CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CA0083721
TENTATIVE ORDER R5-2027-XXXX

WASTE DISCHARGE REQUIREMENTS FOR THE BELL-CARTER FOODS, LLC AND CITY OF CORNING, BELL-CARTER INDUSTRIAL WASTEWATER TREATMENT PLANT, TEHAMA COUNTY

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

Table 1. Discharger Information

Discharger:	Bell-Carter Foods, LLC and City of Corning
Name of Facility:	Bell-Carter Industrial Wastewater Treatment Plant
Facility Street Address:	24862 Gardiner Ferry Road
Facility City, Zip:	Corning, CA 96021
Facility County:	Tehama County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Treated Process Wastewater	39° 54’ 24” N	122° 05’ 21” W	Sacramento River

Table 3. Administrative Information

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

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

_____
PATRICK PULUPA, Executive Officer

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I. FACILITY INFORMATION

Information describing the Bell-Carter Foods, LLC and City of Corning (Discharger), Bell-Carter Industrial 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.

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 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 this Order supersedes Order R5-2021-0021 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.C, in a manner different from that described in this Order is prohibited.

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

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

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

E. **Discharge Flows.** Discharges exceeding an average annual flow of 0.75 million gallons per day (MGD) are prohibited. Discharges exceeding an average monthly flow of 0.95 MGD are prohibited. Discharges exceeding a maximum daily flow of 1.4 MGD are prohibited.

F. **Olive Processing Wastewater Flow.** The discharge of brine-curing and olive processing wastewater, exclusive of rainwater, to the Facility in excess of 255 million gallons per year is prohibited.

G. Discharge Flow During Daylight Hours. Discharge during daylight hours is prohibited at flow rates greater than:

1. 0.072 MGD (equivalent to 50 gallons per minute (gpm)) at river levels below or equal to 168.6 feet (12,672 cubic feet per second (cfs));

2. 500 gpm (0.72 MGD) at river levels in excess of 168.6 feet (12,672 cfs);

3. 600 gpm (0.864 MGD) at river levels in excess of 169.0 feet (14,136 cfs); and

4. 900 gpm (1.3 MGD) at river levels in excess of 169.9 feet (18,063 cfs).

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 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

Parameter	Units	Average Monthly	Maximum Daily	Annual Average
Ammonia Nitrogen, Total (as N)	Milligrams per liter (mg/L)	3.2	13	--
Ammonia Nitrogen, Total (as N)	Pounds per day (lbs/day)	25	150	--
Biochemical Oxygen Demand (5-day @ 20˚C) (BOD)	mg/L	100	150	--
BOD	lbs/day	810	1,300	--
BOD	lbs/year	--	--	211,000
Chloride	lbs/day	--	27,900	20,900
Copper, Total	Micrograms per liter (µg/L)	16	41	--
Electrical Conductivity @ 25°C	Micromhos per centimeter (µmhos/cm)	--	--	9,370
Settleable Solids	Milliliter per liter (ml/L)	0.1	0.2	--
Total Dissolved Solids	lbs/day	--	79,800	59,800
Total Suspended Solids (TSS)	mg/L	100	200	--
TSS	lbs/day	1,700	2,400	--
TSS	lbs/year	--	--	392,000
Zinc, Total	µg/L	67	100	--

b. **Chronic Whole Effluent Toxicity MDEL.** No *Ceriodaphnia dubia* chronic aquatic toxicity test shall result in a "Fail" at the Instream Waste Concentration (IWC) for the sub-lethal endpoint measured in the test AND a percent effect for the survival endpoint greater than or equal to 50 percent.

c. **Chronic Whole Effluent Toxicity MMEL.** No more than one *Ceriodaphnia dubia* chronic aquatic toxicity test initiated in a toxicity calendar month shall result in a "Fail" at the IWC for any endpoint.

d. **Diazinon and Chlorpyrifos.** Effluent diazinon and chlorpyrifos concentrations shall not exceed the sum of one (1.0) as identified below:

i. ***Average Monthly Effluent Limitation (AMEL)***

$S_{AMEL} = C_{D\ M\text{-}avg}/0.079 + C_{C\ M\text{-}avg}/0.012 \leq 1.0$

$C_{D\ M\text{-}AVG}$ = average monthly diazinon effluent concentration (µg/L).

$C_{C\ M\text{-}AVG}$ = average monthly chlorpyrifos effluent concentration (µg/L)

ii. ***Maximum Daily Effluent Limitation (MDEL))***

$S_{MDEL} = C_{D\ W\text{-}avg}/0.16 + C_{C\ W\text{-}avg}/0.025 \leq 1.0$

$C_{D\ W\text{-}AVG}$ = maximum daily diazinon effluent concentration (µg/L).

$C_{C\ W\text{-}AVG}$ = maximum daily chlorpyrifos effluent concentration (µg/L).

e. **pH:**

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

ii. 9.5 SU as an instantaneous maximum.

f. **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.

2. Interim Effluent Limitations – NOT APPLICABLE

B. Land Discharge Specifications –NOT APPLICABLE

C. Recycling Specifications –NOT APPLICABLE

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations – None

B. Groundwater Limitations – None

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:

      (a). 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.

      (b). 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.

      (c). 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 ROWD for permit reissuance, this permit shall continue in force and effect until the permit is reissued or the Regional Water Board rescinds the permit.

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

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. **Whole Effluent Toxicity**

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

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

d. **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/)

e. **Dilution Credits.** This provision allows the Central Valley Water Board to reopen this Order, as appropriate, to modify dilution credits, should the Facility performance, treatment, or characteristics of the discharge or

receiving water change. Modification for the dilution credit may include increasing the allowed dilution credit, if appropriate.

f. **Daytime Discharge Flows.** This Order may be reopened to reassess the discharge flows permitted during daylight hours contained in WDR section III.G if discoloration is seen in the receiving water from the discharge.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

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

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

3. Best Management Practices and Pollution Prevention

a. **Salinity Evaluation and Minimization Plan (SEMP).** The Discharger shall continue to implement a SEMP to identify and address sources of salinity discharged from the Facility.

The 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 effluent concentrations of chloride, electrical conductivity, and total dissolved solids exceed the respective effluent limitations contained in Table 4, the Discharger shall evaluate possible sources of salinity contributing to the exceedance of the trigger and update the SEMP to include a plan of action to control salinity.

4. Construction, Operation and Maintenance Specifications

a. **Membrane Filtration.** The Zenon membrane filtration unit shall be operated year-round, to the maximum extent practicable.

b. **Class II Surface Impoundments.** The Class II Surface Impoundments shall be constructed, operated, and maintained as described in separate WDR Order No. R5-2018-0069.

c. **Treatment Pond Operating Requirements.**

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

ii. Public contact with wastewater at the WWTP shall be prevented through such means as fences, signs, or acceptable alternatives.

iii. Objectionable odors shall not be perceivable beyond the limits of the WWTP property at an intensity that creates or threatens to create nuisance conditions.

iv. As a means of ensuring compliance with section iii above, the Discharger shall operate the WWTP as follows:

(a) Maintain the dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond at or above 1.0 mg/L.

(b) Maintain an automatic system to control aeration in Ponds 1-6 based on the DO readings of fixed probes within each pond. The minimum DO setpoint of each pond specified in the automatic system shall be 1.0 mg/L.

(c) Maintain and replace fixed DO probes in accordance with manufacturer recommendations and as otherwise needed. This includes calibration at minimum once per month.

(d) Dredge ponds as necessary to ensure attainment of DO set point levels, including annually for Ponds 4 and 5.

(e) Maintain accuracy of readings for fixed DO probes by periodically verifying with portable DO probes.

(f) Replace or repair faulty aerators and mixers in all ponds within a timely manner.

(g) Notify Central Valley Water Board if any maintenance activities may result in objectionable odors, including aerator replacement or pond liner replacement.

5. Special Provisions for Publicly-Owned Treatment Works (POTWs) – NOT APPLICABLE

6. Other Special Provisions – NOT APPLICABLE

7. Compliance Schedules – NOT APPLICABLE

VII. COMPLIANCE DETERMINATION

A. Discharge Flow Prohibition (Section III.E). The average discharge flow represents the total effluent flow from the Facility, including storm water. Compliance with the average discharge flow discharge prohibition will be determined based on the total effluent flow for the specified time period divided by the total number of days of discharge for the same time period.

B. Olive Processing Wastewater Flow Prohibition (Section III.F). Compliance with the total olive processing wastewater flow prohibition shall include total influent flow to the Facility less storm water collected at the processing facilities and sent to the Facility over a calendar year.

C. Discharge Flow During Daylight Hours Prohibition (Section III.G). Compliance with this discharge prohibition will be determined based on the definition of "daylight hours" included in Attachment A. The receiving water level shall be determined from the Department of Water Resources California Data Exchange Center station located on the Sacramento River at Vina Bridge-Main Ch (station ID: VIN).

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

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

E. Mass Effluent Limitations. The mass effluent limitations contained in the Final Effluent Limitations IV.A.1.a are based on the permitted flow and calculated as follows:

Mass (lbs/day) = Flow (MGD) x Concentration (mg/L) x 8.34 (conversion factor)

The daily average constituent concentration and the total daily flow shall be used for the daily mass loading. The monthly average constituent concentration and total monthly flow shall be used for average monthly mass loading.

F. Average Annual Effluent Limitations. Compliance with annual average effluent limitations shall be determined by calculating the sum of all samples measured during a calendar year divided by the number of samples measured during that year. In calculating compliance, the Discharger shall count all non-detect measures at one-half of the detection level.

G. Whole Effluent Toxicity Effluent Limitations. The discharge is subject to determination of "Pass" or "Fail" from chronic whole effluent toxicity tests 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.

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

> Mean discharge Instream Waste Concentration (IWC) response ≤ Regulatory Management Decision (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."

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

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

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

1. **Chronic Whole Effluent Toxicity MDEL (section IV.A.1.b).** If the result of a routine *Ceriodaphnia dubia* chronic whole effluent toxicity test, using the TST statistical approach, is a "Fail" at the IWC for the sublethal endpoint measured in the test and the percent effect for the survival endpoint is greater than or equal to 50 percent, the Discharger will be deemed out of compliance with the MDEL.
2. **Chronic Whole Effluent Toxicity MMEL (section IV.A.1.c).** If a routine *Ceriodaphnia dubia* chronic whole effluent toxicity test and at least one *Ceriodaphnia dubia* chronic toxicity MMEL compliance test conducted within the same toxicity calendar month result in a "Fail" at the IWC, using the TST statistical approach, the Discharger will be deemed out of compliance with the MMEL.

H. Chlorpyrifos and Diazinon Effluent Limitations (section IV.A.1.d). Compliance shall be determined by calculating the sum (S), as provided in section IV.A.1.d of this Order, with analytical results that are reported as ND concentrations to be considered to be zero.

I. **Total Residual Chlorine Effluent Limitations (section IV.A.1.f).** 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).

J. **Dissolved Oxygen Treatment Pond Operating Requirements (Section VI.C.4.c.iv.(a)).** To evaluate compliance with the treatment pond operating requirements in section VI.C.4.c.iv.(a), the Discharger shall maintain the measured DO in each Pond 1, 2, and 3 above 1 mg/L. The measured DO in each pond shall be calculated as the average of the highest 8 hours recorded from the fixed probes in a single day.

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Daylight Hours
Daylight hours includes the time between sunrise and sunset, including a two-hour buffer (one hour at the start and stop of night discharge, respectively).

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.

Harmonic Mean
Harmonic mean flows are expressed as:

$$Q_{hm} = (n)/(\Sigma^{n}_{i=1}\ 1/x_i),$$

Where:

x_i = specific data values,
n = number of data values.

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 Flow
The maximum flow sample of all samples collected in a calendar day.

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.

Objectionable Bottom Deposits
An accumulation of materials or substances on or near the bottom of a water body, which creates conditions that adversely impact aquatic life, human health, beneficial uses, or aesthetics. These conditions include, but are not limited to, the accumulation of pollutants in the sediments and other conditions that result in harm to benthic organisms, production of food chain organisms, or fish egg development. The presence of such deposits shall be determined by RWQCB(s) on a case-by-case basis.

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.

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

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

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

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

where:

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

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

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

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

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

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.).

Water Effect Ratio (WER)
An appropriate measure of the toxicity of a material obtained in a site water divided by the same measure of the toxicity of the same material obtained simultaneously in a laboratory dilution water.

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 toxicity calendar month.

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.

