticide Discharges. Pyrethroid pesticides and toxicity monitoring has been included in this Order in accordance with the Pyrethroids Pesticides BPA, as required for domestic wastewater facilities with a discharge flow greater than or equal to 1 million gallons per day.

8. **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 the El Portal Wastewater Treatment Facility. 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. Notification was provided through posting on the Central Valley Water Board's website on <XX June

2025 and through posting by the Discharger at (enter location here) and the Facility entrance on XX June 2025.>

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: 20 June 2025
Time: 9:00 a.m.
Location: State Water Resources Control Board
Coastal Hearing Room
1001 I Street
Sacramento, CA 95814
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 (559) 445-5116.

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 Lovdeep Singh at (559) 445-5130, or by email at Lovdeep.Singh@waterboards.ca.gov.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	MCL	Reasonable Potential
Ammonia Nitrogen, Total (as N) (1 May – 31 October)	mg/L	0.37	--	2.4	5.6 (Note 2)	2.4 (Note 3)	--	--	Yes (Note 4)
Ammonia Nitrogen, Total (as N) (1 November – 30 April)	mg/L	0.6	--	2.9	6.8 (Note 2)	2.9 (Note 3)	--	--	Yes (Note 4)
Copper, Total Recoverable	µg/L	11	0.79	3.0	4.0	3.0	1,300	1,000	Yes
Electrical Conductivity @ 25°C	µmhos/cm	977 (Note 1)	40 (Note 1)	1,600	--	--	--	1,600	No
Nitrite plus Nitrate (as N)	mg/L	66	ND	10	--	--	--	10	No
Total Dissolved Solids	mg/L	770 (Note 1)	35	500	--	--	--	500	No
Zinc, Total Recoverable	µg/L	58	0.73	20	20	20	--	5,000	Yes

Attachment G Table Notes:

1. Highest calendar year average.
2. U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour average.
3. U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 30-day average.
4. Effluent limitations were included despite MEC not exceeding criteria and no dilution granted. See section IV.C.3 of the Fact Sheet for detailed discussion.

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)
MCL =	Drinking Water Standards Maximum Contaminant Level
NA =	Not Available
ND =	Non-detect

ATTACHMENT H – CALCULATION OF WQBELS

AQUATIC LIFE WQBELS CALCULATIONS

Parameter	Units	CMC Criteria	CCC Criteria	B	Effluent CV	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) (1 May – 31 October)	mg/L	5.6	2.4	--	0.60	0.32	1.8	0.78	1.9	1.6	2.7	3.1	2.8	4.8	--
Ammonia Nitrogen, Total (as N) (1 November – 30 April)	mg/L	6.8	2.9	--	0.60	0.32	2.2	0.78	2.3	1.6	2.7	3.1	3.4	5.8	--
Copper, Total Recoverable	µg/L	4.0	3.0	0.79	0.60	0.32	1.3	0.53	1.6	1.6	2.7	3.1	2.0	--	4.0
Zinc, Total Recoverable	µg/L	20	20	0.73	0.60	0.32	6.4	0.53	11	1.6	2.7	3.1	10	--	20

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.

Abbreviations used in this table:

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