**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**CENTRAL VALLEY REGION**

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**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CA0079464**
**ORDER R5-2024-<XXXX>**

# WASTE DISCHARGE REQUIREMENTS FOR THE SAN ANDREAS SANITARY DISTRICT

## WASTEWATER TREATMENT PLANT
## CALAVERAS COUNTY

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

**Table 1. Discharger Information**

| | |
|---|---|
| Discharger: | San Andreas Sanitary District |
| Name of Facility: | Wastewater Treatment Plant |
| Facility Street Address: | 675 Gold Oak Road |
| Facility City, State, Zip: | San Andreas, Ca 95249 |
| Facility County: | Calaveras County |

**Table 2. Discharge Location**

| Discharge Point | Effluent Description | Discharge Point Latitude (North) | Discharge Point Longitude (West) | Receiving Water |
|---|---|---|---|---|
| 001 | Treated municipal wastewater | 38?12’ 39” N | 120?42’ 20” W | North Fork Calaveras River |
| 002 | Treated municipal wastewater | 38º12’18.08” N | 120º41’15.07” W | Pond D |

**Table 3. Administrative Information**

| | |
|---|---|
| This Order was Adopted on: | **XX April 2024** |
| This Order shall become effective on: | **1 June 2024** |
| This Order shall expire on: | **31 May 2029** |
| 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, and an application for reissuance of a NPDES permit no later than: | **31 May 2028** |
| The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as follows: | **Minor discharge** |

I, Patrick Pulupa, Executive Officer, do hereby certify that this Order with all attachments is a full, true, and correct copy of the Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **XX April 2024**.

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# WASTE DISCHARGE REQUIREMENTS
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## TABLES



## ATTACHMENTS

## I. FACILITY INFORMATION

Information describing the San Andreas Sanitary District Wastewater Treatment Plant (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

## II. FINDINGS

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

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

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

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

**D. Provisions and Requirements Implementing State Law**. The provisions/requirements in subsections **IV.B, IV.C, and V.B** 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 R5-2018-0075 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**. Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.

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

**E**. **Average Daily Flow**. Discharges exceeding an average daily flow of 1.5 million gallons per day (MGD) are prohibited.

**F**. The discharge of treated effluent to the North Fork Calaveras River in quantities that do not receive a minimum of 20:1 dilution as a daily average (receiving water flow; effluent flow) is prohibited.

**G**. The discharge of wastewater to surface waters or surface water drainage courses from the Dedicated Land Disposal Area (DLDA) is prohibited.

# IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

## A. Effluent Limitations – Discharge Point No. 001

### 1. Final Effluent Limitations – Discharge Point No. 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point No. 001. Unless otherwise specified compliance shall be measured at Monitoring Location EFF-001, 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) | 30 | 45 | -- |
| Total Suspended Solids (TSS) | mg/L | 30 | 45 | -- |
| Cyanide, Total (as CN) | µg/L | 24 | -- | 47 |
| Ammonia Nitrogen, Total (as N) | mg/L | 5.1 | 18 | -- |

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 85 percent.

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

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

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

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

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

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

### B. Land Discharge Specifications – Discharge Point LND-001

1. The Discharger shall maintain compliance with the following effluent limitations for discharge to the Designated Land Disposal Area (DLDA), with compliance measured at Monitoring Location LND-001 as described in the attached MRP..

**Table 5. Land Discharge Specifications**

| Parameter | Units | Average Monthly | Maximum Daily | Monthly Median |
|---|---|---|---|---|
| Biochemical oxygen Demand (5-day @ 25°C) | mg/L | 40 | 80 | -- |
| Total Coliform Organisms | MPN/100 mL | -- | 240 | 23 |

### C. Recycling Specifications – Not Applicable

## V. RECEIVING WATER LIMITATIONS

### A. Surface Water Limitations

The discharge shall not cause the following in the North Fork Calaveras River.

1. **Bacteria.** The fecal coliform concentration, based on a minimum of not less than five samples for any 30-day period, to exceed a geometric mean of 200 MPN/100 mL, nor more than 10 percent of the total number of fecal coliform samples taken during any 30-day period to exceed 400 MPN/100 mL.
2. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.
3. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.
4. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.
5. **Dissolved Oxygen:**
   a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;
   b. The 95 percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor
   c. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.
6. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.
7. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the

surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

8. **pH.** The pH to be depressed below 6.5 nor raised above 8.5**.**

9. **Pesticides:**

   a. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses;

   b. Pesticides to be present in bottom sediments or aquatic life in concentrations that adversely affect beneficial uses;

   c. Total identifiable persistent chlorinated hydrocarbon pesticides to be present in the water column at concentrations detectable within the accuracy of analytical methods approved by USEPA or the Executive Officer;

   d. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution No. 68-16 and 40 CFR 131.12.);

   e. Pesticide concentrations to exceed the lowest levels technically and economically achievable;

10. **Radioactivity:**

   i. Radionuclides to be present in concentrations that are harmful to human, plant, animal, or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal, or aquatic life.

11. **Suspended Sediments.** The suspended sediment load and suspended sediment discharge rate of surface waters to be altered in such a manner as to cause nuisance or adversely affect beneficial uses.

12. **Settleable Substances.** Substances to be present in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

13. **Suspended Material.** Suspended material to be present in concentrations that cause nuisance or adversely affect beneficial uses.

14. **Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.

15. **Temperature.** The natural temperature to be increased by more than 5°F. Compliance to be determined based on the difference in temperature at Monitoring Locations RSW-001 and RSW-002.

16. **Turbidity.**

   a. Shall not exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;

b. Shall not increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;

c. Shall not increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;

d. Shall not increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor

e. Shall not increase more than 10 percent where natural turbidity is greater than 100 NTUs.

18. **Toxicity**. Toxic substances to be present, individually or in combination, in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.

### B. Groundwater Limitations

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

1. Contain waste constituents in concentrations statistically greater than background groundwater quality.

2. Exceed a total coliform organism level of 2.2 MPN/100mL.

3. Exceed a Nitrate (as N) limitation of 10 mg/L.

4. Contain taste or odor-producing constituents, toxic substances, or any other constituents in concentrations that cause nuisance or adversely affect beneficial uses.

Compliance with these limitations shall be determined annually based on comparison of downgradient well concentrations to background groundwater quality using historical monitoring data, using approved statistical methods.

## VI. PROVISIONS

### A. Standard Provisions

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

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

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

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

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

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

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

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

The causes for modification include:

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

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

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

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

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

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

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

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

   ii. Controls any pollutant limited in the Order.

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

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

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

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

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

i. Safeguard to electric power failure:

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

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

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

j. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under the Central Valley Water Board Standard Provision contained in section VI.A.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 Report of Waste Discharge for permit reissuance, this permit shall continue in force and effect until the permit is reissued or the Regional Water Board rescinds the permit.

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, average monthly effluent limitations, average weekly effluent limitations, maximum daily effluent limitations, instantaneous minimum, instantaneous maximum, or receiving water limitation of this Order, the Discharger shall notify the Central Valley Water Board by telephone (916) 464-3291 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 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 for metals. 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. **Constituent Study.** If after review of the study results it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective this Order may be reopened and effluent limitations added for the subject constituents.

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

**2. Special Studies, Technical Reports and Additional Monitoring Requirements**

a. **Groundwater Quality Assessment Study**. The Discharger shall conduct a study that evaluates the current groundwater well network and groundwater quality downgradient of Pond D. The sources and impacts of nitrate and total coliform in groundwater shall be evaluated as part of this study and shall include a survey and water quality analysis, if applicable,

of any drinking water wells located 0.5 miles or less downgradient of Pond D. The study shall also recommend a groundwater well that can serve as a compliance point downgradient of Pond D. In addition, the study shall include information regarding any potential changes to the groundwater well network, an evaluation of alternatives/actions to reduce nitrate and total coliform, and a proposed plan and timeline for the implementation of recommended actions to reduce nitrate and total coliform in groundwater. The study shall also address compliance with the groundwater limitations in Section V.B. The study shall be completed and submitted to the Central Valley Water Board by the due date in the Technical Reports Table E-11.

b. **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 plan shall be completed and submitted to the Central Valley Water Board by the due date in the Technical Reports Table E-11.

The Discharger submitted a Notice of Intent to comply with the Salt Control Program and selected the Alternative Permitting Approach. Accordingly, the Discharger shall participate in the CV-SALTS Prioritization and Optimization (P&O) Study. Furthermore, an evaluation of the effectiveness of the SEMP shall be submitted with the ROWD. The evaluation shall include, at minimum, the calendar 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 810µmhos/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.

c. **Pollution Prevention Plan for Mercury**. The Discharger shall continue to implement a pollution prevention plan for mercury to identify and address sources of mercury discharged from the Facility.

**4. Construction, Operation and Maintenance Specifications**

a. **Ponds B, C, and D, and DLDA Operating Requirements.**

i. The 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 should assure 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.

iv. Freeboard shall never be less than 1 foot (measured vertically to the lowest point of overflow.

v. Ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the non-irrigation season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

vi. Prior to the onset of the rainy season of each year, available pond storage capacity shall at least equal the volume necessary to comply with the Land Discharge Specification at section VI.C.4.a.v. above.

vii. The discharge of waste classified as “hazardous” as defined in section 2521(a) of Title 23, California Code of Regulations (CCR), or “designated”, as defined in section 13173 of the Water Code, to the treatment ponds is prohibited.

viii. Objectionable odors originating at this Facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas (or property owned by the Discharger).

ix. As a means of discerning compliance with Provision IV.C.4.a.viii., the dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/L.

x. Pond D shall not have a pH less than 6.5 or greater than 9.0 averaged over a 24-hour period.

xi. Irrigation runoff (tailwater) shall be completely contained within the DLDA irrigation areas or be returned to the Facility, and shall not enter any surface water drainage course.

xii. Application of effluent to the DLDA irrigation areas shall comply with the following setback requirements:

| Setback Definition ( See Note 1) | Minimum Irrigation Setback (feet) |
|---|---|
| Edge of DLDA to domestic well | 100 |
| Edge of DLDA to manmade or natural surface water drainage course (see Note 2)or spring | 50 |

Note 1 - As defined by the wetted area produced during irrigation.
Note 2 - Excluding ditches used exclusively for tailwater return and drainages that do not discharge to surface waters.

xiii. The discharge of treated wastewater to the DLDA shall be at reasonable irrigation application rates designed to minimize irrigation runoff.

xiv. "Discharge to the DLDA shall not be performed during rainfall or when the ground is saturated.

xv. Spray irrigation of effluent is prohibited when wind velocities exceed 30 mph.

xvi. The DLDA shall be managed to prevent breeding of mosquitoes. In particular:

(a) There shall be no standing water 72 hours after irrigation ceases;

(b) Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store effluent.

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

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

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

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

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

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

iii. The Discharger shall 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.

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

**6. Other Special Provisions – Not Applicable**

**7. Compliance Schedules – Not Applicable**

## VII. COMPLIANCE DETERMINATION

**A. Average Daily Flow Prohibition (Section III.E)**. The average daily discharge flow represents the mean of all daily flow values obtained within a calendar day (i.e., midnight through 11:59 PM).

**B. 20:1 Flow Prohibition (Section III.F).** Discharge of treated effluent to the North Fork Calaveras River can only occur if a minimum ratio of twenty parts receiving water to one part effluent is present.

**C. $BOD_5$ and TSS Effluent Limitations (Section IV.A.1.a).** 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.a 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.

**D. 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 23 per 100 milliliters, the Discharger will be considered out of compliance.

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

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

**F. Dissolved Oxygen Receiving Water Limitation (Section V.A.5.a-c).** The Facility provides a high level of treatment including tertiary filtration and nitrification, which results in minimal dissolved oxygen impacts in the receiving water. Weekly receiving water monitoring is required in the Monitoring and Reporting Program (Attachment E) and is sufficient to evaluate the impacts of the discharge and compliance with this Order. Weekly receiving water monitoring data, measured at monitoring locations RSW-001 and RSW-002, will be used to determine compliance with part "c" of the

dissolved oxygen receiving water limitation to ensure the discharge does not cause the dissolved oxygen concentrations in the North Fork Calaveras River to be reduced below 7.0 mg/L at any time. However, should more frequent dissolved oxygen and temperature receiving water monitoring be conducted, Central Valley Water Board staff may evaluate compliance with parts “a” and “b”.

**G. 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: $\Sigma x$ 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;
$\mu$ 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.