ATTACHMENT B – MAP

Figure B-1. Vicinity Map

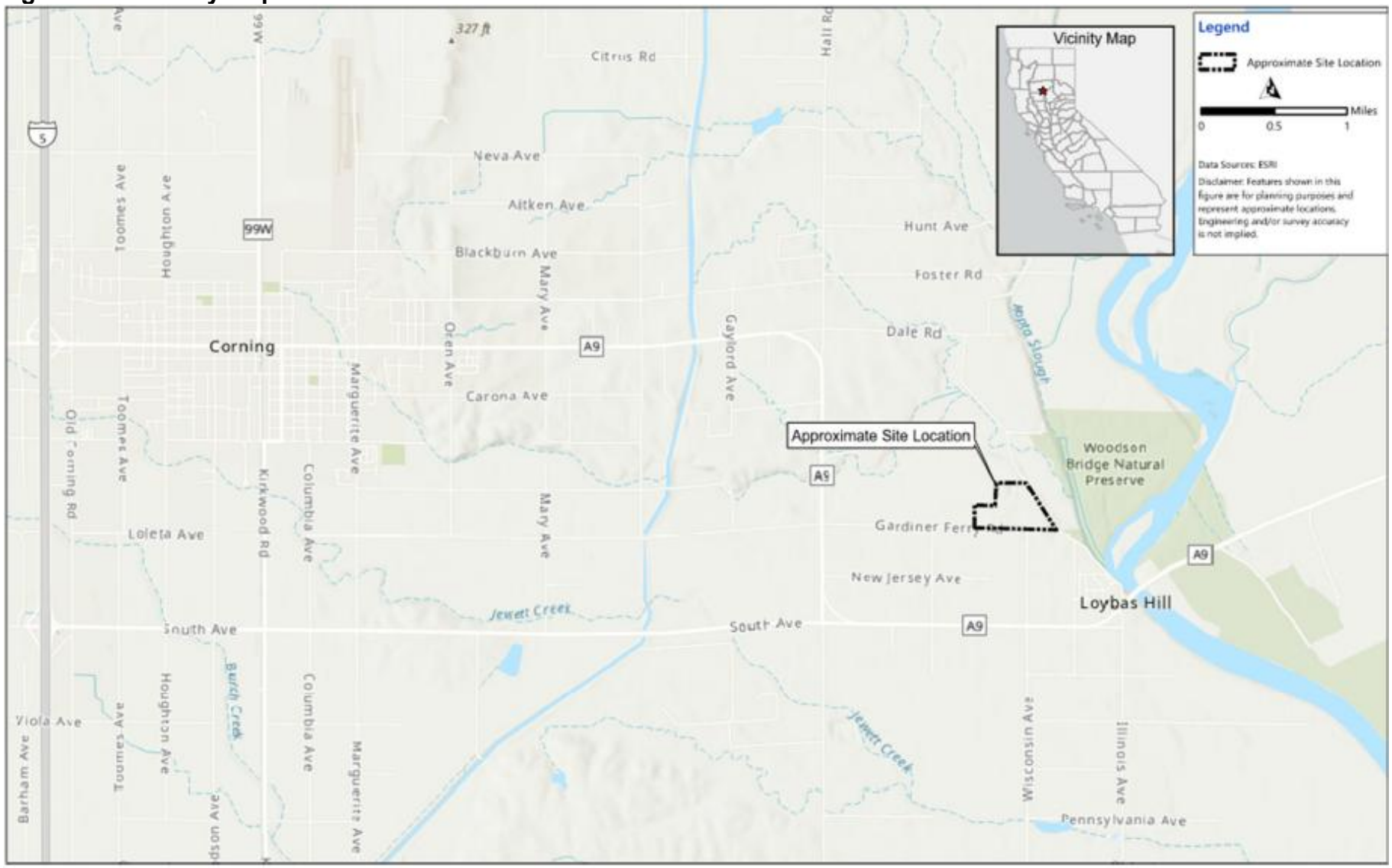
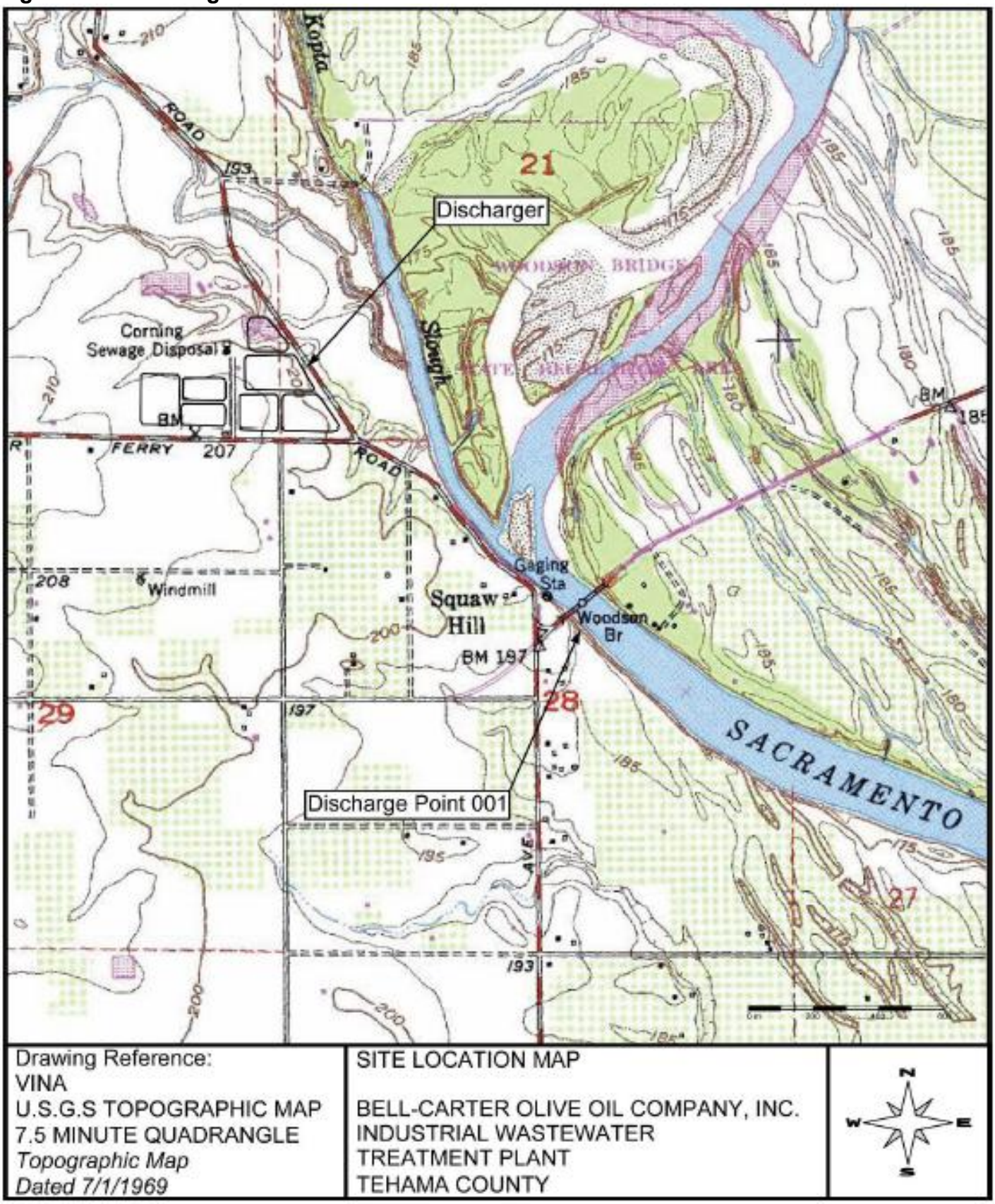


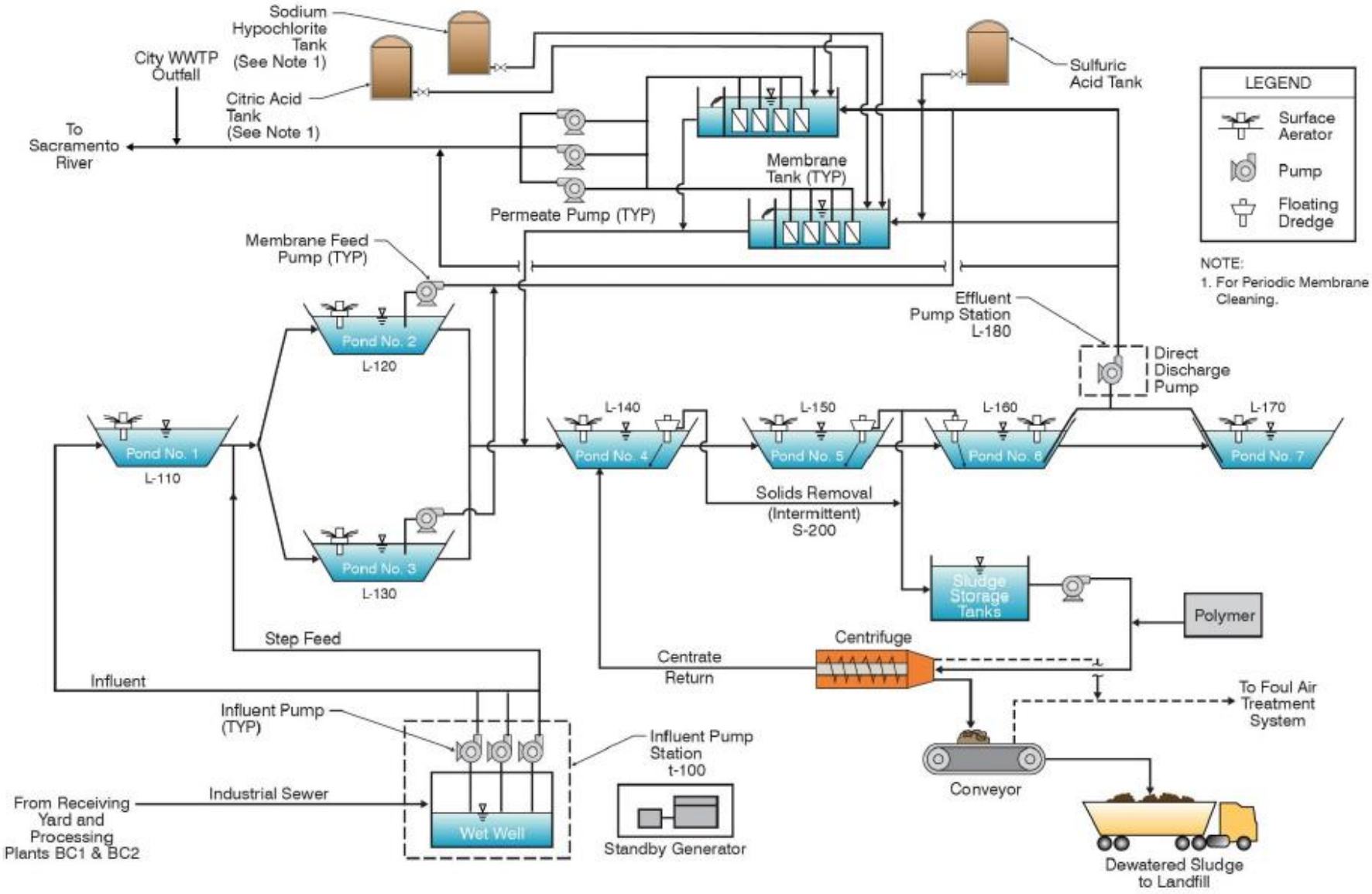
Figure B-2. Site Map



Figure B-3. Discharge Location



ATTACHMENT C – FLOW SCHEMATIC



ATTACHMENT D – STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply:

1. The Discharger must comply with all of the terms, requirements, and conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code and is grounds for enforcement action; permit termination, revocation and reissuance, or modification; denial of a permit renewal application; or a combination thereof. (40 C.F.R. section 122.41(a); Wat. Code, sections 13261, 13263, 13265, 13268, 13000, 13001, 13304, 13350, 13385.)

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

B. Need to Halt or Reduce Activity Not a Defense

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

C. Duty to Mitigate

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

D. Proper Operation and Maintenance

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

E. Property Rights

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

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

F. Inspection and Entry

The Discharger shall allow the Central Valley Water Board, State Water Board, U.S. EPA, and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to (33 U.S.C. section 1318(a)(4)(B); 40 C.F.R. section 122.41(i); Wat. Code, section 13267, 13383):

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

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

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

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

G. Bypass

1. Definitions

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

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

2. Bypass not exceeding limitations. The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not

subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3, I.G.4, and I.G.5 below. (40 C.F.R. section 122.41(m)(2).)

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

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

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

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

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

5. **Notice**

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

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

C.F.R. Part 3, section 122.22, and 40 C.F.R. Part 127. (40 C.F.R. section 122.41(m)(3)(ii).)

H. Upset

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

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

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

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

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

    c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.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 a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures. (40 C.F.R. section 122.22(a)(1).)