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

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

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

**WET Maximum Daily Effluent 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 – MAP

### Figure B-1. Map of Facility Location

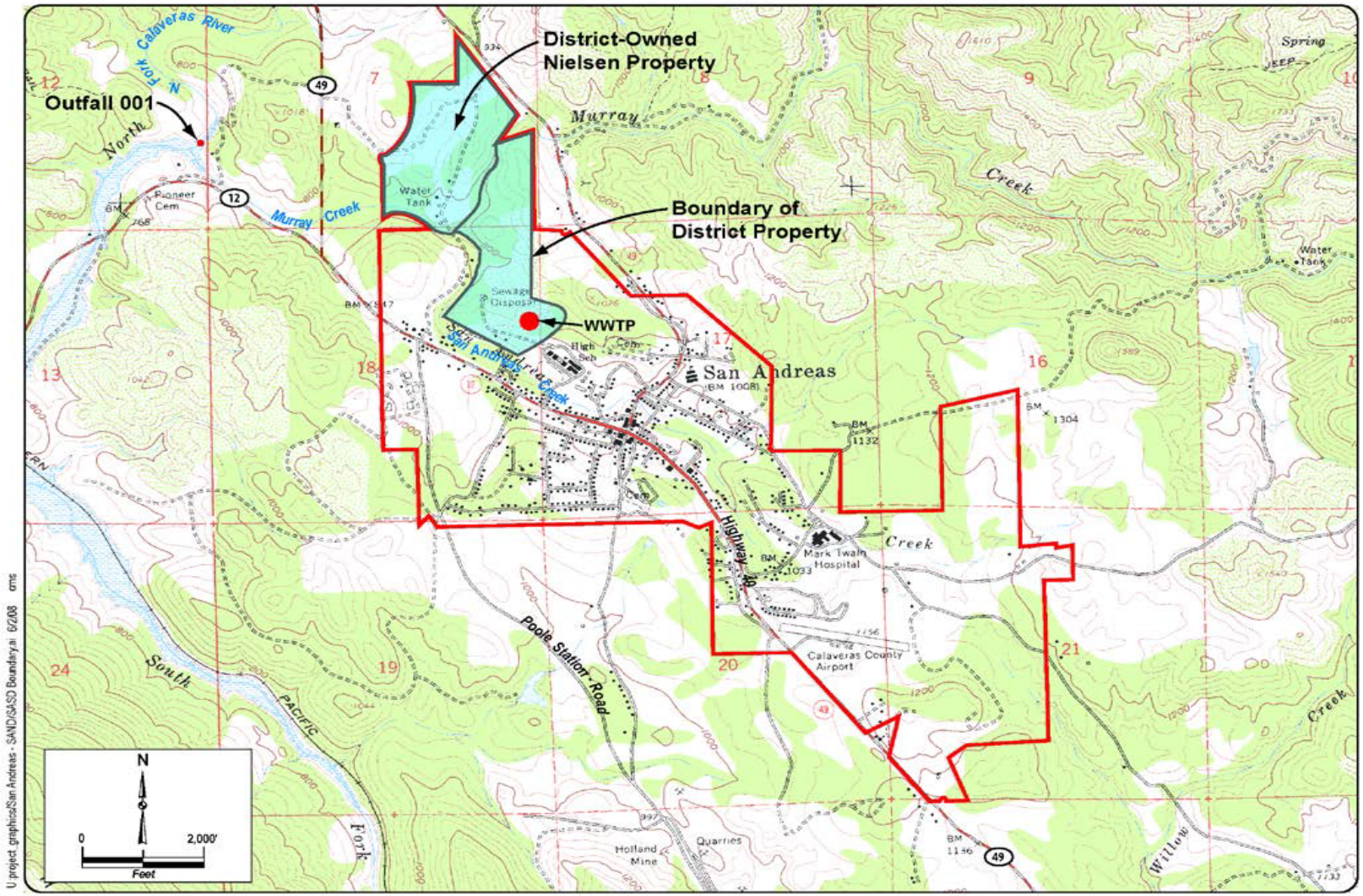
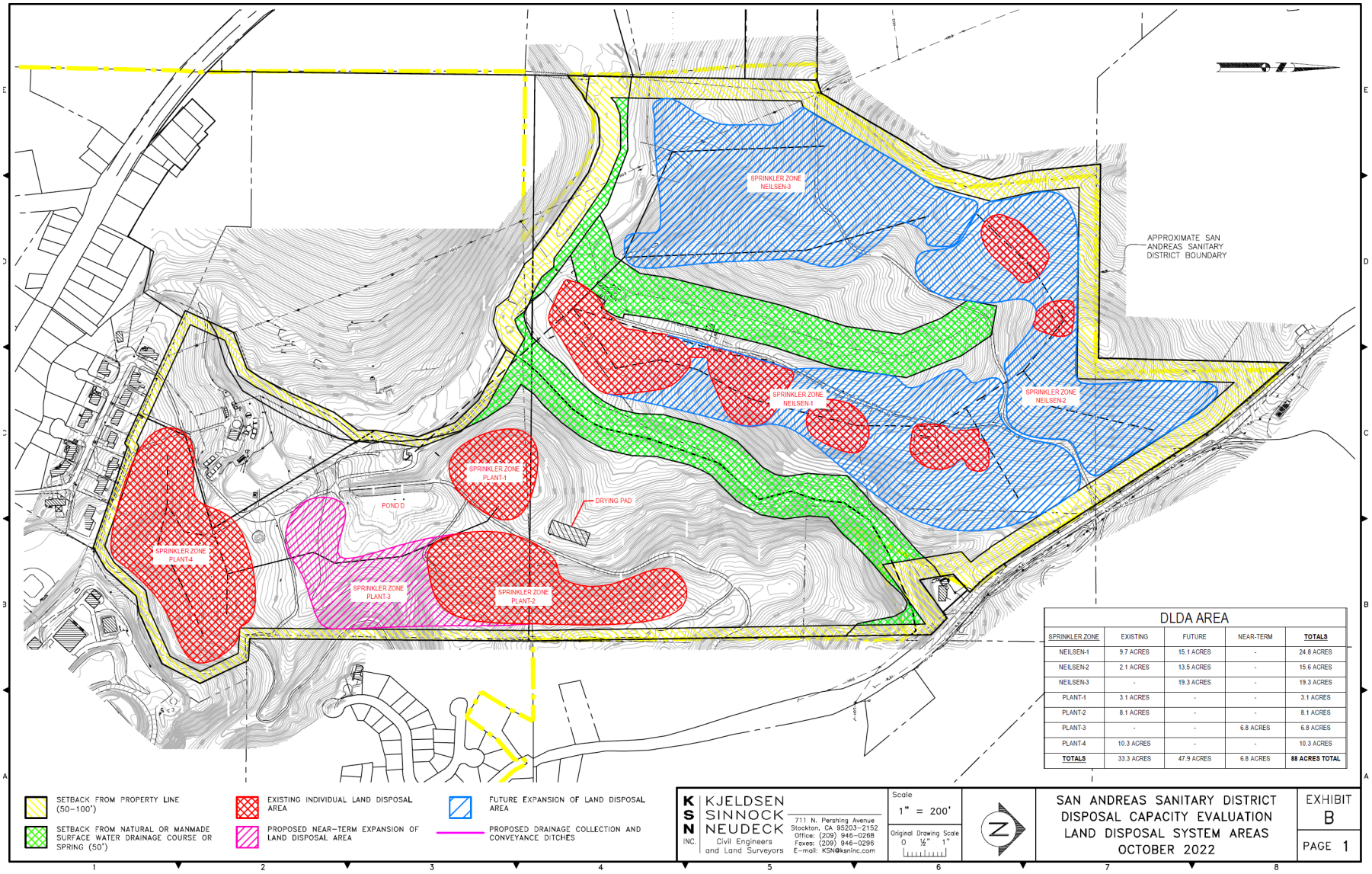


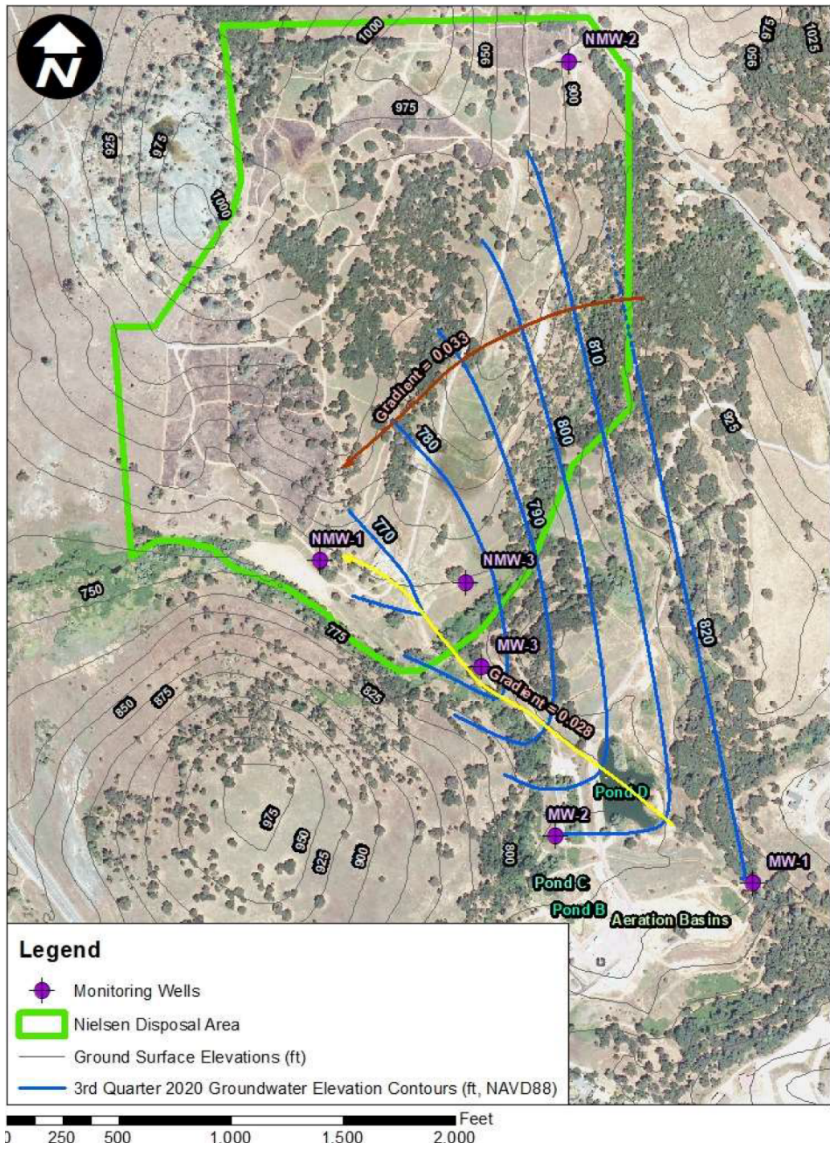
**Figure B-2. Facility map depicting existing and planned future expansions to the DLDA**




DLDA AREA

| SPRINKLER ZONE | EXISTING | FUTURE | NEAR-TERM | TOTALS |
|---|---|---|---|---|
| NEILSEN-1 | 9.7 ACRES | 15.1 ACRES | - | 24.8 ACRES |
| NEILSEN-2 | 2.1 ACRES | 13.5 ACRES | - | 15.6 ACRES |
| NEILSEN-3 | - | 19.3 ACRES | - | 19.3 ACRES |
| PLANT-1 | 3.1 ACRES | - | - | 3.1 ACRES |
| PLANT-2 | 8.1 ACRES | - | - | 8.1 ACRES |
| PLANT-3 | - | - | 6.8 ACRES | 6.8 ACRES |
| PLANT-4 | 10.3 ACRES | - | - | 10.3 ACRES |
| **TOTALS** | 33.3 ACRES | 47.9 ACRES | 6.8 ACRES | **88 ACRES TOTAL** |

**Figure B-3. Facility map depicting groundwater well network**



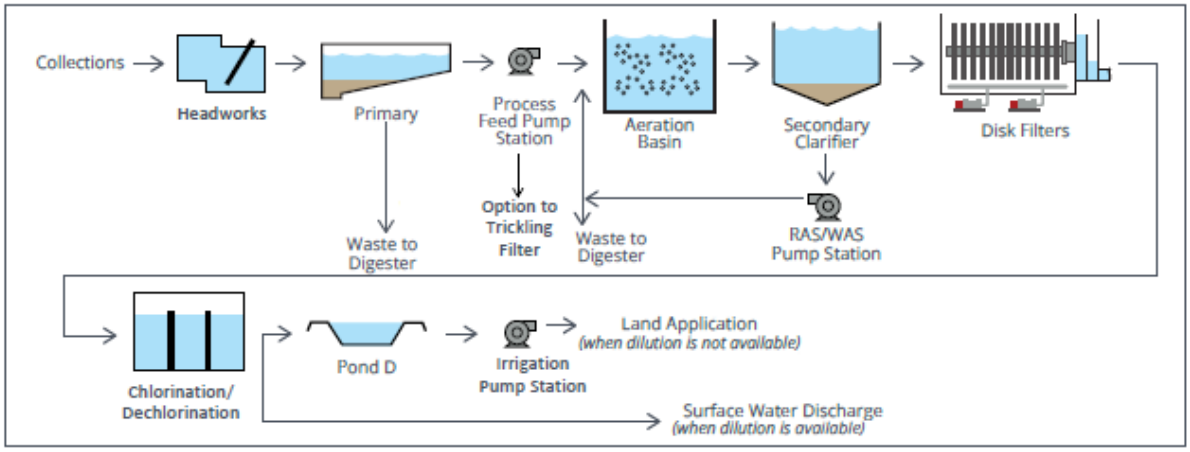
# ATTACHMENT C – FLOW SCHEMATIC

## Treatment Facility Modes of Operation and Process Flow Diagram

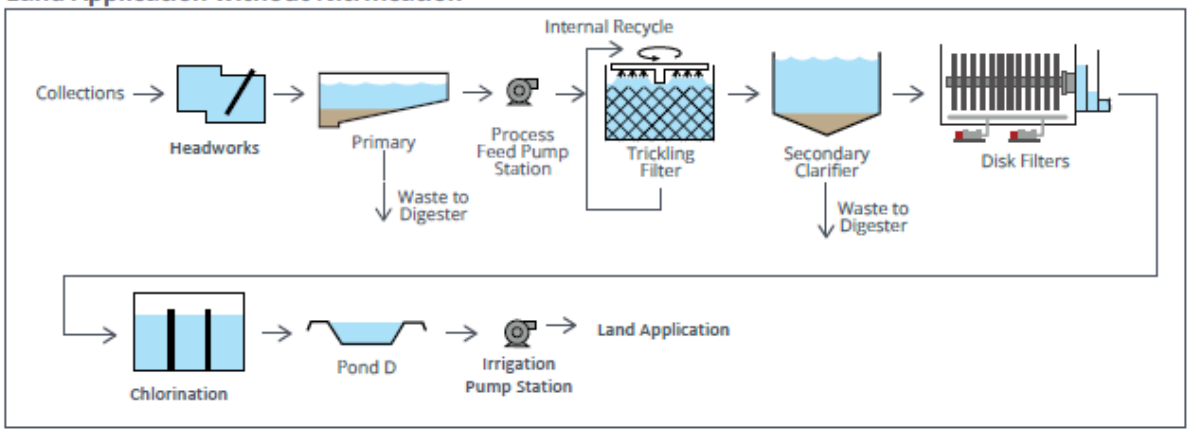
San Andreas Sanitary District

Woodard & Curran

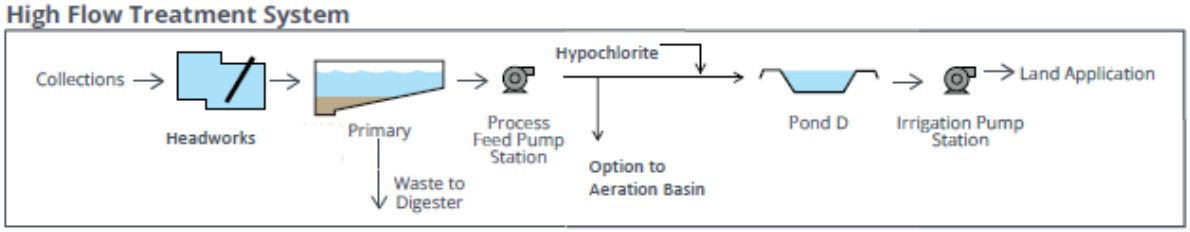
### Discharge with Nitrification (Land Application or River Discharge)



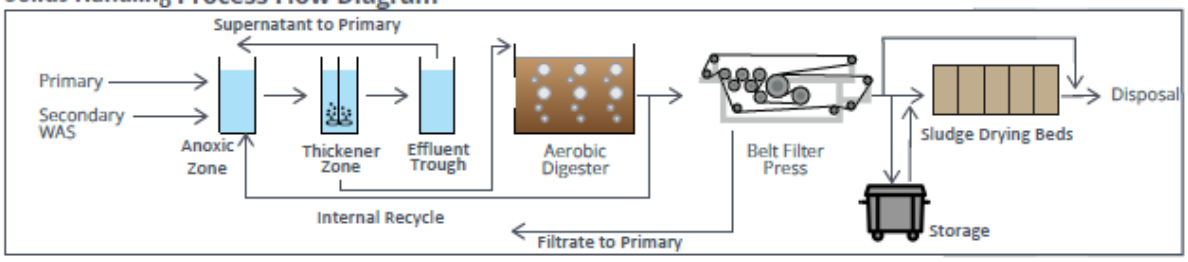

### Land Application without Nitrification




### High Flow Treatment System




### Solids Handling Process Flow Diagram



# 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 subject neither to effluent limitations in this Order nor to notification requirements under section 122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1). (40 C.F.R. section 122.41(l)(1)(ii).)

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

## G. Anticipated Noncompliance

The Discharger shall give advance notice to the Central Valley Water Board of any planned changes in the permitted facility or activity that may result in noncompliance with this Order’s requirements. (40 C.F.R. section 122.41(l)(2).)

## H. Other Noncompliance

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

## I. Other Information

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

## J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part

127 to the appropriate initial recipient, as determined by U.S. EPA, and as defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. section 122.41(l)(9).)