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. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural Dischargers shall notify the Central Valley Water Board as soon as they know or have reason to believe (40 C.F.R. section 122.42(a)):

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

    a. 100 micrograms per liter (µg/L) (40 C.F.R. section 122.42(a)(1)(i));

    b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony (40 C.F.R. section 122.42(a)(1)(ii));

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

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

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

a. 500 micrograms per liter (µg/L) (40 C.F.R. section 122.42(a)(2)(i));

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

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge (40 C.F.R. section 122.42(a)(2)(iii)); or

d. The level established by the Central Valley Water Board in accordance with section 122.44(f). (40 C.F.R. section 122.42(a)(2)(iv).)

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

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

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

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

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

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

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

1. The method minimum level (ML) is at or below the applicable water quality objective for the receiving water, or;
2. The method ML is above the applicable water quality objective for the receiving water but the amount of the pollutant/parameter in the discharge is high enough that the method detects and quantifies the level of the pollutant/parameter, or;
3. the method ML is above the applicable water quality objective for the receiving water, but the ML is the lowest of the 40 C.F.R. 136 U.S. EPA-approved analytical methods for the pollutant/parameter.

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

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

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

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	Influent liquid waste from processing facility. Upstream of the discharge to the surface impoundments. Latitude: 39° 54’ 51” N - Longitude: 122° 6’ 25” W

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	Final blended effluent. Downstream from the last connection through which waste can be added and upstream of the junction with the effluent from the City of Corning Wastewater Treatment Plant. Latitude: 39° 54’ 51” N - Longitude: 122° 6’ 16” W
--	RSW-001	In the Sacramento River immediately upstream of Discharge Point 001. Monitoring location to be consistent with RSW-001 monitoring location for the City of Corning WWTP and may be changed with the approval of the Executive Officer. Latitude: 39° 54’ 25” N - Longitude: 122° 5’ 23” W
--	RSW-002	In the Sacramento River 75 feet downstream of Discharge Point 001. Monitoring location to be consistent with RSW-002 monitoring location for the City of Corning WWTP and may be changed with the approval of the Executive Officer. Latitude: 39° 54’ 22” N - Longitude: 122° 5’ 19” W
--	INT-001	Membrane filter effluent. Immediately downstream from the Zenon membrane filter, and after permeate pump and before combining with flow from Pond 6 and/or Pond 7.
--	INT-002	Pond 6 and Pond 7 effluent. Combined effluent from Pond 6 and Pond 7 before combining with flow from the membrane filter effluent.
--	PND-001	In Pond 1.
--	PND-002	In Pond 2.
--	PND-003	In Pond 3.
--	PRD-001	Raw product delivered to processing each month, either as fresh fruit or from storage.
--	PREC-001	From the rain gauge located at the Receiving Yard.
--	SW-001	Storm water discharge to Class II Surface Impoundments.

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
Flow, Calculated	MGD	Calculated	Daily
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD_5)	mg/L	24-hour Composite	2/Month
Chemical Oxygen Demand	mg/L	24-hour Composite	1/Month
Chloride	mg/L	24-hour Composite	1/Month
Electrical Conductivity @ 25°C	µmhos/cm	24-hour Composite	1/Week
Iron, Total	mg/L	24-hour Composite	1/Month
pH	Standard Units	Grab	1/Week
Sodium, Total	mg/L	24-hour Composite	1/Year
Sulfate	mg/L	24-hour Composite	1/Year
Total Dissolved Solids	mg/L	24-hour Composite	1/Quarter
Total Suspended Solids (TSS)	mg/L	24-hour Composite	2/Month

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

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

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

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

   d. **Flow, Calculated** shall be influent flow less the daily stormwater flow.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor the effluent 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
Aluminum, Total	µg/L	Grab	1/Year
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Month
Ammonia Nitrogen, Total (as N)	lbs/day	Calculate	1/Month
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD_5)	mg/L	24-hour Composite	1/Week
BOD_5	lbs/day	Calculate	1/Week
Chloride	mg/L	Grab	1/Week
Chloride	lbs/day	Calculate	1/Week
Chlorine, Total Residual	mg/L	Grab	1/Day
Chlorpyrifos	µg/L	Grab	1/Year
Color	Color units	Grab	1/Month
Copper, Total	µg/L	Grab	1/Month
Diazinon	µg/L	Grab	1/Year
Electrical Conductivity @ 25°Celsius	µmhos/cm	Grab	1/Week
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Month
Iron, Filtered	µg/L	Grab	1/Month
Iron, Total	µg/L	Grab	1/Month
Mercury, Total	µg/L	Grab	1/Year
Methylene Chloride	µg/L	Grab	1/Month
Nitrate Nitrogen, Total (as N)	mg/L	Grab	1/Quarter
Nitrite Nitrogen, Total (as N)	mg/L	Grab	1/Quarter
pH	standard units	Grab	1/Day
Settleable Solids	ml/L	Grab	1/Week
Sulfate	mg/L	Grab	1/Month
Temperature	ºC	Grab	1/Week
Total Dissolved Solids	mg/L	Grab	1/Week
Total Dissolved Solids	lbs/day	Calculate	1/Week
Total Suspended Solids (TSS)	mg/L	24-hour Composite	1/Week
TSS	lbs/day	Calculate	1/Week

Parameter	Units	Sample Type	Minimum Sampling Frequency
Zinc, Total	µg/L	Grab	1/Month

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

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

   b. **24-hour composite samples** shall be collected from a 24-hour flow proportional composite.

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

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

   e. **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. Total chlorine residual monitoring is required when chlorine or chlorine containing products are used in the treatment process (i.e. Zenon filter backflush). If backflushing does not occur in a given day, this should be noted in the Discharger's monitoring report and a total chlorine residual sample may be omitted for that day only.

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

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

   h. **Filtered Iron.** Filtered samples shall be filtered prior to preservation and analysis using a 1.5-micron filter.

   i. For **pH**, alternative means of monitoring may be implemented (e.g. automatic data logger) when Facility is not fully staffed (i.e. weekends, holidays).

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Toxicity Calendar Month, Quarter and Year.

1. **Toxicity Calendar Month.** The toxicity calendar month is defined as the period of time beginning on the day of the initiation of the routine toxicity monitoring to

the day before the corresponding day of the next month if the corresponding day exists, or if not to the last day of the next month.

2. **Toxicity Calendar Quarter.** A toxicity calendar quarter is defined as **three consecutive toxicity calendar months.** For purposes of this Order, the toxicity calendar quarters **begin on 1 January, 1 April, 1 July, and 1 October** (i.e., from 1 January to 31 March, from 1 April to 30 June, from 1 July to 30 September, etc.).
3. **Toxicity Calendar Year.** A toxicity calendar year is defined as **twelve consecutive toxicity calendar months.** For purposes of this Order, the toxicity calendar year **begins on 1 January** (i.e., 1 January to 31 December), in years in which there are at least 15 days of discharge in at least one toxicity calendar quarter.

B. Acute Toxicity Testing. The Discharger shall meet the following acute toxicity testing requirements:

1. **Instream Waste Concentration (IWC) for Acute Toxicity.** The acute toxicity IWC is 100 percent effluent.
2. **Routine Monitoring Frequency.** The Discharger shall perform routine acute toxicity testing twice per toxicity calendar year in years in which there are at least 15 days of discharge, concurrent with effluent ammonia sampling.
3. **Sample Types.** The Discharger may use flow-through or static renewal testing. For static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001.
4. **Test Species.** Test species shall be rainbow trout (*Oncorhynchus mykiss*).
5. **Methods.** The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition or methods identified in the Code of Federal Regulations, title 40, part 136, or other U.S. EPA-approved methods. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
6. **Test Failure.** If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must conduct a replacement test as soon as possible.

C. 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 5 percent effluent.
2. **Routine Monitoring Frequency.** The Discharger shall perform routine chronic toxicity testing once per toxicity calendar quarter in quarters in which there are at least 15 days of discharge, concurrent with effluent ammonia sampling.

3. **Sample Types.** Effluent samples shall be grab samples when discharging to Discharge Point 001 and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001.
4. **Chronic Toxicity MMEL Compliance Testing.** If a routine chronic toxicity monitoring test results in a "fail" at the IWC, then the Discharger shall complete a chronic toxicity MMEL compliance test. If the MMEL compliance test results in a "pass", the Discharger shall complete a second chronic toxicity MMEL compliance test. All required chronic toxicity MMEL compliance tests shall be initiated within the same toxicity calendar month as the initiation of the routine monitoring chronic toxicity test. If the first chronic toxicity MMEL compliance test results in a "fail" at the IWC, then the second chronic toxicity MMEL compliance test is unnecessary and is waived.
5. **Additional Routine Monitoring Tests for TRE Determination.** A TRE is required when there is any combination of two or more MDEL or MMEL violations within a single toxicity calendar month or within two successive toxicity calendar months. In order to determine if a TRE is necessary when there is only one MDEL or MMEL violation in a single toxicity month, an additional routine monitoring test is required in the successive toxicity month. This additional routine monitoring test is not required if the Discharger is already conducting a TRE. This additional routine monitoring test could result in a violation of the MDEL and/or the need to conduct additional MMEL compliance 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, which is *Ceriodaphnia dubia*. The Discharger shall conduct chronic toxicity tests with *Ceriodaphnia dubia*, unless otherwise specified in writing by the Executive Officer (see Section V.G.2 for more information on the determination of the most sensitive species). The Executive Officer has the authority to allow the temporary use of the next appropriate species as the most sensitive species when the discharger submits documentation and the Executive Officer determines that the discharger has encountered unresolvable test interference or cannot secure a reliable supply of test organisms. The "next appropriate species" is a species in Table 1 of the Statewide Toxicity Provisions in the same test method classification (e.g., chronic aquatic toxicity test methods, acute aquatic toxicity test method), in the same salinity classification (e.g., freshwater or marine), and in the same taxon as the most sensitive species. When there are no other species in Table 1 in the same taxon as the most sensitive species (e.g., freshwater chronic toxicity tests), the "next appropriate species" is the species exhibiting the highest percent effect at the IWC tested in the species sensitivity screening other than the most sensitive species.
8. **Test Methods.** Discharger shall conduct the chronic toxicity tests on effluent samples at the instream waste concentration for the discharge in accordance with species and test methods in Short-term Methods for Estimating the Chronic

Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R02/013, 2002; Table IA, 40 C.F.R. part 136).

9. **Dilution and Control Water.** Dilution water and control water shall be prepared and used as specified in the test methods manual. If dilution water and control water 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.11, below.

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

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

1. The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010), Appendix A, Figure A-1 and Table A-1 (Chronic Freshwater and East Coast Methods) and Appendix B, Table B-1.

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

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

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

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

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

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

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

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

1. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the IWC for the discharge, the dates of sample collection and initiation of each toxicity test.
2. The statistical analysis used in *National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document* (EPA 833-R-10-003, 2010) Appendix A, Figure A-1 and Table A-1, and Appendix B, Table B-1.
3. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.

G. Most Sensitive Species Screening. The Discharger conducted its initial species sensitivity screening resulting in ***Ceriodaphnia dubia*** as the most sensitive species.

The species sensitivity screening shall be conducted at least once every fifteen years as follows and the results of the most recent species sensitivity screening shall be submitted with the Report of Waste Discharge.

1. **Frequency of Testing for Species Sensitivity Screening.** Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing four consecutive calendar quarters using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green algae (*Pseudokirchneriella subcapitata, also known as Selenastrum capricornutum*). The tests shall be

performed at an IWC of no less than 5 percent effluent. An effluent concentration greater than the IWC may be used for the species sensitivity screening.

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

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

H. Toxicity Reduction Evaluations (TRE)

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

   a. **Preparation and Implementation of Detailed TRE Action Plan.** The Discharger shall conduct TREs in accordance with an approved TRE Work Plan. Within 30 days of the test result that triggered the TRE, the Discharger shall submit to the Executive Officer a TRE Action Plan. The TRE Action Plan

shall include the following information, and comply with additional conditions set by the Executive Officer:

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

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

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

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

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location RSW-001

1. The Discharger shall monitor the Sacramento River at RSW-001 in accordance with Table E-4 and the testing requirements described in section VIII.A.2 below:

Table E-4. Receiving Water Monitoring Requirements – RSW-001

Parameter	Units	Sample Type	Minimum Sampling Frequency
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Quarter
Chloride	mg/L	Grab	1/Month
Copper, Dissolved	µg/L	Grab	1/Month
Copper, Total	µg/L	Grab	1/Month
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Week
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Month
Iron, Filtered	µg/L	Grab	1/Month
Iron, Total	µg/L	Grab	1/Month
Methylene Chloride	µg/L	Grab	1/Quarter
pH	Standard units	Grab	1/Week
Sulfate	mg/L	Grab	1/Year
Temperature	°C	Grab	1/Week
Total Dissolved Solids	mg/L	Grab	1/Month
Turbidity	NTU	Grab	1/Week
Zinc, Dissolved	µg/L	Grab	1/Month

Parameter	Units	Sample Type	Minimum Sampling Frequency
Zinc, Total	µg/L	Grab	1/Month

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

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

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

   c. **Filtered Iron.** Filtered samples shall be filtered prior to preservation and analysis using a 1.5-micron filter.

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

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

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

1. The Discharger shall monitor Sacramento River at RSW-002 in accordance with Table E-5 and the testing requirements described in section VIII.B.2 below as follows:

Table E-5. Receiving Water Monitoring Requirements – RSW-002

Parameter	Units	Sample Type	Minimum Sampling Frequency
Chloride	mg/L	Grab	1/Month
Color	Color units	Presence/absence	1/Week
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Week
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Month
pH	Standard units	Grab	1/Week
Sulfate	mg/L	Grab	1/Year
Temperature	°C	Grab	1/Week
Total Dissolved Solids	mg/L	Grab	1/Month
Turbidity	NTU	Grab	1/Week

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

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

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

   c. **Color.** Color monitoring via aerial photography and presence/absence of a discoloration in the effluent plume shall be reported in the monthly SMRs. **When discharging at 50 gpm or less**, the monitoring frequency is 1/month during daylight hours and SMRs shall include presence/absence of a discoloration in the effluent plume. **When discharging over 50 gpm**, the monitoring frequency is **1/week** during daylight hours and SMRs shall include presence/absence of a discoloration in the effluent plume, aerial photograph, discharge rate, and river level at the time of sampling. The river level shall be reported from the Department of Water Resources California Data Exchange Center station located on the Sacramento River at Vina Bridge-Main Ch (station ID: VIN).

IX. OTHER MONITORING REQUIREMENTS

A. Internal Flow Monitoring Requirements

1. **Monitoring Location INT-001 and INT-002.** The Discharger shall monitor internal flows at INT-001 and INT-002 in accordance with Table E-6:

Table E-6. Internal Flow Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous

B. Pond Monitoring Requirements

1. **Monitoring Locations PND-001, PND-002, and PND-003.** The Discharger shall monitor the treatment ponds at Monitoring Locations PND-001, PND-002, and PND-003 in accordance with Table E-7 and the testing requirements described in section IX.B.2 below:

Table E-7. Pond Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Dissolved Oxygen	mg/L	Meter	Continuous
Excessive Odors and Other Nuisances	Presence/absence	Observation	1/Day

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. **Dissolved Oxygen.** The Discharger shall measure the average DO reading from the fixed probes in each pond.

C. Production Monitoring Requirements

1. **Monitoring Location PRD-001.** The Discharger shall monitor production as tons of raw product delivered to processing each month, either as fresh fruit or from storage at Monitoring Location PRD-001. Total monthly production monitoring shall be reported monthly. Total production for the calendar year shall be reported annually, by 1 February (of the following year).

D. Rainfall and Storm Water Monitoring Requirements

1. **Monitoring Locations PREC-001 and SW-001**

   a. The Discharger shall monitor daily rainfall at Monitoring Location PREC-001 and report the daily rainfall (inches) in the monthly self-monitoring reports.

b. The Discharger shall monitor the monthly storm water generated and discharged to the treatment ponds at Monitoring Location SW-001 and report the calculated monthly storm water (gallons) in the monthly self-monitoring reports.

E. Effluent and Receiving Water Characterization

1. **Monitoring Frequency**

   a. **Effluent Sampling.** Samples shall be collected from the effluent (Monitoring Location EFF-001) quarterly between 1 April 2028 and 31 March 2029.

   b. **Receiving Water Sampling.** Samples shall be collected from the upstream receiving water (Monitoring Location RSW-001) quarterly between 1 April 2028 and 31 March 2029.

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

3. **Analytical Methods Report Certification.** Prior to beginning the Effluent and Receiving Water Characterization monitoring, the Discharger shall provide a certification acknowledging the scheduled start date of the Effluent and Receiving Water Characterization monitoring and confirming that samples will be collected and analyzed as described in the previously submitted Analytical Methods Report. If there are changes to the previously submitted Analytical Methods Report, the Discharger shall outline those changes. A one-page certification form will be provided by Central Valley Water Board staff with the permit's Notice of Adoption that the Discharger can use to satisfy this requirement. The certification form shall be submitted electronically via CIWQS submittal by the due date in the Technical Reports Table E-10.

4. The Discharger shall conduct effluent and receiving water characterization monitoring in accordance with Table E-8 and the testing requirements described in section IX.E.5 below.

Table E-8. 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

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

SEMI-VOLATILE ORGANICS

CTR Number	Semi-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

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

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
100	Pyrene	129-00-0	µg/L	Grab

INORGANICS

CTR Number	Inorganic Parameters	CAS Number	Units	Effluent Sample Type
NL	Aluminum, Total	7429-90-5	µg/L	24-hour Composite
1	Antimony, Total	7440-36-0	µg/L	24-hour Composite
2	Arsenic, Total	7440-38-2	µg/L	24-hour Composite
15	Asbestos	1332-21-4	µg/L	24-hour Composite
3	Beryllium, Total	7440-41-7	µg/L	24-hour Composite
4	Cadmium, Total	7440-43-9	µg/L	24-hour Composite
5a	Chromium, Total	7440-47-3	µg/L	24-hour Composite
6	Copper, Total	7440-50-8	µg/L	24-hour Composite
14	Iron, Total	7439-89-6	µg/L	24-hour Composite
7	Lead, Total	7439-92-1	µg/L	24-hour Composite
8	Mercury, Total	7439-97-6	µg/L	Grab
NL	Mercury, Methyl	22967-92-6	µg/L	Grab
NL	Manganese, Total	7439-96-5	µg/L	24-hour Composite
9	Nickel, Total	7440-02-0	µg/L	24-hour Composite
10	Selenium, Total	7782-49-2	µg/L	24-hour Composite
11	Silver, Total	7440-22-4	µg/L	24-hour Composite
12	Thallium, Total	7440-28-0	µg/L	24-hour Composite
13	Zinc, Total	7440-66-6	µg/L	24-hour Composite

NON-METALS/MINERALS

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

PESTICIDES/PCBs/DIOXINS

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

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

CONVENTIONAL PARAMETERS

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

NON-CONVENTIONAL PARAMETERS

CTR Number	Nonconventional Parameters	CAS Number	Units	Effluent Sample Type
NL	Foaming Agents (MBAS)	MBAS	mg/L	Grab
NL	Hardness (as $CaCO_3$)	471-34-1	mg/L	24-hour Composite
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	Grab

NUTRIENTS

CTR Number	Nutrient Parameters	CAS Number	Units	Effluent Sample Type
NL	Ammonia, Total as Nitrogen	7664-41-7	mg/L	Grab
NL	Nitrate, Total as Nitrogen	14797-55-8	mg/L	Grab
NL	Nitrite, Total as Nitrogen	14797-65-0	mg/L	Grab
NL	Phosphorus, Total (as P)	7723-14-0	mg/L	24-hour Composite

OTHER CONSTITUENTS OF CONCERN

CTR Number	Other Constituents of Concern	CAS Number	Units	Effluent Sample Type
NL	Barium	7440-39-3	µg/L	24-hour Composite
NL	Fluoride	16984-48-8	mg/L	24-hour Composite
NL	Molybdenum	7439-98-7	µg/L	24-hour Composite
NL	Chlorpyrifos	2921-88-2	µg/L	24-hour Composite
NL	Diazinon	333-41-5	µg/L	24-hour Composite

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

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

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

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

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

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

   f. **Sample Type.** All receiving water samples shall be taken as grab samples. Effluent samples shall be taken as described in Table E-8.

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

   h. **Total Mercury and Methyl Mercury.** Unfiltered methyl mercury and total mercury samples shall be taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2). The analysis of methyl mercury and total mercury shall be by U.S. EPA method 1630 and1631 (Revision E), respectively, with a reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury.

   i. **Chlorpyrifos and Diazinon** shall be sampled using U.S. EPA Method 625M, Method 8141, or equivalent GC/MS method with a lower Reporting Limit than

the Basin Plan water quality objectives of 0.015 µg/L and 0.1 µg/L for chlorpyrifos and diazinon, respectively.

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

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Central Valley Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.
4. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "Emergency Planning and Community Right to Know Act" of 1986.

B. Self-Monitoring Reports (SMRs)

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (http://www.waterboards.ca.gov/water_issues/programs/ciwqs/). The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly, quarterly, and annual SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMRs are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. Monthly SMRs are required even if there is no discharge. If no discharge occurs during the month, the monitoring report must be submitted stating that there has been no discharge.

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

Table E-9. 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
2/Month	Permit effective date	1st day of calendar month through last day of calendar month	Submit with monthly SMR
1/Quarter	Permit effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February of following year
1/Year	Permit effective date	1 January through 31 December	1 February of following year

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

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

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

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

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

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

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

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

   a. **Calendar Annual Average Limitations.** Constituents with effluent limitations specified as "calendar annual average" (BOD_5,chloride, electrical conductivity, TDS, and TSS) the Discharger shall report the calendar annual average in the annual SMR. The annual average shall be calculated as described in WDR section VII.F.

   b. **Mass Loading Limitations.** For ammonia, BOD_5, chloride, TDS, and TSS, the Discharger shall calculate and report the mass loading (lbs/day) in the SMRs. The mass loading shall be calculated as follows:

      Mass Loading (lbs/day) = Total Flow (million gallons) x Concentration (mg/L) x 8.34 divided by Period Length (days)

      The daily average constituent concentration and the total daily flow shall be used for the daily mass loading. The monthly average constituent concentration and total monthly flow shall be used for average monthly mass loading.

C. Discharge Monitoring Reports (DMRs)

1. DMRs are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal will be in addition to electronic SMR submittal. Information about electronic DMR submittal (http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/) is available on the Internet.

D. Other Reports

1. **Analytical Methods Report.** The Discharger shall complete and submit an Analytical Methods Report, electronically via CIWQS submittal, by the due date shown in the Technical Reports Table E-10. The Analytical Methods Report shall include the following for each constituent to be monitored in accordance with this Order: 1) applicable water quality objective, 2) reporting level (RL), 3) method detection limit (MDL), and 4) analytical method. The analytical methods shall be sufficiently sensitive with RLs consistent with the SSM Rule per 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv), and with the Minimum Levels (MLs) in the SIP, Appendix 4. The "Reporting Level or RL" is synonymous with the "Method Minimum Level" described in the SSM Rule. If an RL is not less than or equal to the applicable water quality objective for a constituent, the Discharger shall

explain how the proposed analytical method complies with the SSM Rule as outlined above in Attachment E, section I.F. Central Valley Water Board staff will provide a tool with the permit's Notice of Adoption to assist the Discharger in completing this requirement. The tool will include the constituents and associated applicable water quality objectives to be included in the Analytical Methods Report.

2. **Annual Operations Report.** The Discharger shall submit a written report to the Central Valley Water Board, electronically via CIWQS submittal, containing the following by the due date in the Technical Reports Table E-10:

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

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

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

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

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

3. **Report of Waste Discharge (ROWD).** For the 5-year permit renewal, the Discharger shall submit a written report to the Central Valley Water Board, electronically via CIWQS submittal, containing, at minimum, the following by the due date in the Technical Reports Table E-10:

   a. Report of Waste Discharge (Form 200);

   b. NPDES Form 1;

   c. NPDES Form 2C;

   d. **Salinity Evaluation and Minimization Plan (SEMP) Summary.** The Discharger shall evaluate the effectiveness of the SEMP 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 (e.g., ammonia, copper, and zinc).

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 E-10 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-10. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
Intentionally left blank	Standard Reporting Requirements	Intentionally left blank	Intentionally left blank
1	Report of Waste Discharge	31 March 2031	ROWD
2	Analytical Methods Report	1 June 2027	MRP X.D.1
3	Analytical Methods Report Certification	1 January 2028	MRP IX.E.3
4	Annual Operations Report	1 February 2028	MRP X.D.2
5	Annual Operations Report	1 February 2029	MRP X.D.2
6	Annual Operations Report	1 February 2030	MRP X.D.2
7	Annual Operations Report	1 February 2031	MRP X.D.2
8	Annual Operations Report	1 February 2032	MRP X.D.2

ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

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

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

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

Waste Discharge ID:	5A520303002
CIWQS Facility Place ID:	209136
Discharger	Bell-Carter Foods, LLC and City of Corning
Name of Facility:	Bell-Carter Industrial Wastewater Treatment Plant
Facility Address:	24862 Gardiner Ferry Road
Facility City, State Zip:	Corning, CA 96021
Facility County:	Tehama County
Accessor Parcel Number:	75-300-02
Facility Contact, Title and Phone Number:	Phil Quigley, Director of Manufacturing, 530-200-3452
Authorized Person to Sign and Submit Reports:	Phil Quigley, Director of Manufacturing, 530-200-3452
Mailing Address:	1012 2nd Street, Corning CA 96021
Billing Address:	Same as Mailing Address
Type of Facility:	Industrial (SIC code 2033)
Major or Minor Facility:	Minor
Threat to Water Quality:	1
Complexity:	A
Pretreatment Program:	No
Recycling Requirements:	Not Applicable
Facility Permitted Flow:	1.4 million gallons per day (MGD) daily maximum, 0.95 MGD as a monthly average, and 0.75 MGD as an annual average.
Facility Design Flow:	0.75 MGD as an annual average
Watershed:	Sacramento River
Receiving Water:	Sacramento River
Receiving Water Type:	Inland Surface Water

A. Bell-Carter Foods, LLC is the owner and operator of the Bell-Carter Industrial Wastewater Treatment Plant (Facility). The City of Corning owns the land on which the Facility is located. Together Bell-Carter Foods, LLC and the City of Corning are hereinafter referred to as the Discharger.