## VI. STANDARD PROVISIONS – ENFORCEMENT

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

## Table of Contents



## Tables

# 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. |

| Discharge Point Name | Monitoring Location Name | Monitoring Location Description |
|---|---|---|
| 001 | EFF-001 | A location downstream from the last connection through which wastewater can be admitted into the outfall to the North Fork Calaveras River.<br>Latitude: 38° 12’ 39” N Longitude: 120° 42’ 20” W |
| -- | FIL-001 | A location where a representative sample of effluent leaving the filtration system can be collected. |
| 002 | LND-001 | A location where a representative sample of the effluent sent to the effluent storage area (Pond D) can be collected. |
| -- | LND-001T | A location where a representative sample of the effluent being sent from Pond D to the Designated Land Disposal Area (DLDA) Irrigation Areas can be collected. |
| -- | LND-002 | A location where a representative sample of the effluent being sent to Ponds B and C can be collected. |
| -- | PND-001 | A location where a representative sample of the contents of Storage Pond D can be collected. |
| -- | RSW-001 | 100 feet upstream from the point of discharge in the North Fork Calaveras River.<br>Latitude: 38° 12’ 39” N Longitude: 120° 42’ 18” W |
| | RSW-002 | 250 feet downstream from the point of discharge in the North Fork Calaveras River.<br>Latitude: 38° 12’ 39” N Longitude: 120° 42’ 23” W |
| -- | GW-001 | Groundwater monitoring well (background). |
| -- | GW-002 | Groundwater monitoring well. |
| -- | GW-003 | Groundwater monitoring well. |
| -- | GWN-001 | Groundwater monitoring well on the Neilson Property (background). |
| -- | GWN-002 | Groundwater monitoring well on the Neilson Property. |
| -- | GWN-003 | Groundwater monitoring well on the Neilson Property. |
| -- | BIO-001 | A location where a representative sample of biosolids can be obtained. |

**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 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 |
| Total Suspended Solids (TSS) | mg/L | 24-hour Composite | 1/Week |
| Electrical Conductivity @ 25°C | µmhos/cm | Grab | 1/Quarter |
| Total Dissolved Solids | mg/L | Grab | 1/Quarter |

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

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

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

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

## IV. EFFLUENT MONITORING REQUIREMENTS

### A. Monitoring Location EFF-001

1. When discharging to the North Fork Calaveras River, the Discharger shall monitor treated wastewater at EFF-001 in accordance with Table E-3 and the testing requirements described in section IV.A.2 below:

**Table E-3. Effluent Monitoring**

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Flow | MGD | Meter | Continuous |
| Biochemical Oxygen Demand, 5-day @ 20°Celcius ($BOD_5$) | mg/L | 24-hour Composite | 1/Week |
| $BOD_5$ | % removal | Calculate | 1/Week |
| Total Suspended Solids (TSS) | mg/L | 24-hour Composite | 1/Week |
| TSS | % removal | Calculate | 1/Week |
| pH | standard units | Grab | 1/Week |
| Cyanide, Total (as CN) | µg/L | Grab | 1/Month |
| Ammonia Nitrogen, Total (as N) | mg/L | Grab | 1/Week |
| Chlorine, Total Residual | mg/L | Meter | Continuous |
| Electrical Conductivity @ 25°C | µmhos/cm | Grab | 1/Week |
| Hardness, Total (as $CaCO_3$) | mg/L | Grab | 1/Month |
| Temperature | °C | Grab | 1/Week |
| Total Coliform Organisms | MPN/100 mL | Grab | 1/Week |
| Total Dissolved Solids | mg/L | Grab | 1/Month |
| Turbidity | NTU | Meter | 1/Week |
| 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 composite.

   c. **Handheld Field Meter.** A handheld field meter may be used for **temperature, Electrical Conductivity,** 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. Whole effluent toxicity monitoring shall be in accordance with section V of this MRP.

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

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

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

i. **Turbidity.** Samples for turbidity shall be collected at FIL-001.

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

## V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

**A. 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 8 percent effluent.

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

3. **Calendar Month.** The calendar month is defined as the period of time beginning on the day of the initiation of the routine 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 (e.g., from January 1 to January 31, from June 15 to July 14, or from January 31 to February 28).

4. **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 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.

5. **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 is not met, but not two in a single calendar month. The calendar month in which the MMET or MDET was not met and the 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.4 above.

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

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

8. **Test Methods**. Discharger shall conduct the chronic toxicity tests on effluent samples at the instream waste concentration for the discharge in accordance with species and test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R02/013, 2002; Table IA, 40 C.F.R. part 136).

9. **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.

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

11. **Replacement Test**. When a required toxicity test for routine monitoring or MMET tests is not completed, a new toxicity test to replace the toxicity test that was not completed shall be initiated as soon as possible. The new toxicity test shall replace the routine monitoring or MMET tests, as applicable, for the calendar month in which the toxicity test that was not completed was required to be initiated, even if the new toxicity test is initiated in a subsequent month. The new toxicity test for routine monitoring or MMET tests, as applicable, and any MMET tests required to be conducted due to the results of the new toxicity test shall be used to determine if the MMET and the MDET are met for the calendar month in which the toxicity test that was not completed was required to be initiated. The new toxicity test and any MMET tests required to be conducted due to the results of the new toxicity test shall not be used to substitute for any other required toxicity tests..

Any specific monitoring event is not required to be initiated in the required time period when the Central Valley Water Board staff determines that the test was not initiated in the required time period due to circumstances outside of the Discharger's control that were not preventable with the reasonable exercise of care, and the Discharger promptly initiates, and ultimately completes, a replacement test.

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

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

**D. 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.

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

1. **Frequency of Testing for Species Sensitivity Screening.** Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing four consecutive calendar quarters in which effluent discharge occurs using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green alga (*Pseudokirchneriella subcapitata*). The tests shall be performed at an IWC of no less than 8 percent effluent.

2. **Determination of Most Sensitive Species.** If a single test in the species sensitivity screening testing results in a “Fail” using the TST statistical approach, then the species used in that test shall be established as the most sensitive species. If there is more than a single test that results in a “Fail” , then of the species with results of a “Fail”, the species that exhibits the highest percent effect shall be established as the most sensitive species. If none of the tests in the species sensitivity screening results in a “Fail”, but at least one of the species exhibits a percent effect greater than 15 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.

**F. Toxicity Reduction Evaluations (TRE)**

1. **TRE Targets.**

   a. **Chronic Whole Effluent Toxicity Median Monthly Effluent Target (MMET).** No more than one chronic aquatic toxicity test initiated in a calendar month shall result in a “Fail” at the IWC for any endpoint.

b. **Chronic Whole Effluent Toxicity Maximum Daily Effluent Target (MDET).** No 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 sub-lethal endpoint greater than or equal to 50 percent.

2. **TRE Implementation.** 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 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, which per the Discharger's approved TRE Work 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.

   c. 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-13. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The TRE Work Plan shall outline the procedures for identifying the source(s) of and reducing or eliminating effluent toxicity. The TRE Work Plan must be of adequate detail to allow the Discharger to immediately initiate a TRE and shall be developed in accordance with U.S. EPA guidance as discussed below.

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

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

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

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

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

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

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

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

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

## VI. LAND DISCHARGE MONITORING REQUIREMENTS

### A. Monitoring Location LND-001 and LND-001T

1. The Discharger shall monitor effluent discharged to Pond D, measured at LND-001 and the flow to the DLDA irrigation area at LND-001T in accordance with Table E-4 and the testing requirements described in section VI.A.2 below:

**Table E-4. Land Discharge Monitoring Requirements**

| Parameter | Units | Sample Type | Sample Location | Minimum Sampling Frequency |
|---|---|---|---|---|
| Flow to Pond D | MGD | Meter | LND-001 | Continuous |
| Flow to Spray Fields | MGD | Meter | LND-001T | 1/Day |
| Biochemical Oxygen Demand (5-Day @ 25° C) | mg/L | 24-Hour Composite | LND-001 | 1/Week |
| Electrical Conductivity @ 25° C | µmhos/cm | Grab | LND-001 | 1/Week |
| Total Coliform Organisms | MPN/100mL | Grab | LND-001 | 1/Week |

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. 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.

b. A hand-held field meter may be used, provided the meter utilizes a USEPA-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.

## B. Monitoring Location PND-001 and LND-002

1. The Discharger shall monitor the contents of Storage Pond D at PND-001 in accordance with Table E-5 and the testing requirements described in section VI.B.2 below:

**Table E-5. Pond D Monitoring Requirements**

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Freeboard | feet | Measurement | 1/Week |
| pH | standard units | Grab | 1/Month |
| Dissolved Oxygen | mg/L | Grab | 1/Month |
| Electrical Conductivity @ 25°C | µmhos/cm | Grab | 1/Quarter |
| Nitrate (as N) | mg/L | Grab | 1/Quarter |
| Standard Minerals | mg/L | Grab | 1/Year |
| Total Nitrogen | mg/L | Grab | 1/Quarter |
| Total Dissolved Solids | mg/L | Grab | 1/Quarter |

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. Freeboard monitoring shall be performed daily if freeboard is less than 2 feet.

b. 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.

c. Standard minerals shall include the following: boron, calcium, iron, magnesium, potassium, sodium, chloride, manganese, phosphorus, total alkalinity (including alkalinity series), and hardness, and include verification that the analysis is complete (i.e., cation/anion balance).

d. **Dissolved Oxygen.** Dissolved oxygen monitoring to be performed between the hours of 8:00 a.m. and 10:00 a.m., as feasible(e.g., as staffing resources allow).

3. The Discharger shall monitor wastewater discharged to Ponds B and C, measured at LND-002, as follows:

   a. The Discharger shall keep a log related to the use of Ponds B and C. In particular the Discharger shall record the following when any type of wastewater is directed Ponds B and C;

      - The date(s) when the wastewater is directed to Ponds B and/or C;
      - The type(s) of wastewater (e.g., secondary or tertiary treated) directed to Ponds B and/or C;
      - The total volume of wastewater directed to Ponds B and/or C;
      - The freeboard available in Ponds B and C.

   b. The log for Ponds B and C shall be submitted with the monthly self-monitoring reports required in Section X.B of the Monitoring and Reporting Program (Attachment E).

## VII. RECYCLING MONITORING REQUIREMENTS- NOT APPLICABLE

## VIII. RECEIVING WATER MONITORING REQUIREMENTS

### A. Monitoring Location RSW-001 and RSW-002

1. When discharging to the North Fork Calaveras River, the Discharger shall monitor at RSW-001 and RSW-002 in accordance with Table E-6 and the testing requirements described in section VIII.A.2 below:

**Table E-6. Receiving Water Monitoring Requirements**

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Flow | MGD | Meter | 1/Day |
| Dilution Factor | River Flow / Effluent Flow | Calculate | 1/Day |
| pH | standard units | Grab | 1/Week |
| Dissolved Oxygen | mg/L | Grab | 1/Week |
| Electrical Conductivity @ 25° C | µmhos/cm | Grab | 1/Month |
| Hardness (as CaCO3) | mg/L | Grab | 1/Month |

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Temperature | °F | Grab | 1/Week |
| Turbidity | NTU | Grab | 1/Week |

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. **Flow.** Monitoring required at Monitoring Location RSW-001 only.

    b. **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.

    c. **Applicable to all parameters**. Applicable to all parameters. A hand-held field meter may be used, 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. **Unsafe Conditions.** If Monitoring Locations RSW-001 and RSW-002 are inaccessible due to unsafe conditions, monitoring is not required. If monitoring is not conducted due to unsafe conditions, the Discharger shall so state in the SMR.

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 or when discharging to the North Fork Calaveras 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.

### B. Monitoring Location GW-001, GW-002, GW-003, GWN-001, GWN-002, and GWN-003

1. The Discharger shall conduct groundwater monitoring at GW-001, GW-002, GW-003, GWN-001, GWN-002, and GWN-003 in accordance with Table E-7 and the testing requirements described in section VIII.C.2 below:

**Table E-7. Groundwater Monitoring Requirements**

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Depth to Groundwater | ±0.01 feet | Measurement | 1/Quarter |
| Groundwater Elevation | ±0.01 feet | Calculated | 1/Quarter |
| Gradient | feet/feet | Calculated | 1/Quarter |
| Gradient Direction | degrees | Calculated | 1/Quarter |
| Electrical Conductivity @ 25°C | µmhos/cm | Grab | 1/Quarter |
| Total Dissolved Solids | mg/L | Grab | 1/Quarter |
| pH | standard units | Grab | 1/Quarter |
| Total Coliform Organisms | MPN/100 mL | Grab | 1/Quarter |
| Total Nitrogen | mg/L | Grab | 1/Quarter |
| Nitrate (as N) | mg/L | Grab | 1/Quarter |
| Standard Minerals | µg/L | Grab | 1/Year |
| Trihalomethanes | µg/L | Grab | 1/Quarter |

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

   b. **Prior to sampling**, the groundwater elevations shall be measured, and the wells shall be purged of at least three well volumes until temperature, pH, and electrical conductivity have stabilized. Depth to groundwater shall be measured to the nearest 0.01 feet.

c. **Groundwater elevation** shall be determined based on depth-to-water measurements from a surveyed measuring point elevation on the well. The groundwater elevation shall be used to calculate the direction and gradient of groundwater flow, which must be reported.

d. **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.

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

f. **Trihalomethanes** shall include the following: chloroform, bromoform, chlorodibromomethane, and dichlorobromomethane.

## IX. OTHER MONITORING REQUIREMENTS

### A. Dedicated Land Disposal Area

1. Monitoring of the DLDA shall be conducted as described in Table E-8 when the disposal areas are used, and the results shall be included in the monthly monitoring report. Evidence of erosion, field saturation, irrigation runoff, or the presence of nuisance conditions shall be noted in the report. Effluent monitoring results shall be used in calculations to determine loading rates at the DLDA

**Table E-8. Dedicated Land Disposal Area Monitoring Requirements.**

| Parameter | Units | Sample Type | Minimum Sampling Frequency |
|---|---|---|---|
| Flow to each DLDA | Gallons | Continuous | 1/Day |
| Acreage Applied | Acres | Calculated | 1/Day |
| Water Application Rate | Inches/day | Calculated | 1/Day |
| Rainfall | Inches | Observation | 1/Day |
| Total Nitrogen Loading Rate | lbs/ac/month | Calculated | 1/Month |
| DLDA Berm Condition | NA | Observation | 1/Week |

2. **Table E-8 Testing Requirements**. The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-9:

a. Rainfall data collected from the weather station that is nearest to the DLDA or a properly maintained on-site rain gauge.

b. At least once per week when the DLDA is being used, the DLDA shall be inspected to identify any equipment malfunction or other circumstances that might allow irrigation runoff to leave the irrigation area and/or create ponding conditions that violate the Waste Discharge Requirements contained in this Order. A weekly log of each inspection shall be kept at the Facility and be submitted with the monthly monitoring reports.

## B. Biosolids

1. **Monitoring Location BIO-001 – Not Applicable**

## C. Effluent and Receiving Water Characterization

1. **Monitoring Frequency**

   a. **Effluent Sampling.** Samples shall be collected from the effluent (Monitoring Location EFF-001) twice during the permit term, once during 2025 and once during 2026

   b. **Receiving Water Sampling.** Samples shall be collected from the upstream receiving water (Monitoring Location RSW-001) twice during the permit term, once during 2025 and once during 2026.

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-9.

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

**Table E-9. Effluent and Receiving Water Characterization Monitoring**

**VOLATILE ORGANICS**

| CTR Number | Volatile Organic Parameters | CAS Number | Units | Effluent Sample Type |
|---|---|---|---|---|
| 25 | 2-Chloroethyl vinyl Ether | 110-75-8 | µg/L | Grab |
| 17 | Acrolein | 107-02-8 | µg/L | Grab |
| 18 | Acrylonitrile | 107-13-1 | µg/L | Grab |
| 19 | Benzene | 71-43-2 | µg/L | Grab |
| 20 | Bromoform | 75-25-2 | µg/L | Grab |
| 21 | Carbon Tetrachloride | 56-23-5 | µg/L | Grab |
| 22 | Chlorobenzene | 108-90-7 | µg/L | Grab |
| 24 | Chloroethane | 75-00-3 | µg/L | Grab |
| 26 | Chloroform | 67-66-3 | µg/L | Grab |
| 35 | Methyl Chloride | 74-87-3 | µg/L | Grab |
| 23 | Dibromochloromethane | 124-48-1 | µg/L | Grab |
| 27 | Dichlorobromomethane | 75-27-4 | µg/L | Grab |
| 36 | Methylene Chloride | 75-09-2 | µg/L | Grab |
| 33 | Ethylbenzene | 100-41-4 | µg/L | Grab |
| 89 | Hexachlorobutadiene | 87-68-3 | µg/L | Grab |
| 34 | Methyl Bromide (Bromomethane) | 74-83-9 | µg/L | Grab |
| 94 | Naphthalene | 91-20-3 | µg/L | Grab |
| 38 | Tetrachloroethylene (PCE) | 127-18-4 | µg/L | Grab |
| 39 | Toluene | 108-88-3 | µg/L | Grab |
| 40 | trans-1,2-Dichloroethylene | 156-60-5 | µg/L | Grab |
| 43 | Trichloroethylene (TCE) | 79-01-6 | µg/L | Grab |
| 44 | Vinyl Chloride | 75-01-4 | µg/L | Grab |
| 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 |
| 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 |

| CTR Number | Semi-Organic Volatile Parameters | CAS Number | Units | Effluent Sample Type |
|---|---|---|---|---|
| 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 (III) | 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 |

| CTR Number | Non-Metal/Mineral Parameters | CAS Number | Units | Effluent Sample Type |
|---|---|---|---|---|
| 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 |
| 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 | -- | ?C | 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 |
| 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 |

5. **Table E-9 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-11:
    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 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.
    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-11.
    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. **2,3,7,8-TCDD (Dioxin)**. Only one sample is required in the effluent and receiving water for 2,3,7,8-TCDD (Dioxin).

# X. REPORTING REQUIREMENTS

## A. General Monitoring and Reporting Requirements

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

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

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

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

## B. Self-Monitoring Reports (SMRs)

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

2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly 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-10. Monitoring Periods and Reporting Schedule**

| Sampling Frequency | Monitoring Period Begins On | Monitoring Period | SMR Due Date |
|---|---|---|---|
| Continuous | Permit effective date | All | Submit with monthly SMR |
| 1/Day | Permit effective date | (Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling. | Submit with monthly SMR |
| 1/Week | Permit effective date | Sunday through Saturday | Submit with monthly SMR |
| 1/Month | Permit effective date | 1st day of calendar month through last day of calendar month | First day of second calendar month following month of sampling |
| 1/Quarter | Permit effective date | 1 January through 31 March<br>1 April through 30 June<br>1 July through 30 September<br>1 October through 31 December | 1 May<br>1 August<br>1 November<br>1 February of following year |
| 1/Year | Permit effective date | 1 January through 31 December | 1 February of following year |

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

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

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

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

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

(low to high), or any other means considered appropriate by the laboratory.

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

d. Dischargers are to instruct laboratories to establish calibration standards so that the Minimum Level (ML) value (or its equivalent if there is differential treatment of samples relative to calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Multiple Sample Data**. When determining compliance with an AMEL, AWEL, or MDEL for priority and non-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" (electrical conductivity) 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.

c. **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 Limitations and Discharge Requirements.

d. **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.

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

f. **Turbidity Receiving Water Limitations**. The Discharger shall calculate and report the turbidity increase in the receiving water applicable to the natural turbidity condition specified in section V.A.17.a-e. of the Waste Discharge Requirements.

g. **Temperature Receiving Water Limitations**. 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. 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:

    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.

f. Summary of annual influent flow volume, annual effluent flow volume discharged to surface water, annual effluent discharged to land and annual effluent flow volume discharged to Pond D. The Discharger shall estimate the total annual volume disposed through percolation into the groundwater and evaporation, including calculations to determine the volume.

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:

   a. Report of Waste Discharge (Form 200);

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

   c. NPDES Form 2S;

   d. **Salinity Evaluation and Minimization Plan.** The Discharger shall evaluate the effectiveness of the salinity evaluation and minimization plan and provide a summary with the Report of Waste Discharge; and

   e. **Mixing Zone Requests.** A mixing zone analysis for constituents the Discharger is requesting the continuation of dilution credits and mixing zones in the calculation of water quality-based effluent limits (. This requirement may be fulfilled with existing mixing zone analysis approved by the Central Valley Water Board.

   f. **Sensitive Species Re-Screening**.

4. **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 and subsequent table notes below summarize all technical reports required by this Order and the due dates for submittal. All technical reports shall be submitted electronically via CIWQS submittal. Technical reports should be uploaded as a PDF, Microsoft Word, or Microsoft Excel file attachment.

**Table E-11. Technical Reports**

| Report # | Technical Report | Due Date | CIWQS Report Name |
|---|---|---|---|
| 1 | Report of Waste Discharge | 31 January 2028 | ROWD |
| 2 | Analytical Methods Report | 1 June 2024 | MRP X.D.1 |
| 3 | Analytical Methods Report Certification | 90 days prior to Characterization Monitoring | MRP IX.C.3. |
| 4 | Annual Operations Report | 1 February 2024 | MRP X.D.3 |
| 5 | Annual Operations Report | 1 February 2025 | MRP X.D.3 |
| 6 | Annual Operations Report | 1 February 2026 | MRP X.D.3 |
| 7 | Annual Operations Report | 1 February 2027 | MRP X.D.3 |
| 8 | Annual Operations Report | 1 February 2028 | MRP X.D.3 |
| 9 | Groundwater Quality Assessment Study | 31 January 2028 | WDR VI.C.2.a |

# ATTACHMENT F – FACT SHEET

## Table of Contents

**Tables**

# ATTACHMENT F – FACT SHEET

As described in section II.B 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**

| | |
|---|---|
| **WDID** | 5B050103001 |
| **CIWQS Facility Place ID** | 255180 |
| **Discharger** | San Andreas Sanitary District |
| **Name of Facility** | Wastewater Treatment Plant |
| **Facility Address** | 675 Gold Oak Road<br>San Andreas, CA 95249<br>Calaveras County |
| **Facility Contact, Title and Phone** | Hugh Logan, District Manager, (209)754-3281 |
| **Authorized Person to Sign and Submit Reports** | Hugh Logan, District Manager, (209)754-3281 |
| **Mailing Address** | P.O. Box 1630 San Andreas, CA 95249 |
| **Billing Address** | Same as mailing address |
| **Type of Facility** | Publicly Owned Treatment Works (POTW) |
| **Major or Minor Facility** | Minor |
| **Threat to Water Quality** | 1 |
| **Complexity** | A |
| **Pretreatment Program** | No |
| **Recycling Requirements** | Not Applicable |
| **Facility Permitted Flow** | 1.5 million gallons per day (MGD) |

| | |
|---|---|
| **Facility Design Flow** | 0.32 MGD (average dry weather design flow); 1.9 MGD (peak hour wet weather flow) (see table note) |
| **Watershed** | Upper Calaveras Watershed |
| **Receiving Water** | North Fork Calaveras River |
| **Receiving Water Type** | Inland surface water |

**Table F-1 Notes**: Excludes capacity of the High Flow Treatment System

**A**. San Andreas Sanitary District (hereinafter Discharger) is the owner and operator of the San Andreas Sanitary District Wastewater Treatment Plant (hereinafter Facility), a Publicly Owned Treatment Works (POTW).

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

**B**. The Facility discharges wastewater to land on the Dedicated Land Disposal Area (DLDA), a Discharger owned property, and to the North Fork Calaveras River, a water of the United States, tributary to New Hogan Reservoir within Upper Calaveras Watershed. The Discharger was previously regulated by Order R5-2014-0104-01 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079464 adopted on 8 August 2014 and expires on 30 September 2019. 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 November 2022. The application was deemed complete on 12 June 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, 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 San Andreas and serves a population of approximately 2,200 and has no industrial users. The design average dry weather flow (ADWF) capacity of the Facility is 0.32 million gallons per day (MGD) and the peak hour flow is 1.9 MGD, excluding the capacity of the High Flow Treatment System (HFTS).

### A. Description of Wastewater and Biosolids Treatment and Controls

The Facility treatment system consists of one mechanical screen, a primary clarifier, a trickling filter, a two-train nitrifying activated sludge reactor basin, a secondary clarifier, disk filters, and chlorine disinfection. The treatment system also includes ancillary systems for pH adjustment and chemical feed for disinfection and de-chlorination. For effluent discharge to North Fork Calaveras River, all unit processes are needed, except for the trickling filter. For discharge to the DLDA, no nitrification is required. Therefore, the reactor basins, disk filters, pH control system, and de-chlorination can be taken offline to reduce costs and salt addition to the effluent. Solids removed are treated by aerobic digestion, dewatered by filter press, and disposed of by a contractor. The Facility has two storm water storage ponds.

The foregoing treatment system has a peak hour, day, and month treatment flow limits of 1.9, 1.3, and 0.8 MGD, respectively. The ADWF capacity of the Facility is 0.32 MGD. Facility influent flows can exceed 1.9 MGD under severe precipitation conditions. A portion of high influent flows (e.g., above the foregoing limits) may be treated by the HFTS, which dischargers directly to Pond D, which is a part of the DLDA. The HFTS consists of a separate chlorination point and contact device downstream of the mechanical screen.

The DLDA consists of unlined effluent storage Pond D and approximately 30 acres (seen in red in Figure B-2, Attachment B). The DLDA may be expanded, as needed, into the blue areas shown in Figure B-2, Attachment B. Effluent is applied to the DLDA land via sprinklers. The Discharger submitted a 1-in-100 Year Season Water Balance to the Central Valley Water Board that forecasts the current sprinkler disposal system and Pond D will be sufficient to meet the effluent storage and disposal needs of the Facility when conditions in the North Fork Calaveras River do not provide sufficient dilution to facilitate surface water discharge.

The primary method of effluent disposal is sprinkler irrigation to of DLDA land. However, under high and/or persistent precipitation events, the DLDA's shallow soils become saturated, and therefore, cannot absorb effluent. During these events, effluent is stored in Pond D and/or discharged to the North Fork Calaveras River in quantities not exceeding a dilution ratio of 20:1 (receiving water to effluent). The outfall to the North Fork Calaveras River consists of a 48-foot cross-stream diffuser directly upstream of a concrete ford.

The Discharger treats primary sludge by means of digestion in the aerobic digester, then dewatering by belt filter press. Waste Activated Sludge (WAS) is also digested

in the aerobic digester. The aerobic digester is designed to reduce the specific oxygen uptake rate (SOUR) to less than 1.5 mg/L/hour. Dewatered sludge is placed on the asphalt lined drying pad during dry-weather conditions to reduce the volume of biosolids required for disposal. The Discharger currently contracts with Synagro, a sustainable facilities management and environmental services provider, for biosolids disposal. Synagro typically receives biosolids from the Facility 2-3 times/year. Biosolids are applied to land by Synagro within six hours of removal to achieve adequate vector attraction reduction. During any rainy season, biosolids are stored under cover at the drying pad to prevent contaminated runoff. The District plans to construct a new biosolids storage area closer to the belt press building for use during the rainy season. This new area will reduce the labor required to manage biosolids during the rainy season. Transportation and disposal/reuse of the biosolids is regulated by USEPA under 40 C.F.R. part 503.

Storm water from the paved portion of the Facility is collected in Ponds B and C, where it either evaporates or is conveyed to Pond D and discharged to the DLDA. Storm water from the non-paved portion of the Facility is not collected but is conveyed to San Andreas Creek through a system of storm water collection ditches. Ponds B and C also accept tertiary or secondary wastewater during periods of operational maintenance. All wastewater is chlorinated prior to discharge to the ponds.

Water in Pond D can be returned to the treatment system for retreatment and discharge to the North Fork Calaveras River, if/when appropriate. Effluent storage is the most limiting aspect of this Facility; therefore, the Facility is operated to minimize the accumulation of water in Pond D.

## B. Discharge Points and Receiving Waters

1. The Facility is located in Section 18, T4N, R12E, MDB&M, as shown in Attachment B, a part of this Order.

2. Treated municipal wastewater is discharged at Discharge Point No. 001 to the North Fork Calaveras River, a water of the United States and a tributary to the New Hogan Reservoir at a point latitude 38° 12’ 39” N and longitude 120° 42’ 20” W.

3. Treated municipal wastewater is discharged to the DLDA through the use of spray irrigation. See Attachment B for a map of the DLDA.

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

Effluent limitations contained in Order R5-2018-0075 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from the term of Order R5-2018-0075 are as follows:

**Table F-2. Historic Effluent Limitations (EFF-001)**

| Parameter | Units | Historic Effluent Limitations | Highest Average Monthly Discharge | Highest Average Weekly Discharge | Highest Daily Discharge |
|---|---|---|---|---|---|
| Flow | MGD | 1.6 | | | |
| Biochemical Oxygen Demand (5-day @ 20°C) | mg/L | AMEL 30<br>AWEL 45<br>MDEL 60 | 6.6 | 8.6 | 8.6 |
| pH | standard units | 6.5 - 8.5 | -- | -- | 7.5 |
| Total Suspended Solids (TSS) | mg/L | AMEL 30<br>AWEL 45<br>MDEL 60 | 4.0 | 6.7 | 6.7 |
| Cyanide, Total (as CN) | µg/L | AMEL 24<br>MDEL 47 | 11 | -- | 11 |
| Ammonia Nitrogen, Total (as N) | mg/L | AMEL 5.1<br>AWEL 11 | 4.1 | | 7.2 |
| Total Residual Chlorine | mg/L | 4-Day Avg. 0.011 mg/L<br>1-Hour Avg. 0.019 mg/L | -- | -- | 0.01 |
| Total Coliform Organisms | MPN/100 ml | 7-Day Median 23<br>Once/30-Day 240 | -- | 170 | 170 |
| Electrical Conductivity (@ 25° C) | µmhos/ cm | Seasonal Avg. 700 | 693 | -- | -- |

**Table F-2 Notes:**

1. Mass Limitations lbs/day: The annual average mass discharge shall not exceed 380 lbs/day. Based upon a design treatment capacity of 1.5 MGD.

2. BOD and TSS: The average monthly percent removal of 5-day biochemical oxygen demand (BOD5) and total suspended solids (TSS) shall not be less than 85 percent.