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 the Sacramento River, a water of the United States, within the Sacramento River watershed. The Discharger was previously regulated by Waste Discharge Requirements (WDRs) Order R5-2021-0021 (National Pollutant Discharge Elimination System (NPDES) Permit No. CA0083721) adopted on 22 April 2021 and expired on 30 May 2026. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. The Discharger filed a Report of Waste Discharge (ROWD) and submitted an application for reissuance of its WDRs and NPDES permit on 30 May 2025. The application was deemed complete on 24 June 2025. A site visit was conducted on 22 June 2026 to observe operations and collect additional data to develop permit limitations and requirements for waste discharge.

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

II. FACILITY DESCRIPTION

A. Regulatory Background

From the late 1980s to 1995, Bell-Carter discharged pretreated olive processing wastewater from two processing facilities (BC-1 and BC-2) to the City of Corning WWTP and did not discharge directly to the Sacramento River. Process wastewater flows from BC-1 and BC-2 to the Class II surface impoundments at the Facility were limited to 151 million gallons (MG) per year and pretreated olive processing wastewater discharge to the City of Corning WWTP was limited to 0.38 MGD. The City of Corning WWTP discharged treated municipal and industrial effluent to the Sacramento River and effluent quality was subject to secondary treatment standards for biological oxygen demand (BOD_5) and total suspended solids (TSS) (i.e., monthly average: 30 mg/L, weekly average: 45 mg/L, daily maximum: 90 mg/L).

In 1993 Bell-Carter requested an increase in permitted flows to the Facility from 151 MG per year to 255 MG per year and an increase in discharge of pretreated olive processing wastewater to the City of Corning WWTP from 0.38 MGD to 0.75 MGD. Environmental review was conducted and in September 1993 the Corning City Council certified the Environmental Impact Report (EIR) for the proposed expansion. The final EIR required mitigation measures at the Facility ponds for project approval. The mitigation measures included an increase to the aeration capacity of the ponds to provide additional treatment for the olive processing wastewater prior to discharge to the City of Corning WWTP.

The Discharger was issued an NPDES permit for the first time in 1995 (Order No. 95 113). Order No. 95-113 permitted a direct discharge of 0.4 MGD (monthly average) to the Sacramento River, while the facility continued to discharge 0.35 MGD pretreated olive processing wastewater to the City of Corning WWTP. The Discharger's effluent BOD_5 and TSS limitations were limited, in part, to a monthly average and daily maximum of 120 mg/L and 200 mg/L, respectively. These effluent limitations were considered interim limits that would be revised downward when treatability studies were completed and additional treatment was implemented. These limitations applied only to the surface water discharge and not the discharge to the City of Corning WWTP.

In the late 1990s, Bell-Carter installed a dissolved-air floatation (DAF) system and increased aeration which resulted in a decrease of BOD_5 and TSS concentrations. Subsequently, when the Discharger's NPDES permit was renewed in 2000, Order No. 5 00-113 imposed more stringent BOD_5 and TSS monthly average and daily maximum effluent limits (BOD_5 100/150, TSS 100/200) for the surface water discharge. The direct discharge to the Sacramento River was limited to 0.4 MGD as an annual average; however, the Order established a monthly average and daily maximum flow limit to the river of 0.6 and 1.0 MGD, respectively. [Bell-Carter had requested that the daily maximum effluent flow limit be increased to allow more flexibility in pond level management]. The maximum daily limit of 1.0 MGD was considered the "practical physical limit" for Bell Carter's direct discharge to the City of Corning's 2.0 MGD capacity outfall (the City of Corning WWTP's permitted flow limit at the time was 1.38 MGD). At the time of issuance of Order 5-00-113, the City of Corning WWTP's annual average effluent flow was approximately 1.0 MGD.

In early 2000, Bell-Carter constructed and began operation of a "Zenon" micro-filtration system that, in conjunction with the ponds, was capable of treating its entire waste stream, without relying on the City or Corning WWTP. Subsequently, in December 2003 Bell-Carter requested that the Central Valley Water Board increase its flow limitation for direct discharge to the Sacramento River from 0.4 MGD to 0.75 MGD. The increase in flow would be offset by the decrease in flow (i.e., elimination) of 0.35 MGD to the City of Corning WWTP, resulting in a zero net increase in flow to the Sacramento River. The request was reviewed and a Special Order (R5-2004-0074) amending the Discharger's current NPDES permit (Order No. 5-00-113) flow

limits was adopted by the Central Valley Water Board in June 2004. The amendment established effluent flow limits of 0.95 MGD (monthly average), 0.75 MGD (annual average), and 1.4 MGD (daily maximum). The basis for the monthly average and maximum daily limit is not explicitly clear in the Special Order, but it appears that the net flow increase value of 0.35 MGD was added to the existing monthly average limit of 0.6 MGD to achieve 0.95 MGD and the daily maximum limit of 1.0 MGD increased by 0.4 MGD to 1.4 MGD. The amendment was limited to the flow increase and did not take into consideration the net increase in solids loading from the additional 0.35 MGD of effluent now being treated to Bell-Carter existing BOD_5 and TSS effluent limits, which were less stringent than the City of Corning's secondary treatment standards. The amendment stated, however, that water quality-based effluent limits and other matters related to the increase would be addressed when Order No. 5-00-113 was renewed in a few years. Upon adoption of the Special Order R5-2004-0074, Bell-Carter ceased discharge to the City of Corning WWTP and commenced direct discharge all Facility-treated wastewater to the Sacramento River. In addition, as a result of the installation of the Zenon micro-filtration unit, use of the Facility DAF unit was discontinued (the DAF unit is still located at the treatment plant but is currently off-line) and a new DAF was purchased and installed to serve as pretreatment for Plant 2 process wastewater.

In December 2007, the NPDES permit was renewed and WDR Order No. R5-2007-0166 was adopted. Order No. R5-2007-0166 retained the flow limits established in Special Order R5-2004-0074. The 2007 permit also retained the existing concentration-based BOD_5 and TSS effluent limits from Order No. 5-00-113.

B. Description of Wastewater and Biosolids Treatment and Controls

The Discharger owns a processing plant, Bell-Carter Plant 1 (BC-1), where there are three main waste flow streams that currently require permitting: storm water that falls within the boundaries of the facility, the waste flow from the processing of olives, and the spent cooling water utilized during the canning process. Previously the Discharger had a second processing plant, Bell-Carter Plant 2 (BC-2), which has since been converted to a warehouse and does not generate any waste flow, other than storm water that falls within the boundaries of the facility (all of which is sent directly to the industrial WWTP (Facility)).

At the processing facility olives are received, processed, canned, and packaged for distribution. Wastewater from BC-1 that is collected and sent to the Facility include: storage brines, flume brines, processing lye, pitting wastes, wash-water, blowdown from the retort water recycling system, and storm water. Wastewater from the processing facility combines with storm water that falls within the boundaries of BC-1 and BC-2 and spent cooling water utilized during the canning process and is conveyed to the Facility for treatment prior to discharge to the Sacramento River.

All stormwater collected within BC-1 is typically sent to the Facility, combined with the process water, treated, and discharged to the Sacramento River. During periods

of heavy rainfall, The Discharger can direct storm water collected within the Receiving, Grading, and Storage Yard (within BC-1) for discharge to Jewett creek in accordance with the associated storm water permit (waste discharge identification [WDID] number 5R521030055). The rain that falls in or around the treatment ponds is contained (and treated) on-site. The volume of storm water and infiltration discharged to the treatment ponds is not included in the historical 255 million gallons per year flow limit. The Report of Waste Discharge states the approximate average annual storm water discharge to the Facility ponds approximately 0.039 MGD.

Process wastewater from BC-1 and BC-2 is conveyed to the Facility through an approximately 6 mile industrial sewer. Raw wastewater from a 15- to 18-inch diameter gravity flow industrial sewer enters the influent pump station wet well, which was constructed below grade. The City of Corning owns the industrial collection system and the Discharger operates and maintains the industrial collection system. The processing facilities, industrial collection system, and Facility is located in Corning, CA. The Facility is adjacent to the City of Corning's WWTP and is located on property owned by the City of Corning (Assessor's Parcel Number 75-300-02).

Wastewater from the industrial collection system is discharged to 27 acres of Class II surface impoundments (treatment ponds) located at the Facility. The wastewater is classified as a liquid designated waste and all of the impoundments are double-lined in accordance with Title 27 of the California Code of Regulations. The operational and construction factors associated with the Facility's Class II surface impoundments for groundwater protection are regulated by WDR Order No. R5-2018-0069.

The treatment system at the Facility consists of an influent pump station, influent metering and sampling equipment, a two-stage extended aeration pond system, and an ultrafiltration membrane solids separation process. Flow is pumped from the wet well via three influent pumps and transferred to the aerated ponds for secondary treatment. Influent flow can be routed directly to the front of Pond 1 or to the location of the outlet from Pond 1, if step feed is desired. The Facility has seven treatment lagoons (or ponds) for treatment and storage of influent wastewater prior to discharge. The first three of the seven ponds (Ponds 1, 2, and 3, also referred to herein as "upper ponds") provide most of the biological treatment, using floating axial aerators, and downdraft and axial mixers that keep the ponds mixed and provide sufficient aeration for biological treatment. Brush aerators are used in Ponds 4, 5, 6, and 7 (also referred to herein as the "lower ponds") to help maintain an oxygen cap as solids are settled out of the treated flow in more quiescent pond conditions.

Influent flow is introduced to Pond 1 directly from the influent pump station and is allowed to "flow through" from Pond 1 to Pond 5, achieving removal of organic matter, biochemical oxygen demand (BOD), suspended solids, and other wastewater pollutants. Ponds 4 and 5 allow for sedimentation of solids, and thus, further reduction in waste constituents. Ponds 6 and 7 are used primarily for effluent storage and polishing. Effluent from Pond 7 can typically be discharged year-round,

and its volume is replenished by treated water from Pond 6 (which is continuously recharged with flow from the upper ponds). Effluent is then primarily discharged from Pond 7 and would only discharge from Pond 6 in the unlikely event that discharge from Pond 7 was not possible.

The Discharger utilizes a “Zenon” Membrane Filtration Unit (Zenon) to treat effluent prior to discharge. The unit operates at approximately 0.40 mgd maximum (0.25 mgd during the winter months). When the Zenon unit is in operation, flow is pumped from Ponds 2 and/or 3 and through the membrane modules allowing for complete filtration of suspended solids due to the size of the membrane pore openings. Flow can also be introduced to the Zenon unit directly from Ponds 4, 5, 6, or 7 (or any combination of these). When in use, the treated effluent from the Zenon unit is discharged directly to the outfall pipe that conveys effluent to the effluent diffuser in the Sacramento River. Backwash wastewater from the ultrafiltration membrane system is discharged back to Ponds 4 and 5 for retreatment.

Direct discharge from Pond 7 is accomplished by use of the outfall pump located adjacent to the west side of Pond 7. Effluent is discharged directly to the outfall pipeline, where it mixes with Zenon discharge when the filtration unit is in use. Bell-Carter discharges Facility effluent to the Sacramento River through a multiport diffuser outfall that is also used as the City of Corning’s WWTP effluent outfall. The outfall is owned by the City of Corning.

The design average annual flow of the treatment system is 0.75 MGD and the hydraulic capacity is 2.0 MGD. The outfall capacity is inversely related to the river stage, or water surface, within the receiving water. During dry weather conditions when the river level is low, the outfall capacity is at its maximum of 3.8 MGD. During high river flow conditions, the outfall capacity is at its minimum of 2.0 MGD. To accommodate the City of Corning WWTP’s firm capacity needs, the City of Corning can restrict the amount of flow that Bell-Carter is allowed to discharge. This can occur during periods of high rainfall and/or river flows when the outfall capacity is limited to 2.0 MGD. To alleviate concerns associated with the potential limitation by the City of Corning for effluent discharge, Bell-Carter strives to maintain ample available storage within the pond system at all times.