Land discharge specifications contained in the existing Order for discharges to the DLDA (Monitoring Location LND-001) and representative monitoring data from the term of the previous Order are as follows:

**Table F-3. Historic Effluent Limitations (LND-001)**

| Parameter | Units | Historic Effluent Limitations | Highest Average Monthly Discharge | Highest Average Weekly Discharge | Highest Daily Discharge |
|---|---|---|---|---|---|
| Biochemical Oxygen | mg/L | AMEL 40<br>MDEL 80 | 7.8 | | 15 |

| Parameter | Units | Historic Effluent Limitations | Highest Average Monthly Discharge | Highest Average Weekly Discharge | Highest Daily Discharge |
|---|---|---|---|---|---|
| Demand (5-day @ 20°C) | | | | | |
| Total Coliform Organisms | MPN/100 ml | 7-Day Median 23<br>Once/30-Day 240 | 11 | | 130 |

**Table F-3 Notes:**

1. Mass Limitations lbs/day: The annual average mass discharge shall not exceed 380 lbs/day. Based upon a design treatment capacity of 1.5 MGD.

2. BOD and TSS: The average monthly percent removal of 5-day biochemical oxygen demand (BOD5) and total suspended solids (TSS) shall not be less than 85 percent.

### D. Compliance Summary

Since the adoption of Order R5-2018-0075 the Discharger has not received Mandatory Minimum Penalties (MMPs).

### E. Planned Changes

The Discharger is working on an expansion of the chlorine contact basin, replacing the antiquated headworks, and upgrading the irrigation pumping station (both mechanical and electrical components). Other planned changes include constructing a new biosolids storage area closer to the belt press building for use during the rainy season.

## III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

### A. Legal Authorities

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

### B. California Environmental Quality Act (CEQA)

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

Division 13 of the Public Resources Code. Additionally, the adoption of land discharge for the Facility constitutes permitting of an existing facility that is categorically exempt from the provisions of CEQA pursuant to CCR, title 14, section 15301.

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

1. **Water Quality Control Plans**. 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 Water Quality Control Plan, Fourth Edition (Revised July 2016), (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. Beneficial uses applicable to the North Fork Calaveras River are as follows:

**Table F-4 Basin Plan Beneficial Uses**

| Discharge Point | Receiving Water Name | Beneficial Use(s) |
|---|---|---|
| 001 | North Fork Calaveras River | Existing:<br>Water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD)'migration of aquatic organisms (MIGR); spawning, reproduction, and/or early development (SPWN); and wildlife habitat (WILD) |

   b. The Basin Plan does not apply the MUN and AGR beneficial uses to the North Fork Calaveras River which is contained in the surface water body of "Source to New Hogan Reservoir." Therefore, this Order does not include effluent limits for nitrate+nitrite or the CTR THMs.

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, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires

compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. 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. Use the following finding for storm water requirements for a POTW.

9. **Storm Water Requirements**. USEPA promulgated federal regulations for storm water on 16 November 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the storm water program and are obligated to comply with the federal regulations. The State Water Board does not require wastewater treatment facilities with design flows less than 1 MGD to obtain coverage under the Industrial Storm water General Order. Therefore, this Order does not regulate storm water.

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 2022-0103-DWQ (General Order) on 6 December 2022. The State Water Board amended the MRP for the General Order through Order WQ 2013-0058-EXEC on 6 August 2013. 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 2022-0103-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, as amended by State Water Board Order WQ 2013-0058-EXEC and any subsequent order.

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 11 October 2011 USEPA gave final approval to California's 2008-2010 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 North Fork Calaveras River is not specifically listed in the 303(d) list of impaired waters. However, the North Fork Calaveras River is a tributary of New Hogan Reservoir, a water body of the United States, which is listed on the 303(d) list of impaired water bodies. New Hogan Reservoir is listed on the 303(d) list for mercury.

2. Total Maximum Daily Loads (TMDLs). Table F-4, below, identifies the 303(d) listings and any applicable TMDLs. At the time of this permit renewal, there are no approved TMDL's with wasteload allocations that apply to this Facility.

**Table F-5. 303 (d) List for New Hogan Reservoir**

| Pollutant | Potential Sources | TMDL Status |
|---|---|---|
| Mercury | Resource Extraction | Expected Completion 2027 |

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

## 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, California Code of Regulations (CCR), section 20005 et seq (hereafter Title 27). The exemption, pursuant to Title 27 CCR section 20090(a), is based on the following:

   a. **Storage Pond D**. Title 27 section 20090(a) contains a sewage exemption, which contains a conditional exemption for "Discharges of domestic sewage or treated effluent which are regulated by WDR's issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDR's have been waived, and which are consistent with applicable water quality objectives…" and an unconditional exemption for "treatment or storage facilities associated with municipal wastewater treatment plants".

      The State Water Board's recent revision to the decision on the City of Lodi petition indicates that the unconditional exemption covers post-treatment storage facilities that are "associated with" municipal wastewater treatment plants if the facilities (1) are used to store treated municipal wastewater prior to ultimate disposal or reuse, and (2) do not receive any other wastes other than on-site storm water flows if authorized by the State Water Board or the applicable regional water quality control board, and (3) are under the control of the municipal treatment plant. Facilities that are subject to the municipal wastewater treatment plant waste discharge requirements, water recycling requirements, or other permitting mechanism issued to the municipal wastewater treatment plant owner or operator are considered to be "under the control" of the municipal treatment plant.

      Pond D is used to store treated wastewater prior to application to the DLDA through sprinkler application. Additionally, Pond D does not receive any other wastes aside from treated wastewater and is under control of the Facility, which is subject to the requirements of this Order. Therefore, Pond D is exempt from the requirements of Title 27, pursuant to Title 27 CCR section 20090(a).

   b. **Land Application**. The Discharger disposes of treated wastewater by land application to the DLDA through the use of sprinkler application. Title 27 section 20090(a) contains a sewage exemption, which contains a conditional exemption for "Discharges of domestic sewage or treated effluent which are regulated by WDR's issued pursuant to Chapter 9, Division 3, Title 23 of this code, or for which WDR's have been waived, and which are consistent with applicable water quality objectives…" Discharge of treated wastewater to the DLDA is regulated by the Waste Discharge Requirements of this Order, and is consistent with applicable

water quality objectives, therefore, the discharge of treated wastewater to the DLDA is exempt from Title 27 pursuant to Section 20090(a).

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

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

e. 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 is based on Water Code section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance.

4. **Prohibition III.D (No discharge of hazardous waste)**. This prohibition is based on California Code of Regulations, title 22, section 66261.1 et seq, that prohibits discharge of hazardous waste.

5. **Prohibition III.E (No discharge greater than 1.5 MGD)**. The Facility was designed to provide secondary treatment for up to an average dry weather design flow of 0.4 MGD and a peak hour wet weather flow of 1.9 MGD. Therefore, this Order contains a prohibition of flows greater than 1.5 MGD.

6. **Prohibition III.F**. In a letter to the Central Valley Water Board dated 8 April 1999, California Department of Drinking Water (DDW) indicated it would consider wastewater discharged to water bodies with identified beneficial uses of contact recreation and where the wastewater receives dilution of more than 20:1 to be adequately disinfected if the effluent coliform concentration does not exceed 23 MPN/100 mL as a 7-day median and if the effluent coliform concentration does not exceed 240 MPN/100 mL more than once in any 30 day period (Disinfected Secondary). Although the Facility provides tertiary filtration, this Order includes disinfection requirements equivalent to the Disinfected Secondary requirements for total coliform organisms discussed above. 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. Title 22 is not directly applicable to surface waters; however, the Regional Water Board finds that it is appropriate to apply an equivalent level of treatment to that required by DDW's reclamation criteria for receiving waters used for contact recreation purposes. The Discharger is currently able to provide an equivalent level of treatment required by DPH's reclamation criteria for discharges that do not receive 20:1 dilution.

## B. Technology-Based Effluent Limitations

### 1. Scope and Authority

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

Regulations promulgated in 40 C.F.R. section 125.3(a)(1) require technology-based effluent limitations for municipal Dischargers to be placed in NPDES

permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTW's [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 biochemical oxygen demand (BOD5), total suspended solids (TSS), and pH.

**2. Applicable Technology-Based Effluent Limitations**

a. **$BOD_5$ and TSS.** Federal regulations at 40 C.F.R. part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for $BOD_5$ and TSS. A daily maximum effluent limitation for $BOD_5$ and TSS is also included in the Order to ensure that the treatment works are not organically overloaded and operate in accordance with design capabilities. In addition, 40 C.F.R. section 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. This Order contains a limitation requiring an average of 85 percent removal of $BOD_5$ and TSS over each calendar month.

c. **pH.** The secondary treatment regulations at 40 C.F.R. part 133 also require that pH be maintained between 6.0 and 9.0 standard units. This Order, however, requires more stringent WQBELs for pH to comply with the Basin Plan's water quality objectives for pH.

**Summary of Technology-based Effluent Limitations**
**Discharge Point 001**

**Table F-6. Summary of Technology-based Effluent Limitations**

| Parameter | Units | Effluent Limitations |
|---|---|---|
| Biochemical Oxygen Demand (5-day @ 20°C) | mg/L | AMEL 30<br>AWEL 45<br>(see table note 2) |
| Total Suspended Solids | mg/L | AMEL 30<br>AWEL 45 |

| Parameter | Units | Effluent Limitations |
|---|---|---|
| | | (see table note 2) |
| pH | Standard units | Instantaneous Max 9.0<br>Instantaneous Min 6.0<br>(see table note 3) |

**Table F-5 Notes:**

1. Percent Removal. The average monthly percent removal of BOD5 and TSS shall not be less than 85 percent.
2. No WQBEL's are applicable; therefore, TBELs are implemented in this Order.
3. More stringent WQBELs for pH are applicable and are established as final effluent limitations in this Order (see section IV.C.3.c of this Fact Sheet).

## C. Water Quality-Based Effluent Limitations (WQBELs)

### 1. Scope and Authority

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

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

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

Finally, 40 C.F.R. section 122(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 01 January 2020 through 31 January 2023, which includes effluent and ambient background data submitted in SMRs, the ROWD, Effluent and Receiving Water Characterizations Study, and the North Fork Calaveras River Dilution/Mixing Zone Study.

c. **Water Effects Ratio Study For Copper**. This Order allows for a site-specific water effects ratio (WER) of 7.55 to calculate the aquatic life

criteria for copper based on the Discharger's Copper Water Effects Ratio Study (August 2013). The Discharger's study followed U.S. EPA's 2001 Streamlined Water-Effect Ratio Procedure for Discharges of Copper (EPA 822-R-01-005). This Order calculates the aquatic life criteria for copper using a total recoverable WER of 7.55. A discussion on the calculation of the criteria for hardness dependent metals, such as copper, can be found in Section IV.C.2.f. below.

d. **Assimilative Capacity/Mixing Zone.**

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

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

For Priority Pollutants, the SIP supersedes the Basin Plan mixing zone provisions. Section 1.4.2 of the SIP states, in part, "…with the exception of effluent limitations derived from TMDLs, in establishing and determining compliance with effluent limitations for applicable human health, acute aquatic life, or chronic aquatic life priority pollutant

criteria/objectives or the toxicity objective for aquatic life protection in a basin plan, the Regional Board may grant mixing zones and dilution credits to dischargers…The applicable priority pollutant criteria and objectives are to be met through a water body except within any mixing zone granted by the Regional Board. ***The allowance of mixing zones is discretionary and shall be determined on a discharge-by-discharge basis.*** The Regional Board may consider allowing mixing zones and dilution credits only for discharges with a physically identifiable point of discharge that is regulated through an NPDES permit issued by the Regional Board." [emphasis added]

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

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

A mixing zone shall not:

1. *compromise the integrity of the entire water body;*
2. *cause acutely toxic conditions to aquatic life passing 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.****"*

ii. **Dilution/Mixing Zone Study Results.** The Discharger provided the North Fork Calaveras River Dilution/Mixing Zone Study on 24 January 2018 providing the results of a field dilution/mixing zone study using effluent EC as a tracer.

During the implementation of the field study, the river flow rate, measured downstream of effluent discharge, was 7.9 MGD, which is within the typical range of river flow conditions under which effluent discharge occurs. The Discharger's effluent discharge flow rate to the North Fork Calaveras River is controlled by the Discharger's operations staff. For this study, the Discharger set the effluent flow rate to target a 20:1 river dilution ratio. During the time of field study implementation, the average effluent discharge rate, as recorded by the Discharger's automated data recording system, was 0.39 MGD.

The field study was conducted during the discharge of Facility effluent into the North Fork Calaveras River at a dilution ratio of 20:1 (receiving water flow: effluent flow), as measured downstream of the outfall. Effluent EC was measured from the District's effluent sampling port within the Facility's effluent control building, upstream of the outfall to the North Fork Calaveras River. The background river EC was measured mid-stream, mid-depth, upstream of the effluent outfall. The in-stream EC, resulting from discharge of effluent at a 20:1 dilution ratio, was measured on the concrete ford downstream of the effluent outfall, at various transects, using a calibrated hand-held YSI field EC meter. In-stream EC readings, obtained downstream of the effluent outfall, are used to approximate the percentage of effluent in the river (i.e., the dilution ratio and extent of dispersion) at cross-sectional locations at each monitored transect. River EC measurements, downstream of the outfall, obtained during this field study were limited to the area of the concrete ford the expected mixing zone based the Discharger's previous work, and a location with limited aquatic habitat.

To obtain the data necessary to determine the mixing and dilution ratios of effluent with river water, mid-depth EC measurements were taken on a pre-determined grid (3' intervals) on the concrete ford immediately downstream of the effluent outfall structure. Using the EC data collected, a dilution ratio is determined at each monitored location using the following formula:

$$\text{Dilution (parts river to 1 part effluent)} = \frac{(\text{Effluent EC} - \text{Downstream EC})}{(\text{Downstream EC} - \text{Background EC})}$$¶

The EC/dilution ratio data are used to identify 1) an aquatic life zone of passage and 2) the edges of the maximum aquatic life mixing zone.

The effluent outfall diffuser is located approximately one mile northwest of the WWTP in the North Fork Calaveras River. The effluent outfall is located immediately upstream of the historic concrete ford that crosses the river. The river is a shallow gradient stream at this location. The river study area was limited to the portion of the concrete ford covered by flowing water. The river depth on the concrete ford varied between 1.25 and 6 inches. Data points were collected at seven cross-stream transects downstream from the outfall (spaced at 3 feet on-center). At each monitoring transect, data were collected at three-foot intervals.

Based on the results of the field study, conducted under typical effluent discharge flow conditions, a minimum dilution ratio of 6.4:1 was observed at the monitoring transect immediately downstream of the outfall diffuser box. Thus, the 6:1 dilution ratio mixing zone boundary is located below the surface of the cobble-filled outfall diffuser box. The edge of the 12:1 dilution ratio mixing zone is at the downstream edge of the concrete ford (16-18 feet downstream from the effluent diffuser box).

iii. **Evaluation of Available Dilution for Acute and Chronic Aquatic Life Criteria (Cyanide and Ammonia).** The SIP requires a mixing zone must be as small as practicable and comply with eleven (11) prohibitions under section 1.4.2.2.A. Based on Central Valley Water Board staff evaluation, the mixing zone extends up to 18 feet downstream of the Facility's outfall and a maximum available dilution credit of 12:1 meets the eleven prohibitions of the SIP as follows:

(1) *Shall not compromise the integrity of the entire waterbody* – The TSD states that, "*If the total area affected by elevated concentrations within all mixing zones combined is small compared to the total area of a waterbody (such as a river segment), then mixing zones are likely to have little effect on the integrity of the waterbody as a whole, provided that the mixing zone does not impinge on unique or critical habitats*." This criterion is met by establishing effluent limitations via the SIP procedure such that no water quality criteria are violated because of the effluent discharge outside of the small portion of the receiving water defined by the mixing zone. The mixing zone located on the concrete ford is a small fraction of the overall length of the North Fork Calaveras River, therefore, the mixing zone does not compromise the integrity of the entire waterbody.

(2) Shall not cause acutely toxic conditions to aquatic life passing through the mixing zone – This criterion is met via the effluent

limitation, contained in the Order, that survival of aquatic organisms in 96-hour whole effluent (no dilution) bioassays shall be no less than:

- 70 percent, minimum for any one bioassay; and
- 90 percent, median for any three consecutive bioassays.

The effluent, without dilution (i.e., 100% effluent), is not permitted to be acutely toxic to aquatic life. Therefore, the effluent without dilution cannot cause acute toxic conditions in the North Fork Calaveras River. The effluent discharge will be undiluted only at the actual effluent discharge point. The effluent discharge point was selected to maximize the rate of dilution of one part effluent into at least 20 parts stream flow. Only a small area of the stream (immediately downstream of the outfall) will have elevated effluent concentrations and by definition, the stream flow on either side of the effluent discharge point will have little to no effluent. The areas of the stream with little to no effluent provide zones of passage around the actual effluent discharge point for any aquatic life that is disposed to avoid higher concentrations of effluent for any reason. As part of the study, the concentration gradients around the discharge point were measured (using EC as the tracer) to quantify the zone of higher effluent concentration and the zones of passage around the effluent discharge point. The observed acute mixing zone is shorter in length than the distance aquatic life would be expected to migrate up or down in this stream over a four-day (96-hour) period. Therefore, the four-day whole effluent acute toxicity bioassay is believed to be a conservative monitor of whether compliance with this mixing zone criterion is being achieved.

(3) Shall not restrict the passage of aquatic life – This criterion is met by complying with the acute lethality requirement discussed previously, and by the fact that the mid-stream effluent discharge point design provides zones of passage around the effluent discharge point containing little to no effluent. The mixing zone field study measured the EC gradients from the maximum effluent discharge under typical stream flow conditions around and downstream of the effluent discharge point. As discussed previously, the study was conducted under a dilution ratio of 20 parts receiving water for every one part effluent (i.e., 20:1).

Additionally, the effluent outfall structure in no way physically obstructs the passage of any form of aquatic life past the effluent discharge point. Note that the cross-stream diffuser is located just upstream of an 18-foot wide concrete ford which does not support aquatic life under low flow conditions. Further, under low flow conditions, the concrete ford restricts the passage of aquatic life. Also note that a dam is located approximately 1,000 feet

downstream of the outfall diffuser, which restricts upstream migration of aquatic life to those that migrate when river flows occur, and are capable of either jumping the fall created by the dam, or navigating around it.

(4) Shall not adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under federal or State endangered species laws – A search of the California Department of Fish and Wildlife California Natural Diversity Database (CNDDB) and the United States Forest Service Critical Habitat Database found that the North Fork Calaveras River is not critical habitat and does not contain endangered species. Thus, if the SIP procedures for setting effluent limitations are followed, and if the effluent complies with those effluent limitations, then this criterion will be met.

(5) Shall not produce undesirable or nuisance aquatic life; result in floating debris, oil, or scum; produce objectionable color, odor, taste, or turbidity; cause objectionable bottom deposits; cause nuisance – The current discharge has not been shown to result in floating debris, oil, or scum; produce objectionable color, odor, taste, or turbidity; cause objectionable bottom deposits; or cause nuisance. This Order requires end-of-pipe limitations for individual constituents and discharge prohibitions to prevent these conditions from occurring, which will ensure continued compliance with these mixing zone requirements. With these requirements the acute and chronic mixing zones will not produce undesirable or nuisance aquatic life, result in floating debris, oil, or scum; produce objectionable color, odor, taste, or turbidity; cause objectionable bottom deposits; or cause nuisance.

(6) Shall not dominate the receiving water body or overlap a mixing zone from different outfalls – By complying with SIP-derived effluent limitations, the 20:1 minimum dilution ratio (parts receiving water : part effluent), and receiving water limitations contained in this Order, the Discharger's effluent discharge cannot dominate the North Fork Calaveras River as a matter of fact. Additionally, the maximum mixing zone is a small part of the North Fork Calaveras River water body. There are no other existing or planned outfalls discharging to the North Fork Calaveras River in the vicinity of the outfall. Thus, the mixing zone identified in this study will not overlap a mixing zone from any different outfall.

(7) Shall not be allowed at or near any drinking water intake – Compliance with this criterion is satisfied because there are no drinking water intakes on the North Fork Calaveras River at or near the District's effluent discharge point. Additionally, the North Fork Calaveras River does not contain the Basin Plan beneficial use designation MUN.

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

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

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

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

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

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

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

(a) **Ammonia.** The receiving water contains assimilative capacity for ammonia and acute and chronic aquatic life mixing zones for this

constituent meet the mixing zone requirements of the SIP. Section 1.4.2.2 of the SIP requires that, “A mixing zone shall be as small as practicable.”, and Section 1.4.2.2.B requires, “The RWQCB shall deny or significantly limit a mixing zone and dilution credits as necessary to protect beneficial uses, meet the conditions of this Policy, or comply with other regulatory requirements.” Based on a 20:1 (receiving water to effluent) flow requirement for discharge to the North Fork Calaveras River, the maximum dilution credit that could be allocated to the Discharger for ammonia is 12. However, , a chronic aquatic life dilution credit of only 9 is necessary to achieve compliance with WQBEL’s for ammonia. This represents a mixing zone that is as small as practicable for ammonia and that fully complies with the SIP.

This Order is carrying forward the effluent limitations for ammonia from previous Order R5-2018-0075 based on the allowance of the mixing zone. Therefore, no additional use of assimilative capacity is being authorized by this Order. The effluent limits continue to result in the implementation of best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

(b) **Cyanide.** The receiving water contains assimilative capacity for cyanide and acute and chronic aquatic life mixing zones for this constituent meet the mixing zone requirements of the SIP. Section 1.4.2.2 of the SIP requires that, “A mixing zone shall be as small as practicable.”, and Section 1.4.2.2.B requires, “The RWQCB shall deny or significantly limit a mixing zone and dilution credits as necessary to protect beneficial uses, meet the conditions of this Policy, or comply with other regulatory requirements.” Based on a 20:1 (receiving water to effluent) flow requirement for discharge to the North Fork Calaveras River, the maximum dilution credit that could be allocated to the Discharger for cyanide is 12. However, , a chronic aquatic life dilution credit of only 5 is necessary to achieve compliance with WQBEL’s for cyanide. This represents a mixing zone that is as small as practicable for cyanide and that fully complies with the SIP.

This Order is carrying forward the effluent limitations for barium from previous Order R5-2018-0075 based on the allowance of the mixing zone. Therefore, no additional use of assimilative capacity is being authorized by this Order. The effluent limits continue to result in the implementation of best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained. Based on the findings above, this Order grants mixing zones and dilution credits that have been used for the calculation of WQBELs for ammonia and cyanide.

The dimensions of the mixing zones and allowable dilution credits are shown in Table F-5, below. The percent assimilative used was calculated for antidegradation purposes comparing current permitted discharge to the revised permitted discharge with the mixing zone at the minimum required flow ratio of 20:1 (parts receiving water to parts effluent).. The percent assimilative capacity used calculations are summarized in Table F-7, below.

**Table F-7. Mixing Zones and Dilution Credits**

| Parameter | Mixing Zone Type | Maximum Dilution Credit | Allowed Dilution Credit | Mixing Zone Size (feet) |
|---|---|---|---|---|
| Cyanide | Chronic Aquatic Life | 12 | 5 | 36Wx3L |
| Ammonia | Chronic Aquatic Life | 12 | 9 | 36Wx3L |

**Table F-8. Percent Assimilative Capacity Used Calculations**

| Parameter | Cyanide | Ammonia as N |
|---|---|---|
| **Water Quality Objective/ Criteria** | 5 µg/L | 0.7 mg/L |
| **Maximum Background Concentration** | ND | ND |
| **Existing Permitted Condition** | 24 | 5.1 |
| **Revised Permitted Condition** | 24 | 5.1 |
| **Percent Assimilative Capacity Used** | 0% | 0% |

Table F-8 Notes:

1. Existing Permitted Condition is the existing average monthly effluent limitation or applicable water quality objective/criteria if there is currently no effluent limitation.

2. Revised Permitted Condition is new average monthly effluent limitation implemented in this Order with the allowed mixing zone(s).

3. Assimilative Capacity calculated using mass balance equation at the minimum required flow ratio of 20:1 (parts receiving water to parts effluent).

e. **Conversion Factors.** The default U.S. EPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total criteria when developing effluent limitations for CTR metals, including arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc. Furthermore, a conservative dissolved-to-total metal translator of 1 has been used when developing effluent limitations for arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc. 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.

f. **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.

The ambient hardness for the North Fork Calaveras River ranges from 56 mg/L to 148 mg/L based on collected ambient data from January 2020 through January 2023. 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 56 mg/L (minimum) up to 148 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-7 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-9. Summary of Criteria for CTR Hardness-dependent Metals**

| CTR Metals | Ambient Hardness (mg/L) | Acute Criteria (µg/L, total) | Chronic Criteria (µg/L, total) |
|---|---|---|---|
| Copper | 58 | 44 | 63 |
| Chromium III | 58 | 1112 | 132 |
| Cadmium | 58 (acute)<br>58 (chronic) | 2.4 | 1.6 |
| Lead | 58 | 41 | 1.6 |
| Nickel | 58 | 296 | 33 |

| CTR Metals | Ambient Hardness (mg/L) | Acute Criteria (µg/L, total) | Chronic Criteria (µg/L, total) |
|---|---|---|---|
| Silver | 58 | 1.6 | -- |
| Zinc | 58 | 76 | 76 |

**Table F-9 Notes:**

1. **Criteria (ug/L total)**. Acute and chronic criteria were rounded to two significant figures in accordance with the CTR (40 C.F.R. section 131.38(b)(2)).
2. **Ambient hardness (mg/L).** Values in Table F-9 represent actual observed receiving water hardness measurements.
3. **Copper.** This Order allows a site-specific WER for copper to calculate the criteria (see Attachment F, Section IV.C.2.c).

### 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, chlorine residual, nitrate plus nitrite, pH, pathogens, and temperature are not priority pollutants. Due to the site-specific conditions of the discharge, the Central Valley Water Board has used professional judgment in determining the appropriate method for conducting the RPA for these non-priority pollutant parameters based on a qualitative assessment as recommended by U.S. EPA guidance. U.S. EPA's September 2010 NPDES Permit Writer's Manual, page 6-30, states, "State implementation procedures might allow, or even require, a permit writer to

determine reasonable potential through a qualitative assessment process without using available facility-specific effluent monitoring data or when such data are not available…A permitting authority might also determine that WQBELs are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBELs for pathogens in all permits for POTWs discharging to contact recreational waters).” U.S. EPA’s TSD also recommends that factors other than effluent data should be considered in the RPA, “When determining whether or not a discharge causes, has the reasonable potential to cause, or contributes to an excursion of a numeric or narrative water quality criterion for individual toxicants or for toxicity, the regulatory authority can use a variety of factors and information where facility-specific effluent monitoring data are unavailable. These factors also should be considered with available effluent monitoring data.” With regard to POTWs, U.S. EPA recommends that, “POTWs should also be characterized for the possibility of chlorine and ammonia problems.” (TSD, p. 50)

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

Most constituents with no reasonable potential are not discussed in this Order. This section only provides the rationale for the reasonable potential analyses for the following constituents of concern that were found to have no reasonable potential after assessment of the data:

**i. 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. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default USEPA translators were used for the receiving water and effluent.

(b) **RPA Results**. Section IV.C.2.f of this Fact Sheet includes procedures for conducting the RPA for hardness-dependent CTR metals, such as copper. The CTR includes hardness-dependent criteria for copper for

the receiving water. The RPA was conducted using the upstream receiving water hardness to calculate the criteria for comparison to the maximum ambient background concentration, and likewise using the reasonable worst-case downstream hardness to compare the MEC. The Discharger submitted a Copper Water Effects Ratio (WER) study along with their Report of Waste Discharge (ROWD) in August 2013 that calculated a site specific WER of 7.55 that is applicable to the effluent. The table below shows the specific total recoverable criteria used for the RPA.

**Table F-10. Total Recoverable Copper RPA**

| CTR Chronic Criteria | CTR Acute Criteria | Max Effluent Concentration | Reasonable Potential? (Y/N) |
|---|---|---|---|
| 63 ug/L | 44 ug/L | 11 ug/L | No |

Based on the available data, copper in the discharge does not have a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for the protection of freshwater aquatic life and the effluent limitations for copper are not included in this Order.

ii. **Salinity**

(a) **WQO.** Chloride, electrical conductivity (EC), total dissolved solids, and sulfate are all forms of salinity. Since agricultural and MUN uses are not beneficial uses of the North Fork Calaveras River, the most critical beneficial use affected by salinity within the discharge is warm freshwater habitat, for the protection of aquatic life. There are no water quality criteria for the protection of aquatic life for electrical conductivity, total dissolved solids, and sulfate. The USEPA NAWQC criteria for chloride are 230 mg/L as a 4-day average and 860 mg/L as a 1-hour average..

(b) **RPA Results.**

(1) **Chloride.** Chloride concentrations in the effluent ranged from 43 mg/L to 60 mg/L, with an average of 54 mg/L. These levels do not exceed the Secondary MCL. Background concentrations in North Fork Calaveras River ranged from 4.9 mg/L to 8.3 mg/L, with an average of 6.9 mg/L, for 4 samples collected by the Discharger from January 2020 through January 2023.

(2) **Electrical Conductivity or Total Dissolved Solids.** Not applicable.

(3) **Sulfate.** Not applicable.

(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. However, since the Discharger discharges to the North Fork Calaveras River, a tributary of the New Hogan Reservoir and eventually the Sacramento-San Joaquin Delta, of additional concern is the salt contribution to Delta waters. Allowing the Discharger to increase its current salt loading may be contrary to the region-wide effort to address salinity in the Central Valley.

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.

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, chlorine residual, cyanide, pathogens, and pH.. 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 North Fork Calaveras 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 North Fork Calaveras 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 North Fork Calaveras River has a beneficial use of cold freshwater habitat and the presence of salmonids and early fish life stages in the North Fork Calaveras River is well-documented, the recommended criteria for waters where salmonids and early life stages are present were used.

The acute (1-hour average) criterion or CMC was calculated using paired effluent pH and temperature data, collected during the period from 1 January 2020 and 31 January 2023. The most stringent CMC of 15.3 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 1 January 2020 and 31 January 2023. The most stringent 30-day rolling average CCC of 0.7 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. Based on the 30-day CCC of 0.7 mg/L (ammonia as N), the 4-day average concentration that should not be exceeded is 1.8 mg/L (ammonia as N).