To meet the compliance schedule for discharge color included in previous NPDES Order No. 2015-0030, Bell-Carter started discharging almost 100% of effluent flow during night hours only, starting 1 June 2020. A two hour buffer is used to allow discharge flows to normalize after sunset and before sunrise (one hour each at the start and stop of night discharge, respectively). However, Bell-Carter can discharge effluent at approximately 0.072 MGD (equal to 50 gpm) throughout day and night hours since no discoloration nuisance is observed during daylight hours at this effluent flow rate. To allow flexibility with discharge while preventing discoloration or color nuisance conditions in the receiving water, the Discharger may discharge during daylight hours up to 500 gpm (0.72 MGD) at river levels in excess of 168.6 feet (12,672 cfs), up to 600 gpm (0.864 MGD) at river levels in excess of 169.0 feet (14,136 cfs), and up to 900 gpm (1.3 MGD) at river levels in excess of 169.9 feet

(18,063 cfs).

Treatment chemicals are used at the processing facilities and the Facility. Chemicals used at the processing facilities as part of olive processing include, but are not limited to, acetic acid, calcium chloride, sodium hydroxide, ferrous gluconate, silicon product, and sodium hypochlorite. Polymers and different cleaning chemicals are also used at the processing facilities that contribute to the waste stream to the Facility. Chemicals used at the Facility are primarily used for cleaning the Zenon unit and include citric acid and sodium hypochlorite. Sulfuric acid is used for pH adjustment at the Zenon feed and polymers are used in the solids dewatering process of the sludge removed from Ponds 4, 5, and 6.

Settled solids accumulate in Ponds 4, 5, and 6 throughout the year. Solids are removed from these ponds periodically (during normal operation of the olive/canning facility) by the use of a floating dredge. Solids are transferred to sludge storage tanks and ultimately to the on-site centrifuge for dewatering. Dewatered solids are transferred to storage bins via a covered shaftless screw conveyor and are stored in bins. The solids storage bins are removed from the site daily (when the ponds are being dredged), and the solids are disposed of at Tehama County Landfill.

C. Discharge Points and Receiving Waters

1. The Facility is located in section 28, T24N, R2W, MDB&M, as shown in Attachment B, a part of this Order.
2. Treated municipal wastewater is discharged at Discharge Point 001 to the Sacramento River, a water of the United States at a point latitude 39° 54’ 24” N and longitude 122° 05’ 21” W.

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

Effluent limitations contained in Order R5-2021-0021 for discharges from Discharge Point 001 (Monitoring Location EFF-001) and representative monitoring data from 1 April 2022 through 31 March 2025 from the term of Order R5-2021-0021 are as follows:

Table F-2. Historic Effluent Limitations

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest Annual Average
Acute Whole Effluent Toxicity	% survival	Instantaneous Min 70, Three Consecutive Median 90	--	--	95	--
Ammonia Nitrogen, Total (as N)	mg/L	AMEL 15 MDEL 38	0.94	--	0.94	--

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest Annual Average
Ammonia Nitrogen, Total (as N)	lbs/day	AMEL 120 MDEL 440	3.1	--	3.1	--
Biochemical Oxygen Demand (BOD), 5-day @ 20°Celsius	mg/L	AMEL 100 MDEL 150	55	--	150	--
BOD	lbs/day	AMEL 792 MDEL 1,168	208	--	554	--
BOD	lbs/year	Annual Average (AA) 429,000	--	--	--	24,024
Chloride	lbs/day	MDEL 27,900 AA 20,900	--	--	9,777	6,217
Chlorine, Total Residual	mg/L	4-day Average 0.011 1-hour Average 0.019	--	--	Not Detected	--
Chlorpyrifos	µg/L	$S_{AMEL} \leq 1.0$ $S_{MDEL} \leq 1.0$	Not Detected	Not Detected	--	--
Copper, Total Recoverable	µg/L	AMEL 16 MDEL 37	29	--	29	--
Diazinon	µg/L	$S_{AMEL} \leq 1.0$ $S_{MDEL} \leq 1.0$	Not Detected	Not Detected	--	--
Electrical Conductivity @ 25°C	µmhos/cm	AA 9,370	--	--	--	7,615
Iron, Total Recoverable	µg/L	AA 4,200	--	--	--	1,137
Methylene Chloride	µg/L	AMEL 91 MDEL 182	2.8	--	2.8	--
pH	Standard Units	Instantaneous Min 6.5 Instantaneous Max 9.5	--	--	8.2 – 9.3	--
Settleable Solids	ml/L	AMEL 0.1 MDEL 0.2	Not Detected	--	Not Detected-	--
Total Dissolved Solids	lbs/day	MDEL 79,800 AA 59,800	--	--	32,624	20,731
Total Suspended Solids (TSS)	mg/L	AMEL 100 MDEL 200	47	--	72	--
TSS	lbs/day	AMEL 792 MDEL 1,168	225	--	383	--

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge	Highest Annual Average
TSS	lbs/year	AA 429,000	--	--	--	36,264
Zinc, Total Recoverable	µg/L	AMEL 67 MDEL 209	87	--	87	--

Table F-2 Notes:

1. **Mass-based Effluent Limits.** Except for BOD and TSS, mass-based effluent limits are based on the permitted discharge flows. Average monthly mass-based limits are based on an average monthly discharge flow of 0.95 MGD. Maximum daily mass-based limits are based on a maximum daily discharge flow of 1.4 MGD. Annual average mass-based limits are based on an annual average discharge flow of 0.75 MGD.
2. **BOD and TSS Mass-based Effluent Limitations.** Average monthly mass-based limits for BOD are based on an average monthly discharge flow of 0.95 MGD. Maximum daily mass-based limits for BOD are based on a maximum daily discharge flow of 1.4 MGD and a BOD concentration of 100 mg/L. Annual average effluent limitations are based on the average mass-loading for the calendar year.
3. **Diazinon and Chlorpyrifos.** Effluent limitations for diazinon and chlorpyrifos are based on the concentrations that shall not exceed the sum of one (1.0) as identified below:
   a. **Average Monthly Effluent Limitation (AMEL)**
   S_{AMEL} = CD M-avg/0.079 + CC M-avg/0.012 ≤ 1.0
   CD M-AVG = average monthly diazinon effluent concentration in µg/L
   CC M-AVG = average monthly chlorpyrifos effluent concentration in µg/L.
   b. **Maximum Daily Effluent Limitation (MDEL)**
   S_{MDEL} = CD W-avg/0.16 + CC W-avg/0.025 ≤ 1.0
   CD W-AVG = maximum daily diazinon effluent concentration in µg/L.
   CC W-AVG = maximum daily chlorpyrifos effluent concentration in µg/L.
4. **Acute Whole Effluent Toxicity.** The minimum daily discharge for acute toxicity is provided as the highest daily discharge.
5. **pH.** A pH range from daily minimum to daily maximum is provided as the highest daily discharge.

E. Compliance Summary

1. On 12 January 2023, the Discharger notified the Central Valley Water Board of its intent to discharge wastewater over exceeding the 0.072 MGD daytime discharge prohibition. The discharge occurred due to increased influent from rainfall over an extended time and a hold on the stormwater permit while a recent business name change was being processed that caused the pond levels to reach capacity and necessitate a discharge before spilling occurs. The discharge of treated wastewater over the 0.072 MGD daytime discharge prohibition occurred from 12 January 2023 to 20 January 2023.

2. On 23 December 2025, the Discharger notified the Central Valley Water Board of an accidental discharge of wastewater from the east end of Ponds 2 and 3 discharging approximately 429,000 gallons of wastewater from 14 December 2025 to 15 December 2025 discharging into an open field east of Pond 7. The spill occurred from a mechanical failure of an underground elbow in the wastewater conveyance line between the feed pumps and the Zenon filtration treatment unit. Upon discovery, the feed pumps were shut down to isolate the affected line and the storm drain culvert discharging to the field was plugged to prevent further migration of the discharge and the affected pipeline was repaired.

F. Planned Changes

There are no planned changes to the Facility within the permit term.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

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

A. Legal Authorities

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

B. California Environmental Quality Act (CEQA)

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

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

1. **Water Quality Control Plan.** Requirements of this Order specifically implement the applicable Water Quality Control Plans.
   a. **Basin Plan.** The Central Valley Water Board adopted a Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan), which designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for

municipal or domestic supply. Beneficial uses applicable to the Sacramento River are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Sacramento River (Shasta Dam to Colusa Basin Drain)	**Existing:** Municipal and Domestic Supply (MUN) Agricultural Supply (AGR) Industrial Service Supply (IND) Hydropower Generation (POW) 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) Wildlife Habitat (WILD) Navigation (NAV)

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

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

On 14 December 2023, the State Water Board applied for U.S. EPA Region 9 review and approval of a limited-use alternative test procedure (ATP) for the use of one-effluent concentration when conducting whole effluent toxicity (WET) testing (see 40 C.F.R. § 136.5). The application is specific to acute or chronic WET tests in Table 1 of the application when using the TST statistical approach (U.S. EPA, 2010) for analyzing the data. The application is being sought for all dischargers or facilities in California and their associated laboratories. The ATP application is still pending with U.S. EPA.

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

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

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

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

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

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

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

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

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

4. **Antidegradation Policy.** 40 Code of Federal Regulations section 131.12 requires that the state water quality standards include an antidegradation policy

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

5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

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

7. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, sections 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. sections 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state.

8. **Storm Water Requirements.** U.S. EPA promulgated federal regulations for storm water on 16 November 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from manufacturing facilities. Manufacturing facilities are applicable industries under the storm water program and are obligated to comply with the federal regulations. The Facility submitted its NOI to be covered under State Water Board Order 2014-0057-DWQ, *General Permit for Storm Water Discharges Associated with Industrial Activities* (NPDES General Permit No. CAS000001) (Industrial General Permit) under waste discharge identification number 5R521030055.

9. **Water Quality Impacts in Disadvantaged or Tribal Communities and Environmental Justice Concerns.** Consistent with Water Code section 13149.2, the Central Valley Water Board has considered environmental justice, tribal impact, and racial equity in issuing this Order. The discharges regulated by this Order may impact one or more disadvantaged communities or tribal communities. The Discharger has selected the Alternative Salinity Permitting

Approach for the Salt Control Program, which provides an alternative approach for compliance with conservative salinity limitations through implementation of specific requirements (i.e., support facilitation and completion of the Salt Control Program's Prioritization & Optimization Study). This Order addresses potential adverse impacts to water quality from the Facility's discharge by setting prohibitions and performance-based triggers on the discharge of wastewater, requiring ongoing monitoring and reporting of the discharged wastewater and receiving water, and imposing other specifications on the facility's wastewater treatment operations.

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

1. Under CWA section 303(d) (33 U.S.C. § 1313(d)), states are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 13 December 2024, U.S. EPA gave partial approval and partial disapproval to California's 2022-2024 section 303(d) List of Water Quality Limited Segments (WQLSs). The Basin Plan references this list of WQLSs, which are defined as "*…those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources* (40 C.F.R. part 130, et seq.)." The Basin Plan also states, "*Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment.*" The listing for the Sacramento River from Red Bluff to Knights Landing includes: DDT, dieldrin, dissolved oxygen, mercury, PCBs, toxicity, and temperature.
2. **Total Maximum Daily Loads (TMDLs).** Table F-4, below, identifies the 303(d) listings and any applicable TMDLs.

Table F-4. 303 (d) List for Sacramento River (Redd Bluff to Knights Landing)

Pollutant	Potential Sources	TMDL Status
DDT	Source Unknown	Planned for completion 2027
Dieldrin	Source Unknown	Planned for completion 2027
Dissolved Oxygen	Source Unknown	Planned for completion 2035
Mercury	Source Unknown	Planned for completion 2027
PCBs	Source Unknown	Planned for completion 2027
Toxicity	Source Unknown	Planned for completion 2027
Temperature	Source Unknown	Planned for completion 2037

In 2007, the Central Valley Water Board adopted an amendment to the Basin Plan that addressed impairments within the Sacramento River and Feather River Basins by promulgating a water quality objective for diazinon and chlorpyrifos as well as an implementation program designed to ensure compliance with the new water quality objective. Per this implementation program, all NPDES permits for discharges (both direct and indirect) to the Sacramento or Feather Rivers must

contain an effluent limit equivalent to the diazinon and chlorpyrifos water quality objective. This Order requires the Discharger to monitor the effluent for diazinon and chlorpyrifos, and includes effluent limitations for diazinon and chlorpyrifos.

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 Facility is also regulated as a Class II Surface Impoundment facility under Title 17, California Code of Regulations (CCR). The Waste Discharge Requirements (WDR Order No. R5-2018-0069) for the Class II Surface Impoundments pertain only to operational factors associated with the Class II Surface Impoundments and groundwater protection regulations contained in Title 27, CCR, Section 20080, et seq.

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

3. **Prohibition III.C (No controllable condition shall create a nuisance**). This prohibition implements Water Code section 13263, subdivision (a), which requires that WDRs take into consideration, among other things, "the need to prevent nuisance," as that term is defined in Water Code section 13050.
4. **Prohibition III.D (No discharge of hazardous waste)**. The Central Valley Water Board does not permit the discharge of hazardous wastes to waters of the state. The generation, transport, management, and disposal of such wastes are subject to separate regulation under state and federal law (see Health & Saf. Code, § 25100 et seq.; Cal. Code Regs., tit. 22, § 66250 et seq.; 42 U.S.C. § 6901 et seq.; 40 C.F.R. § 260-267).
5. **Prohibition III.E (Discharge Flows)**. This prohibition is based on the design annual average flow, monthly average flow, and maximum daily flow treatment capacity rating for the Facility and ensures the Facility is operated within its treatment capacity.
6. **Prohibition III.F (Olive Processing Wastewater Flow)**. This prohibition is retained from Order R5-2015-0030 and is included to ensure that adequate capacity is available within the Facility. In addition, the final Environmental Impact Report (EIR) dated August 1993 states that the basis for the 1993 expansion was a proposed annual flow of 255 million gallons per year. Any proposed increase in the flow of olive processing wastewater to the industrial treatment ponds would require modification of the EIR. The Discharger collects storm water from the processing facilities, which is also discharged to the Facility. The volume of storm water and infiltration discharged to the treatment ponds is not included in the 255 million gallons per year flow limit.
7. **Prohibition III.G (Discharge Flow During Daylight Hours).** This prohibition is based on the dark brown color of the olive processing wastewater discharge that may cause a color nuisance in the receiving water during daytime hours. Visual observation by the Discharger using aerial photography shows a marginal discoloration in the receiving water at a discharge flow of 100 gpm and a receiving water flow of 7,365 cubic feet per second, near the lower end of annual receiving water flow. Based on aerial photography by the Discharger, an effluent discharge flow rate of 50 gpm or less during daylight hours is not expected to produce discoloration. Additionally, the Discharger submitted a Project Memorandum on 20 August 2026 requesting revisions to the daytime discharge flow prohibition to include discharge flows above 50 gpm to allow flexibility for increasing discharge at higher river levels while preventing discoloration in the receiving water. The Discharger provided evidence and aerial photographs to confirm that no discoloration was seen in the receiving water at each discharge flow rate and receiving water level specified. Therefore, this prohibition ensures there is no discoloration nuisance in the receiving water during daylight hours.

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 Effluent Limitations Guidelines (ELGs) and Standards for the Canned and Preserved Fruits and Vegetables Processing Point Source Category in 40 C.F.R. part 407 and Best Professional Judgment (BPJ) in accordance with 40 C.F.R. section 125.3.

The CWA requires that technology-based effluent limitations be established based on several levels of controls:

a. Best practicable treatment control technology (BPT) represents the average of the best existing performance by well-operated facilities within an industrial category or subcategory. BPT standards apply to toxic, conventional, and non-conventional pollutants.

b. Best available technology economically achievable (BAT) represents the best existing performance of treatment technologies that are economically achievable within an industrial point source category. BAT standards apply to toxic and non-conventional pollutants.

c. Best conventional pollutant control technology (BCT) represents the control from existing industrial point sources of conventional pollutants including BOD_5, TSS, fecal coliform, pH, and oil and grease. The BCT standard is established after considering a two-part reasonableness test. The first test compares the relationship between the costs of attaining a reduction in effluent discharge and the resulting benefits. The second test examines the cost and level of reduction of pollutants from the discharge from publicly owned treatment works to the cost and level of reduction of such pollutants from a class or category of industrial sources. Effluent limitations must be reasonable under both tests.

d. New source performance standards (NSPS) represent the best available demonstrated control technology standards. The intent of NSPS guidelines is to set limitations that represent state-of-the-art treatment technology for new sources.

The CWA requires U.S. EPA to develop effluent limitations, guidelines and standards (ELGs) representing application of BPT, BAT, BCT, and NSPS. Section 402(a)(1) of the CWA and 40 C.F.R. section 125.3 authorize the use of best professional judgment (BPJ) to derive technology-based effluent limitations on a case-by-case basis where ELGs are not available for certain industrial categories and/or pollutants of concern. Where BPJ is used, the Central Valley Water Board must consider specific factors outlined in 40 C.F.R. section 125.3.

2. Applicable Technology-Based Effluent Limitations

a. **BOD_5 and TSS.** U.S. EPA's final ELGs for the Canned and Preserved Fruits Subcategory of the Canned and Preserved Fruits and Vegetables Processing Point Source Category in 40 C.F.R. part 407, subpart F established ELGs applicable to discharges resulting from the processing of olives. The ELGs at 40 C.F.R. section 407.62 include the following effluent limitations representing the degree of effluent reduction attainable for the application of BPT and BCT for BOD_5 and TSS.

Table F-5. Effluent Limitations Guidelines for BOD_5 and TSS for Olives

Parameter	Units	Daily Maximum	Average Monthly	Annual Average
BOD_5	lbs/1,000 lbs of raw material	5.44	3.34	2.39
TSS	lbs/1,000 lbs of raw material	9.79	6.92	4.44

Consistent with 40 C.F.R. sections 122.45 and 407.61, this Order includes annual average, average monthly, and maximum daily effluent limitations for BOD_5 and TSS based on a reasonable measure of the actual production for the processing facility and the applicable limitation from the ELG. The production value provided by the Discharger was used to calculate the annual average, average monthly, and maximum daily effluent limitations. The formula used to calculate the loading limits for BOD_5 and TSS from the ELGs is shown below:

Loading (lbs/day) = Production (lbs/day) ÷ 1,000 (lbs/lbs) × ELG Factor

The annual average loading (lbs/year) was calculated by using the formula above multiplied by 365 days.

In addition to the effluent limitations derived from the ELGs, Central Valley Water Board staff used its best professional judgement to set concentration based effluent limitations for BOD_5 and TSS. The Discharger utilizes various treatment technologies to remove BOD_5 and TSS from the effluent prior to discharge to the Sacramento River. While the ELGs are based on the raw commodity processed at the industrial plant prior to discharge into the Facility, the concentration based effluent limitations are based on treatment technology utilized at the Facility prior to discharging to the receiving water. Therefore, it is feasible for the Discharger to meet concentration-based effluent limitations based on the treatment technology performance. The concentration based effluent limitations are based on the level of treatment the Facility can achieve in reducing BOD_5 and TSS to ensure BOD_5 and TSS concentrations do not impact the receiving water. The performance-based

effluent limitations for BOD_5 and TSS have been carried forward from Order R5-2021-0021 and are shown Table F-6, below.

b. **pH.** The ELGs at 40 C.F.R. section 407.62(c) requires that the pH be maintained within the range of 6.0 to 9.5 at all times. 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) (BOD_5)	mg/L	AMEL 100 MDEL 150
BOD_5	lbs/day	AMEL 810 MDEL 1,300
BOD_5	lbs/year	Annual Average 211,000
Total Suspended Solids (TSS)	mg/L	AMEL 100 MDEL 200
TSS	lbs/day	AMEL 1,700 MDEL 2,400
TSS	lbs/year	Annual Average 392,000
pH	Standard units	Instantaneous Min 6.0 Instantaneous Max 9.5

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 1 April 2022 through 31 March 2025, which includes effluent and ambient background data submitted in SMRs and the ROWD. The receiving

water data point at Monitoring Location RSW-001 on 20 March 2024 for dissolved copper has been removed from the data set for being nonrepresentative. The dissolved copper concentration was greater than the total concentration on the same day which is not procedurally possible. Receiving water data at Monitoring Location RSW-001 for dissolved zinc and total zinc after 31 July 2023 was removed from the data set due to quality control concerns with the matrix spike/matrix spike duplicate lab results.

c. **Assimilative Capacity/Mixing Zone**

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

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

For Priority Pollutants, the SIP supersedes the Basin Plan mixing zone provisions. Section 1.4.2 of the SIP states, in part, "…with the exception of effluent limitations derived from TMDLs, in establishing and determining compliance with effluent limitations for applicable human health, acute aquatic life, or chronic aquatic life priority pollutant criteria/objectives or the toxicity objective for aquatic life protection in a basin plan, the Regional Board may grant mixing zones and dilution credits to dischargers…The applicable priority pollutant criteria and objectives are to be met through a

water body except within any mixing zone granted by the Regional Board. **The allowance of mixing zones is discretionary and shall be determined on a discharge-by-discharge basis.** The Regional Board may consider allowing mixing zones and dilution credits only for discharges with a physically identifiable point of discharge that is regulated through an NPDES permit issued by the Regional Board." [emphasis added]

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

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

A mixing zone shall not:

1. *compromise the integrity of the entire water body;*
2. *cause acutely toxic conditions to aquatic life passing 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. **Receiving Water and Outfall Characteristics**

The Facility discharges to the Sacramento River via a multiport diffuser. The City of Corning owns the diffuser from which both the Discharger and the City of Corning discharge. The outfall capacity is inversely related to the river stage, or water surface elevation, within the Sacramento River. During dry weather conditions when the river level is low, the outfall capacity is at its maximum of 3.8 MGD. However, during high river flows, the outfall capacity is at its minimum of 2.0 MGD. The City of Corning can restrict the amount of flow that the Facility is allowed to discharge. The diffuser is 30 feet in length and consists of four 8-inch diffuser ports with approximately 10 feet between each port. The ports extend upward from the outfall pipe, which is buried below the river bottom and is perpendicular to the river bank, and are approximately 2.5 to 3.5 feet above the channel bed. The river channel at the diffuser has a width of approximately 500 feet. The lowest one-day flow with an average reoccurrence frequency of once in ten years (1Q10) and the lowest average seven consecutive day flow with an average reoccurrence frequency of once in ten years (7Q10). The 1Q10 and 7Q10 Sacramento River flows are 3,880 cfs (2,508 MGD) and 3,930 cfs (2,540 MGD), respectively. The harmonic mean flow of the Sacramento River is 8,290 cfs (5,358 MGD).

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

Previous Studies

The Discharger completed a 2010 Mixing Zone Study with addenda in 2013 and 2014 to update the critical flows in the Sacramento River to account for drought conditions. The Discharger also submitted a 2014 pH Mixing Zone Study demonstrating that the Basin Plan objective maximum for pH of 8.5 is met at the edge of a mixing zone boundary when considering a maximum pH of 9.5 (set at the TBEL) and based on a dilution credit of 40:1. These studies served as the basis for the mixing zone and dilution credits in Order No. R5-2015-0030. However, Order No. R5-2015-0030 required a mixing zone/dilution confirmation field study to verify the model results of the previous studies and addenda.

2019 Mixing Zone/Dilution Confirmation Study

The Discharger completed a field confirmation dye study in October 2019. Dye measurements were collected at transects of 32, 59, 137, and 240

feet downstream of the diffuser. At approximately 800 feet downstream of the diffuser, an island bifurcates the Sacramento River. With the relatively low river flow during the time of the study, a 1,000 foot downstream transect was not measured on the west side of the island, but it was confirmed that no effluent was flowing on the east side of the island. Results of the measured dye study were used to select an appropriate model to establish mixing zone distances and dilution credits in accordance with the SIP. Results of the model show the mixing zone sizes for selected dilution ratios below:

Table F-7. Mixing Zone Length (in feet) for Different Criteria Based on Dilution Ratios

Dilution Ratio	Acute Criteria	Chronic Criteria	Human Health Criteria
10:1	19	15	4
20:1	39	29	8
40:1	104	68	17
60:1	252	139	25
80:1	--	275	35
100:1	--	--	46
120:1	--	--	61
140:1	--	--	79
160:1	--	--	100

iv. **Evaluation of Available Dilution for Human Health Criteria.** The SIP requires a mixing zone must be as small as practicable and comply with eleven (11) mixing zone prohibitions under section 1.4.2.2.A. Based on Central Valley Water Board staff evaluation, the mixing zone extends up to 100 feet downstream of the Facility's outfall and a maximum available dilution credit of 160:1 meets the eleven prohibitions of the SIP as follows:

(1) Shall not compromise the integrity of the entire water body – 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 water body (such as a river segment), then mixing zones are likely to have little effect on the integrity of the water body as a whole, provided that the mixing zone does not impinge on unique or critical habitats."* The width of the Sacramento River at the outfall is approximately 500 feet. During the field dye study conducted in 2019, the dye was not measured more than 90 feet from the west bank of the Sacramento River at low flows. Additionally, the Sacramento River is a large river spanning over 100 miles in length downstream of the outfall. The mixing zones are small relative to the large size of the receiving water; therefore, the human health mixing zones do not compromise the integrity of the entire water body.