(b) **RPA Results.** The Facility is a POTW that treats domestic wastewater. Untreated domestic wastewater contains ammonia in concentrations that 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 nitrification may result in the discharge of ammonia to the receiving 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. This Order contains a final average monthly effluent limitation (AMEL) and average weekly effluent limitation (AWEL) for ammonia of 5.1 mg/L and 18.4 mg/L, respectively, based on the site-specific ammonia criteria for North Fork Calaveras River.

(d) **Plant Performance and Attainability.** Since January 2020, the MEC for ammonia in the effluent was 7.2 mg/L out of 39 samples. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

ii. **Chlorine Residual**

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

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

The Discharger uses chlorine for disinfection, which is extremely toxic to aquatic organisms. Although the Discharger uses a sulfur dioxide process to dechlorinate the effluent prior to discharge to North Fork Calaveras River, the existing chlorine use and the potential for chlorine to be discharged provides the basis for the discharge to have a reasonable potential to cause or contribute to an instream excursion above the NAWQC.

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

(d) **Plant Performance and Attainability**. Analysis of the effluent data shows that the continued positive presence of dechlorination agents indicate that chlorine residual is less than the applicable WQBELs . The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iii. **Cyanide**

(a) **WQO**. The CTR includes maximum 1-hour average and 4-day average cyanide criteria of 22 µg/L and 5.2µg/L, respectively, for the protection of freshwater aquatic life.

(b) **RPA Results**. The MEC for cyanide was 11 µg/L, based on 17 samples collected between January 2020 and January 2023. Therefore, the discharge exhibits reasonable potential to cause or contribute to an in-stream excursion from the CTR criteria for the protection of aquatic life for cyanide.

(c) **WQBEL's**. The receiving water contains assimilative capacity for cyanide, therefore, as discussed further in Section IV.C.2.d of this Fact Sheet, a chronic aquatic life dilution credit of 5 was allowed in the development of the WQBEL's for cyanide. This Order contains a final MDEL and AMEL for cyanide of 47 µg/L and 24 µg/L, respectively, based on CTR criteria for the protection of freshwater aquatic life.

(d) **Plant Performance and Attainability**. Analysis of the effluent data shows that the MEC of 11 µg/L is less than applicable WQBEL's. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iv. **Pathogens**

(a) **WQO.** In a letter to the Central Valley Water Board dated 8 April 1999, DDW indicated it would consider wastewater discharged to water bodies with identified beneficial uses of irrigation or contact recreation and where the wastewater receives dilution of more than 20:1 to be adequately disinfected if the effluent coliform concentration does not exceed 23 MPN/100 mL as a 7-day median and if the effluent coliform concentration does not exceed 240 MPN/100 mL more than once in any 30 day period.

(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. Body contact water recreation is a beneficial use of the North Fork Calaveras River. Although the Discharger provides disinfection, inadequate or incomplete disinfection creates the potential for pathogens to be discharged. Therefore, the Central Valley Water Board finds the discharge has reasonable potential for pathogens and WQBELs are required.

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

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the MEC of 170 MPN/100 mL is less than the applicable 30-day maximum but is greater than the applicable 7-day median. However, this concentration of pathogens is not typical of the discharge and only one sample was taken during the surrounding 7- day period. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

v. **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 354 samples taken from January 2020 to January 2023, the maximum pH reported was 7.6 and the minimum was 6.6. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

**4. WQBEL Calculations**

a. This Order includes WQBELs for ammonia, chlorine residual, cyanide, pathogens, and pH. 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 98$^{th}$ 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 98$^{th}$ percentile occurrence probability.

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

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

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

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

where:

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

**Summary of Water Quality-Based Effluent Limitations**
**Discharge Point No. 001**

**Table F-11. Summary of Water Quality-Based Effluent Limitations**

| Parameter | Units | Effluent Limitations |
|---|---|---|
| Ammonia Nitrogen, Total (as N) | mg/L | AMEL 5.1<br>AWEL 18 |
| Chlorine, Total Residual | mg/L | 1-hour average 0.019<br>4-day average 0.011 |
| Cyanide, Total (as CN) | µg/L | AMEL 24<br>MDEL 47 |
| pH | Standard units | Instantaneous Min 6.5<br>Instantaneous Max 8.5 |
| Total Coliform Organisms | MPN/100mL | 7-Day Median 23<br>Once/30-Day 240 |

**5. Whole Effluent Toxicity (WET)**

The Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California (ISWEBE Plan) contains toxicity provisions, including numeric objectives for acute and chronic aquatic toxicity, that are applicable to this discharge and are hereafter referred to as the Toxicity Provisions.

a. **Acute Toxicity.** 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.

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

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

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

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

Attainment of the water quality objective is demonstrated by conducting chronic aquatic toxicity testing and rejecting this null hypothesis in accordance with the Test of Significant Toxicity (TST) statistical approach described in National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1. When the null hypothesis is rejected, the alternative hypothesis is accepted in its place, and there is no exceedance of the chronic aquatic toxicity water quality objective. Failing to reject the null hypothesis (referred to as a "fail") is equivalent to an exceedance of the chronic aquatic toxicity water quality objective.

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.

a. **Chronic Toxicity.** The table below is chronic WET testing performed by the Discharger from January 2020 through January 2023.

**Table F-12 Chronic Whole Effluent Toxicity Testing Results – Test of Significant Toxicity at the IWC (8.3 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 (*Selenastrum capricornutum)* Growth** | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Pass / Fail | Percent Effect | Pass / Fail | Percent Effect | Pass / Fail | Percent Effect | Pass / Fail | Percent Effect | Pass / Fail | Percent Effect |
| 2/4/2020 | Pass | 0 | Pass | 0 | Pass | 0 | Pass | 0 | Pass | 0 |
| 1/12/2021 | Pass | 0 | Pass | 0 | Pass | 0 | Pass | 0 | Pass | 0 |
| 2/15/2022 | Pass | 0 | Pass | 0 | Pass | 0 | Pass | 0 | Pass | 0 |
| 3/21/2023 | Pass | 0 | Pass | 0 | Pass | 0 | Pass | 0 | Pass | 0 |

i. **RPA.** A dilution ratio of 12:1 is available for chronic whole effluent toxicity. Therefore, chronic toxicity testing has been conducted at an

instream waste concentration (IWC) of 8.3 percent effluent. A test result that fails the Test of Significant Toxicity (TST) or has a percent effect of 10 percent or greater 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 January 2020 and January 2023 there were no fails of the TST and the percent effect was less than 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.

ii. **WQBELs.** Effluent limitations have not been established for chronic whole effluent toxicity because there is no reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions numeric chronic aquatic toxicity objective and Basin Plan's narrative 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 January 2019 through January 2023.

**Table F-13 Acute Whole Effluent Toxicity Testing Results – Test of Significant Toxicity**

| Date | Fathead Minnow (*Pimephales promelas*) Survival | |
|---|---|---|
| | Pass/Fail | Percent Effect |
| 4/1/2019 | Pass | 0 |
| 12/10/2019 | Pass | 0 |
| 2/3/2020 | Pass | 0 |
| 12/2/2020 | Pass | 0 |
| 1/4/2021 | Pass | 0 |
| 4/26/2021 | Pass | 0 |

i. **RPA.** 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 April 2019 and April 2022 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 aquatic toxicity numeric objectives and Basin Plan's narrative toxicity objective.

ii. **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 chronic aquatic toxicity objective and Basin Plan's narrative toxicity objective. Chronic toxicity MMETs and MDETs have been established to protect toxicity objectives in the receiving water..

## D. Final Effluent Limitation Considerations

### 1. Mass-based Effluent Limitations

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

### 2. Averaging Periods for Effluent Limitations

40 C.F.R. section 122.45 (d) requires average weekly and average monthly discharge limitations for POTWs unless impracticable. For cyanide, average weekly effluent limitations have been replaced with maximum daily effluent limitations in accordance with section 1.4 of the SIP. Furthermore for total residual chlorine and pH, 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 toxicity. 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.

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 2018-0075 was issued indicates that acute and chronic toxicity do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. The updated information that supports the removal of effluent limitations for these constituents includes the following:

   **i. Acute Toxicity.** Effluent monitoring data collected from April 2019 through March 2022 indicates that acute toxicity in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance per the Toxicity Provisions.

   Thus, removal of the effluent limitations for acute toxicity from Order R5-2018-0075 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 acute toxicity based on updated monitoring data demonstrating that the effluent does not cause or contribute to an exceedance of the applicable water quality criteria or objectives in the receiving water. The removal of WQBELs for this parameter will not result in an increase in pollutant concentration or loading, a decrease in the level of treatment or control, or a reduction of water quality. Therefore, the Central Valley Water Board finds that the removal of the effluent limitations does not result in an increase in pollutants or any additional degradation of the receiving water. Thus, the removal 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 the mass-based effluent limitation for ammonia based on 40 CFR parts 122.45 (d) and (f). The removal of the mass-based effluent limit for ammonia will not result in a decrease in the level of treatment or control or a reduction in water quality.

Furthermore, both a concentration-based AMEL and AWEL remain for ammonia, as well as an average daily discharge flow prohibition that limits the amount of flow that can be discharged to the receiving water. The combination of concentration-based effluent limits and a flow prohibition in this Order are equivalent to mass-based effluent limitations, which were redundant limits contained in previous Orders by multiplying the concentration-based effluent limits and permitted average daily discharge flow by a conversion factor to determine the mass-based effluent limitations. The Central Valley Water Board finds that the removal of the mass-based effluent limit for ammonia does not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of the mass-based limit for ammonia is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

Groundwater. The Facility utilizes an unlined irrigation pond to hold treated effluent for land application. Domestic wastewater contains constituents such as total dissolved solids (TDS), electrical conductivity, pathogens, nitrates, organics, metals and oxygen demanding substances (BOD). Percolation from the irrigation pond may result in an increase in the concentration of these constituents in groundwater. The State Anti Degradation Policy generally prohibits the Central Valley Water Board from authorizing activities that will result in the degradation of high-quality waters unless it has been shown that:

i. The degradation will not result in water quality less than that prescribed in state and regional policies, including violation of one or more water quality objectives;

ii. The degradation will not unreasonably affect present and anticipated future beneficial uses;

iii. The discharger will employ Best Practicable Treatment or Control (BPTC) to minimize degradation; and

iv. The degradation is consistent with the maximum benefit to the people of the state.

Some degradation of groundwater from use of the Pond D and discharge to the DLDA may be consistent with the State Anti-Degradation Policy provided that the Discharger is implementing best practicable treatment or control (BPTC) measures and such degradation is consistent with the maximum benefit to the people of the state. The Facility is designed and constructed to provide secondary treatment and disinfection prior to using the Pond D and discharge to the DLDA. Additionally, this Order continues land discharge specifications for BOD5, TSS, and total coliform organisms consistent with treatment capabilities at the Facility for the protection of designated and anticipated beneficial uses of groundwater. This Order also includes operation and maintenance specifications for Pond D and the DLDA. This level of treatment may result in limited groundwater degradation not exceeding water quality objectives and constitutes best practicable treatment or control. Providing wastewater treatment to the community and use of the irrigation pond and land application areas during dry weather is in the best interest of the people of the state.

**5. Stringency of Requirements for Individual Pollutants**

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD5, pH, and TSS. Restrictions on BOD5pH, and TSS are discussed in section IV.B.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. In addition, this Order contains effluent limitations more stringent than the minimum, federal technology-based requirements that are necessary to meet water quality standards. For pH, both technology-based effluent limitations and water quality-based effluent limitations are applicable. The more stringent of these effluent limitations are implemented by this Order. These limitations are not more stringent than required by the CWA.

**Summary of Final Effluent Limitations**
**Discharge Point 001**

**Table F-14 Summary of Final Effluent Limitations**

| Parameter | Units | Effluent Limitations | Basis[1] |
|---|---|---|---|
| Ammonia Nitrogen, Total (as N) | mg/L | AMEL 5.1<br>AWEL 18 | NAWQC |
| Biochemical Oxygen Demand (5-day @ 20°C) | mg/L | AMEL 30<br>AWEL 45 | CFR |
| Chlorine, Total Residual | mg/L | 1-hour average 0.019<br>4-day average 0.011 | NAWQC |
| Cyanide, Total (as CN) | µg/L | AMEL 24<br>MDEL 47 | CTR |
| pH | Standard units | Instantaneous Min 6.5<br>Instantaneous Max 8.5 | BP |
| Total Coliform Organisms | MPN/100mL | 7-Day Median 23<br>Once/30-Day 240 | BP |
| Total Suspended Solids | mg/L | AMEL 30<br>AWEL 45 | CFR |

**Table F-13 Notes:**

1.
CFR – Based on secondary treatment standards contained in 40 CFR part 133.
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.

### E. Interim Effluent Limitations – Not Applicable

### F. Land Discharge Specifications

1. The Land Discharge Specifications are necessary to protect the beneficial uses of the groundwater and have been retained from Order R5-2018-0075 for dischargers to the DLDA.

2. For nutrients such as nitrate, the potential for degradation to groundwater not only depends on the quality of treated effluent, but the ability of the vadose zone below the DLDA spray fields to provide an environment conductive to denitrification to convert the effluent to nitrate and the nitrate to nitrogen gas prior to effluent reaching the water table.

The water balance submitted to the Central Valley Water Board in March 2018 indicates an annual potential of 32 MG of wastewater discharged to the spray fields in the DLDA. Based on an average total nitrogen concentration of 16 mg/L (December 2010 – April 2013), approximately 130 pounds per acre per year will be applied to the spray fields in the DLDA. The nutrient uptake rate for oak trees is unknown, however, grasses have a nutrient uptake rate of approximately 300 lb/ac/yr. Therefore, the current effluent nitrogen application rates are consistent with the vegetation grown, and represent best practical treatment and control. Based on the current treatment system the discharge to the spray fields does not have the potential to degrade groundwater with respect to nitrate.

### G. Recycling Specifications – Not Applicable

## V. RATIONALE FOR RECEIVING WATER LIMITATIONS

### A. Surface Water

1. CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Central Valley Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This Order contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for ammonia, bacteria, biostimulatory substances, color, chemical constituents, dissolved oxygen, floating material, oil and grease, pH, pesticides, radioactivity, suspended sediment, settleable substances, suspended material, tastes and odors, temperature, toxicity, and turbidity.

a. **Bacteria**. On 7 August 2018 the State Water Board adopted Resolution No. 2018-0038 establishing Bacteria Provisions, which are specifically titled "Part 3 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California—Bacteria Provisions and a Water Quality Standards Variance Policy" and "Amendment to the Water Quality Control Plan for Ocean Waters of California—Bacteria Provisions and a Water Quality Standards Variance Policy." The Bacteria Water Quality Objectives established in the Bacteria Provisions supersede any numeric water quality objective for bacteria for the REC-1 beneficial use contained in a water quality control plan before the effective date of the Bacteria Provisions.

The Bacteria Water Quality Objectives correspond with the risk protection level of 32 illnesses per 1,000 recreators and use E. coli as the indicator of pathogens in freshwaters and enterococci as the indicator of pathogens in estuarine waters and ocean waters.

The Bacteria Provisions provide that where a permit, waste discharge requirement (WDR), or waiver of WDR includes an effluent limitation or discharge requirement that is derived from a water quality objective or other guidance to control bacteria (for any beneficial use) that is more stringent than the Bacteria Water Quality Objective, the Bacteria Water Quality Objective would not be implemented in the permit, WDR, or waiver of WDR. This Order includes effluent limitations and discharge requirements equivalent to the DDW Title 22 disinfected tertiary reclamation criteria that are more stringent than the Statewide Bacteria Objectives. Therefore, the Statewide Bacteria Objectives have not been implemented in this Order.

## 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.
3. Nitrate, which was found to be present in the treated wastewater (at EFF-001) at an average concentration of up to 28 mg/L as nitrogen (as sampled between January 2020 and January 2023), has the potential to degrade groundwater quality because there is little ability for attenuation in the shallow permeable vadose zone beneath the Facility. Furthermore, groundwater monitoring data show nitrate concentrations above the primary MCL of 10 mg/L in monitoring wells GW-001, GW-003, GWN-002 and GWN-003. The Chemical Constituents objective prohibits concentrations of chemical constituents in excess of California MCLs in groundwater that is designated as municipal or domestic supply. The California primary MCL for nitrate is equivalent to 10 mg/L as nitrogen, and groundwater beneath the facility is designated as municipal or domestic supply. It is therefore appropriate to adopt a numerical groundwater limitation of 10 mg/L

for nitrate as nitrogen to implement the Chemical Constituents objective to protect the municipal and domestic use of groundwater.

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

b. **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. A WER of 7.55 has been used in this Order for calculating CTR criteria of copper. In addition, default dissolved-to-total metal

translators have been used to convert water quality objectives from dissolved to total. If the Discharger performs studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

**.2. Special Studies and Additional Monitoring Requirements**

a. **Groundwater Monitoring.** The Discharger shall conduct a study that evaluates the current groundwater well network and groundwater quality downgradient of Pond D. The sources and impacts of nitrate and total coliform in groundwater shall be evaluated as part of this study and shall include a survey and water quality analysis, if applicable, of any drinking water wells located 0.5 miles or less downgradient of Pond D. The study shall also recommend a groundwater well that can serve as a compliance point downgradient of Pond D. In addition, the study shall include information regarding any potential changes to the groundwater well network, an evaluation of alternatives/actions to reduce nitrate and total coliform, and a proposed plan and timeline for the implementation of recommended actions to reduce nitrate and total coliform in groundwater. The study shall also address compliance with the groundwater limitations in Section V.B.

**3. Best Management Practices and Pollution Prevention**

**a. Salinity Evaluation and Minimization Plan.** 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 has indicated its intent to meet the Alternative Salinity Permitting Approach. Under the Alternative Permitting Approach the Basin Plan requires dischargers implement salinity minimization measures to maintain existing salinity levels, and participate in the P&O Study. The Discharger demonstrated adequate participation in the P&O and this Order requires continued participation to meeting the requirements of the Alternative Salinity Permitting Approach. This Order also requires continued implementation of the Discharger's Salinity Evaluation and Minimization Plan 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. **Mercury Pollution Prevention Plan**. This Order requires the Discharger to maintain the previously developed Pollution Prevention Plan for mercury that was accepted by the Central Valley Water Board. The North Fork Calaveras River, to which the Facility discharges treated wastewater, is not listed on the 303(d) list for impaired water bodies. However, the North Fork Calaveras River is tributary to the New Hogan Reservoir, which is listed on the 303(d) list for mercury. A TMDL for mercury in New Hogan Reservoir is currently under development and is projected to be completed in 2027. The Pollution Prevention Plan for mercury is required to prevent possible further mercury loading in New Hogan Reservoir.

**4. Construction, Operation, and Maintenance Specifications**

a. The operation and maintenance specifications for Storage Pond D are necessary to protect the beneficial uses of the groundwater. The specifications included in this Order are retained from Order R5-2018-0075. In addition, reporting requirements related to use of Storage Pond D are required to monitor its use and the potential impact on groundwater.

**5. Special Provisions for POTWs**

a. **Collection System**. The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2022-0103-DWQ (General Order) on 6 December 2022. The State Water Board amended the Monitoring and Reporting Program for the General Order through Order WQ 2013-0058-EXEC on 6 August 2013.. The General Order requires public agencies that own or operate sanitary sewer systems with greater than one mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

The Discharger is subject to the requirements of, and must comply with, State Water Board Order 2022-0103-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, as amended by State Water Board Order WQ 2013-0058-EXEC, and any subsequent order. The General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows that are more extensive, and therefore, more stringent than the requirements under federal standard provisions.

b. **Sludge/Biosolids Treatment or Discharge Specifications.** Sludge in this Order means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the wastewater treatment plant. Biosolids refer to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 C.F.R. part 503. This Order does not regulate offsite use or disposal of biosolids, which are regulated instead under 40 C.F.R. part 503; administered by U.S. EPA. The Sludge/Biosolids Treatment or Discharge Specifications in this Order implement the California Water Code to ensure sludge/biosolids are properly handled onsite to prevent nuisance, protect public health, and protect groundwater quality.

**6. Other Special Provisions – Not Applicable**

**7. Compliance Schedules – Not Applicable**

## VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

CWA section 308 and 40 C.F.R. sections 122.41(h), (j)-(l), 122.44(i), and 122.48 require that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program (MRP), Attachment E of this Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The burden, including costs, of these monitoring and reporting requirements bears a reasonable relationship to the need for the reports and the benefits to be obtained therefrom. The Discharger, as owner and operator of the Facility, is required to comply with these requirements, which are necessary to determine compliance with this Order. The following provides additional rationale for the monitoring and reporting requirements contained in the MRP for this facility.

Water Code section 13176, subdivision (a), states: “The analysis of any material required by [Water Code sections 13000-16104] shall be performed by a laboratory that has accreditation or certification pursuant to Article 3 (commencing with section 100825) of Chapter 4 of Part 1 of Division 101 of the Health and Safety Code.” The DDW accredits laboratories through its Environmental Laboratory Accreditation Program (ELAP).

Section 13176 cannot be interpreted in a manner that would violate federal holding time requirements that apply to NPDES permits pursuant to the CWA. (Wat. Code sections 13370, subd. (c), 13372, 13377.). Section 13176 is inapplicable to NPDES permits to the extent it is inconsistent with CWA requirements. (Wat. Code section 13372, subd. (a).) Lab accreditation is not required for field tests such as tests for color, odor, turbidity, pH, temperature, dissolved oxygen, electrical conductivity, and disinfectant residual. The holding time requirements are 15 minutes for chlorine residual, dissolved oxygen, pH, and

temperature (40 C.F.R. section 136.3(e), Table II). The Discharger maintains an ELAP accredited laboratory on-site and conducts analysis within the required hold times.

## 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 No. R5-2018-0075.

## 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 No. R5-2018-0075.

## C. Receiving Water Monitoring

### 1. Surface Water

a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream. Receiving surface water monitoring frequencies and sample types have been retained from Order No. R5-2018-075, except as noted in Table F-15 below.

### 2. Groundwater

a. Water Code section 13267 states, in part, “(a) A Regional Water Board, in establishing waste discharge requirements may investigate the quality of any waters of the state within its region” and “(b)(1) In conducting an investigation, the Regional Water Board may require that any person who discharges waste that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the Regional Water Board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports.” The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, a Regional Water Board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports. The Monitoring and Reporting Program is issued pursuant to Water Code section 13267. The groundwater monitoring and reporting

program required by this Order and the Monitoring and Reporting Program are necessary to assure compliance with these waste discharge requirements. The Discharger is responsible for the discharges of waste at the facility subject to this Order.

b. Monitoring of the groundwater must be conducted to determine if the discharge has caused an increase in constituent concentrations, when compared to background. The monitoring must, at a minimum, require a complete assessment of groundwater impacts including the vertical and lateral extent of degradation, an assessment of all wastewater-related constituents which may have migrated to groundwater, an analysis of whether additional or different methods of treatment or control of the discharge are necessary to provide BPTC to comply with the State Anti-Degradation Policy. Economic analysis is only one of many factors considered in determining BPTC. If monitoring indicates that the discharge has incrementally increased constituent concentrations in groundwater above background, this permit may be reopened and modified. Until groundwater monitoring is sufficient, this Order contains Groundwater Limitations that allow groundwater quality to be degraded for certain constituents when compared to background groundwater quality, but not to exceed water quality objectives. If groundwater quality has been degraded by the discharge, the incremental change in pollutant concentration (when compared with background) may not be increased. If groundwater quality has been or may be degraded by the discharge, this Order may be reopened, and specific numeric limitations established consistent with the State Anti-Degradation Policy and the Basin Plan.

c. This Order requires the Discharger to continue groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports are necessary to evaluate impacts to waters of the State to assure protection of beneficial uses and compliance with Central Valley Water Board plans and policies, including the State Anti-Degradation Policy. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater and surface water.

d. Groundwater monitoring frequencies and parameters have been retained from Order No. R5-2018-0075, except as noted in Table F-15, below:

**Table F-15 Summary of Monitoring Changes**

| Parameter, Units | Type of Monitoring | Prior Sample Frequency | Revised Sample Frequency | Reason for Change |
|---|---|---|---|---|
| Nitrate (as N) | Groundwater | -- | 1/Quarter | To evaluate compliance with MCL |

| Parameter, Units | Type of Monitoring | Prior Sample Frequency | Revised Sample Frequency | Reason for Change |
|---|---|---|---|---|
| E.coli | Receiving Water | -- | 1/Week (when discharging to surface water) | Added for consistency with new Statewide Bacteria Objective |
| Total Nitrogen | Groundwater, Pond D | -- | 1/Quarter | To characterize groundwater quality |
| Trihalomethanes | Groundwater | -- | 1/Quarter | To characterize groundwater quality |
| Depth to Groundwater | Groundwater | -- | 1/Quarter | To collect additional information |
| Gradient | Groundwater | -- | 1/Quarter | To collect additional information |
| Gradient Direction | Groundwater | -- | 1/Quarter | To collect additional information |

## 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), and Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, Fifth Edition (EPA-821-R-02-012).

Twice annual chronic whole effluent toxicity testing is required to demonstrate compliance with the toxicity receiving water limitation and chronic 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 or receiving water concentration differs from the control, the test result is “Pass” or “Fail”). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

4. **Sensitive Species Screening.** The Discharger shall perform rescreening to re-evaluate the most sensitive species if there is a significant change in the nature of the discharge. **If there are no significant changes during the permit term, 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 in which effluent discharge occurs using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green alga (*Pseudokirchneriella subcapitata*). The tests shall be performed at an IWC of no less than 8 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. The species that exhibited the highest percent effect was the water flea (Ceriodaphnia dubia). 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 or Basin Plan’s narrative toxicity objective. 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 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, MMET test, or MMEL compliance test.

## E. Other Monitoring Requirements

### 1. Biosolids Monitoring – Not Applicable

Biosolids monitoring is required to ensure compliance with the pretreatment requirements contained in 40 C.F.R. part 403 and implemented in section VI.C.5.a. of this Order. Biosolids monitoring is required per U.S. EPA guidance to evaluate the effectiveness of the pretreatment program. 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. Pond Monitoring

Treatment pond monitoring is required to ensure proper operation of the storage pond. Monitoring for freeboard (weekly), pH (monthly), and dissolved oxygen (monthly) to evaluate compliance with land discharge specifications; quarterly monitoring for electrical conductivity, total nitrogen, and total dissolved solids; and annual monitoring for standard minerals have been retained from Order R5-2018-0075 to evaluate impacts to groundwater from the pond.

### 3. Land Discharge Monitoring

Land discharge monitoring is required to ensure that the discharge to the land disposal area complies with the Storage Pond and Land Disposal Operating Requirements in section VI.C.4 of this Order. Monitoring frequencies and sample types for flow (continuous), flow to spray fields (daily), BOD5 (weekly), electrical conductivity (weekly), total coliform organisms (weekly), and total nitrogen (monthly) have been retained from Order R5 2018-0075.

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

Under the authority of section 308 of the CWA (33 U.S.C. section 1318), U.S. EPA requires all dischargers under the NPDES Program to participate in the annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S.EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from their own laboratories or their contract laboratories. A Water Pollution Performance

Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall submit annually the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

## VIII. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDRs that will serve as an NPDES permit for the San Andreas Sanitary District Wastewater Treatment Plant. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

### A. Notification of Interested Persons

The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through posting on the Central Valley Water Board's website on XXXX and through posting by the Discharger at XXXX and the Facility entrance on XXXX.

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 XX January 2024.

### 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: **15-16 February 2024**
Time: **8:30 a.m.**

Location: Online and at the Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

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 California Code of Regulations, 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 (916) 464-3291.

## 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 Victor Lopez at (916) 464-4855, or victor.lopez@waterboards.ca.gov.

## ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

| Constituent | Units | MEC | B | C | CMC | CCC | Water & Org | Org. Only | Basin Plan | MCL | Reasonable Potential |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia | mg/L | 7.2 | 0.02 | 0.7 | 15.3 | 0.7 | -- | -- | -- | -- | YES |
| Cyanide | ug/L | 11 | 0.9 | 5.2 | 22 | 5.2 | 700 | 220,000 | -- | -- | YES |

**Attachment G Table Notes:**

1. All inorganic concentrations are given as a total concentration.

**Abbreviations used in this table:**

| | |
|---|---|
| MEC = | Maximum Effluent Concentration |
| B = | Maximum Receiving Water Concentration or lowest detection level, if non-detect |
| C = | Criterion used for Reasonable Potential Analysis |
| CMC = | Criterion Maximum Concentration (CTR or NTR) |
| CCC = | Criterion Continuous Concentration (CTR or NTR) |
| Water & Org = | Human Health Criterion for Consumption of Water & Organisms (CTR or NTR) |
| Org Only = | Human Health Criterion for Consumption of Organisms Only (CTR or NTR) |
| Basin Plan = | Numeric Site-Specific Basin Plan Water Quality Objective |
| MCL = | Drinking Water Standards Maximum Contaminant Level |
| NA = | Not Available |
| ND = | Non-detect |

## ATTACHMENT H-1 – CALCULATION OF WQBELS

AQUATIC LIFE WQBELS CALCULATIONS

| Parameter | Units | CMC Criteria | CCC Criteria | B | Effluent CV | CMC Dilution Factor | CCC Dilution Factor | ECA Multiplier$_{acute}$ | LTA$_{acute}$ | ECA Multiplier$_{chronic}$ | LTA$_{chronic}$ | AMEL Multiplier$_{95}$ | AWEL Multiplier | MDEL Multiplier$_{99}$ | AMEL | AWEL | MDEL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ammonia Nitrogen, Total (as N) | mg/L | 15.3 | 0.7 | 0.02 | 2.17 | 8.7 | 8.7 | 0.11 | 16.5 | 2.94 | 1.74 | 1.74 | 6.29 | -- | 5.1 | 18.5 | -- |
| Cyanide | µg/L | 22 | 5.2 | 0.9 | 0.57 | 4.8 | 4.8 | 0.34 | 40.7 | 0.54 | 15.8 | 1.52 | -- | 2.98 | 24 | -- | 47 |

**Attachment H-2 Table Notes:**

1. AMEL calculated according to section 1.4 of the SIP using a 95$^{th}$ percentile occurrence probability.

2. AWEL calculated according to section 1.4 of the SIP using a 98$^{th}$ percentile occurrence probability.

3. MDEL calculated according to section 1.4 of the SIP using a 99$^{th}$ 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