(2) Shall not cause acutely toxic conditions to aquatic life passing through the mixing zone – The mixing zone is not applicable to aquatic life

criteria. Therefore, acutely toxic conditions will not occur in the mixing zone.

(3) Shall not restrict the passage of aquatic life – The human health mixing zone is not applicable to aquatic life criteria. Therefore, the mixing zone will not restrict the passage of aquatic life.

(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 – The mixing zone is not applicable to aquatic life criteria. The mixing zone will not impact biologically sensitive or critical habitats.

(5-9) Shall not produce undesirable or nuisance aquatic life; result in floating debris, oil, or scum; produce objectionable color, odor, taste, or turbidity; cause objectionable bottom deposits; cause nuisance – The allowance of the mixing zone 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. Therefore, the allowance of the mixing zone 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.

(10) Shall not dominate the receiving water body or overlap a mixing zone from different outfalls – The mixing zone is small relative to the water body, so it will not dominate the water body. The Discharger shares an outfall with the City of Corning WWTP, and the 2019 Mixing Zone/Dilution Confirmation Study accounted for both discharges. There are no other outfalls or mixing zones in the vicinity of the discharge.

(11) Shall not be allowed at or near any drinking water intake – The mixing zone is not near a drinking water intake.

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

v. **Evaluation of Available Dilution for Acute and Chronic Aquatic Life Criteria.** 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 acute aquatic life mixing zone extends up to 252 feet downstream of the Facility's outfall and a maximum available dilution credit of 60:1 and the chronic aquatic life mixing zone extends up to 275 feet downstream of the Facility's outfall and a maximum available dilution credit of 80:1 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*." The width of the Sacramento River at the outfall is approximately 500 feet. During the field dye study conducted in 2019, the dye was not measured more than 90 feet from the west bank of the Sacramento River. Additionally, the Sacramento River is a large river spanning over 100 miles in length downstream of the outfall. The mixing zones are small relative to the large size of the receiving water; therefore, the mixing zones do not compromise the integrity of the entire waterbody.

(2) Shall not cause acutely toxic conditions to aquatic life passing through the mixing zone – The SIP requires that the acute mixing zone be appropriately sized to prevent lethality to organisms passing through the mixing zone. U.S. EPA recommends that float times through a mixing zone less than 15 minutes ensures that there will not be lethality to passing organisms. The acute mixing zone allowed in this Order extends 252 feet downstream from the outfall. The float time is very short, literally only a few seconds. Compliance with these requirements ensures that acutely toxic conditions to aquatic life passing through the acute and chronic mixing zones do not occur.

(3) Shall not restrict the passage of aquatic life –The acute and chronic mixing zones are small relative to the large size of the receiving water; therefore, there is an adequate zone of passage for aquatic life in the Sacramento River.

(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 – The acute and chronic mixing zones will not cause acutely toxic conditions, allow an adequate zone of passage, and are sized appropriately to ensure that there will be no adverse impacts to biologically sensitive or critical habitats.

(5-9) Shall not produce undesirable or nuisance aquatic life; result in floating debris, oil, or scum; produce objectionable color, odor, taste, or turbidity; cause objectionable bottom deposits; cause nuisance – The allowance of 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. Therefore, the allowance of the 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.

(10) Shall not dominate the receiving water body or overlap a mixing zone from different outfalls – The acute and chronic mixing zones are small relative to the water body, so it will not dominate the water body. The Discharger shares an outfall with the City of Corning WWTP, and the 2019 Mixing Zone/Dilution Confirmation Study accounted for both discharges. There are no other outfalls or mixing zones in the vicinity of the discharge.

(11) Shall not be allowed at or near any drinking water intake – The acute and chronic mixing zones are not near a drinking water intake.

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

vi. **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, chronic whole effluent toxicity, copper, and zinc and the acute and chronic aquatic life criteria mixing zones meet the mixing zone prohibitions of the SIP section 1.4.2.2.A.

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

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

The mixing zones allowed in this Order are as small as practicable and will result in the Discharger implementing best practicable treatment or control of the discharge necessary to assure that pollution or nuisance will not

occur and the highest water quality consistent with maximum benefit to the people of the State will be maintained.

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

(a) **Ammonia.** As outlined above, acute and chronic aquatic life criteria mixing zones extending 252 feet for acute and 275 feet for chronic downstream of the Facility's outfall and a maximum dilution credit of 60:1 for acute and 80:1 for chronic meet the eleven mixing zone prohibitions of section 1.4.2.2.A of the SIP. In this case, however, to ensure the mixing zone is as small as practicable and considering section 1.4.2.2.B of the SIP, the Central Valley Water Board finds the mixing zone must be limited. The dilution credit for ammonia has been adjusted based on Facility performance resulting in dilution credits of 38.3:1 for acute and 12:1 for chronic and a mixing zone extending 98 feet for acute and 23 feet for chronic downstream has been granted for ammonia.

This Order is decreasing the effluent limitations for ammonia from previous Order R5-2021-0021. 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) **Chronic Whole Effluent Toxicity.** As discussed in section v above, the receiving water contains assimilative capacity for chronic aquatic life criteria. Therefore, a dilution credit of 19:1 was granted for the chronic aquatic life criteria in determination of reasonable potential for chronic whole effluent toxicity. Therefore, the dilution credit of 19:1 for chronic whole effluent toxicity represents a mixing zone length of approximately 30 feet. This represents a mixing zone that is as small as practicable for this Facility and that fully complies with the SIP.

(c) **Copper.** As outlined above, acute and chronic aquatic life criteria mixing zones extending 252 feet for acute and 275 feet for chronic downstream of the Facility's outfall and a maximum dilution credit of 60:1 for acute and 80:1 for chronic meet the eleven mixing zone prohibitions of section 1.4.2.2.A of the SIP. In this case, however, to ensure the mixing zone is as small as practicable and considering section 1.4.2.2.B of the SIP, the Central Valley Water Board finds the mixing zone must be limited. The dilution credit for copper has been adjusted based on Facility performance resulting in dilution credits of 10:1 for acute and 11:1 for chronic and a mixing zone extending 19 feet for acute and 16 feet for chronic downstream has been granted for copper.

This Order is carrying forward the effluent limitations for copper from previous Order R5-2021-0021 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.

(d) **Zinc.** As outlined above, acute and chronic aquatic life criteria mixing zones extending 252 feet for acute and 275 feet for chronic downstream of the Facility's outfall and a maximum dilution credit of 60:1 for acute and 80:1 for chronic meet the eleven mixing zone prohibitions of section 1.4.2.2.A of the SIP. In this case, however, to ensure the mixing zone is as small as practicable and considering section 1.4.2.2.B of the SIP, the Central Valley Water Board finds the mixing zone must be limited. The dilution credit for zinc has been adjusted based on Facility performance resulting in dilution credits of 11.2:1 for acute and 0.31:1 for chronic and a mixing zone extending 21 feet for acute and 0.47 feet for chronic downstream has been granted for zinc.

This Order is carrying forward the effluent limitations for zinc from previous Order R5-2021-0021 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, chronic whole effluent toxicity, copper, and zinc. The dimensions of the mixing zones and allowable dilution credits are shown in Table F-8, 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 long-term receiving water flow. The long-term receiving water flows are the 1Q10 for acute aquatic life of 3,880 cfs (2,508 MGD), the 7Q10 for chronic aquatic life of 3,930 cfs (2,540 MGD), and the harmonic mean flow for human health of 8,290 cfs (5,358 MGD). Use of the long-term receiving water flows are appropriate for antidegradation purposes which considers the long-term effect of an allowed permitted increase in the mass loading on the receiving water. The percent assimilative capacity used calculations are summarized in Table F-9, below.

Table F-8. Mixing Zones and Dilution Credits

Parameter	Mixing Zone Type	Allowed Dilution Credit	Mixing Zone Size (feet)
Ammonia	Acute and Chronic Aquatic Life	Acute 38.3:1 Chronic 12:1	Acute 98 Chronic 23
Chronic Whole Effluent Toxicity	Chronic Aquatic Life	Chronic 19:1	Chronic 30
Copper	Acute and Chronic Aquatic Life	Acute 10:1 Chronic 11:1	Acute 19 Chronic 16
Zinc	Acute and Chronic Aquatic Life	Acute 11.2:1 Chronic 0.31:1	Acute 21 Chronic 0.47

Table F-9. Percent Assimilative Capacity Used Calculations

Parameter	Ammonia as N	Copper, Total	Zinc, Total
Water Quality Objective/ Criteria	0.40 mg/L	4.5 µg/L	17 µg/L
Maximum Background Concentration	0.13 mg/L	2.7 µg/L	9.5 µg/L
Existing Permitted Condition	15 mg/L	16 µg/L	67 µg/L
Revised Permitted Condition	3.2 mg/L	16 µg/L	67 µg/L
Existing Permitted Assimilative Capacity	0.14 mg/L	2.8 µg/L	9.5 µg/L
Revised Permitted Assimilative Capacity	0.13 mg/L	2.8 µg/L	9.5 µg/L
Percent Change in Assimilative Capacity	0%	0%	0%

Table F-9 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. **Existing Permitted Assimilative Capacity** is the existing mixed downstream concentration based on the existing permitted condition.
4. **Revised Permitted Assimilative Capacity** is the revised mixed downstream concentration based on the revised permitted condition.
5. **Assimilative Capacity** calculated using mass balance equation with a long-term average receiving water flow of 2,508 MGD for acute, 2,540 MGD for chronic, and 5,358 MGD for human health and the permitted maximum daily flow of 1.4 MGD.

d. **Conversion Factors.** The CTR contains aquatic life criteria for arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc,

which are presented in dissolved concentrations. 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. Furthermore, a default Water Effects Ratio (WER) of 1 was used for calculating criteria for applicable inorganic constituents. Per the Reopener Provisions of this Order, if the Discharger performs studies to determine site-specific WERs or dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

e. **Hardness-Dependent CTR Metals Criteria.** The CTR and the NTR contain water quality criteria for seven metals that vary as a function of hardness. The lower the hardness the lower the water quality criteria. The metals with hardness-dependent criteria include cadmium, copper, chromium III, lead, nickel, silver, and zinc. For the Sacramento River the Basin Plan contains hardness-dependent site-specific objectives for cadmium, copper, and zinc that apply in lieu of the CTR acute criteria for these metals. 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 Sacramento River ranges from 43 mg/L to 78 mg/L based on collected ambient data from April 2022 through March 2025. 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 43 mg/L (minimum) up to 78 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-10 to conduct the reasonable potential analysis (RPA) and , unless otherwise noted in the table, to calculate WQBELs, protect beneficial uses under all ambient receiving water conditions and comply with the SIP, CTR, and Basin Plan.

Table F-10. 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	78	10.7	7.5
Chromium III	78	1,400	170
Cadmium	78 (acute) 78 (chronic)	0.46	2.0
Lead	78	60	2.3
Nickel	78	380	42
Silver	78	2.7	--
Zinc	78	28	97

Table F-10 Notes:

1. **Criteria (µg/L total).** Acute and chronic criteria were rounded to two significant figures in accordance with the CTR (40 C.F.R. section 131.38(b)(2)).
2. **Ambient hardness (mg/L).** Values in Table F-10 represent actual observed receiving water hardness measurements.
3. **Acute Criteria.** The acute criteria for Cadmium, Copper, and Zinc are based on site-specific objectives provided in the Basin Plan.
4. **Copper and Zinc.** This Order allows a mixing zone for copper and zinc. The ambient hardness shown above is only appropriate for conducting the RPA, because dilution has not been considered. As discussed in section IV.C.2.c, when considering dilution to calculate the WQBELs the appropriate ambient hardness is 43 mg/L (as $CaCO_3$) based solely on upstream receiving water hardness.

3. Determining the Need for WQBELs

Clean Water Act section 301(b)(1)(C) requires effluent limitations necessary to meet water quality standards, and 40 C.F.R. section 122.44(d) requires NPDES permits to include conditions that are necessary to achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality. Federal regulations at 40 C.F.R 122.44(d)(1)(i) state, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Additionally, 40 C.F.R. section 122(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.

a. **Constituents with Total Maximum Daily Load (TMDL).**
40 C.F.R. section 122.44(d)(1)(vii) provides: "When developing water quality-based effluent limits under [section 122.44(d)(1)], the permitting authority shall ensure that: (A) The level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies

with all applicable water quality standards; and (B) Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available WLA for the discharge prepared by the State and approved by U.S. EPA pursuant to [Total Maximum Daily Loads regulations]." U.S. EPA construes 40 C.F.R. section 122.44(d)(1)(vii)(B) to mean that "when WLAs are available, they must be used to translate water quality standards into NPDES permit limits." 54 Fed. Reg. 23868, 23879 (June 2, 1989).

The Sacramento River is subject to TMDLs for chlorpyrifos and diazinon and WLAs under those TMDLs are available. The Central Valley Water Board developed WQBELs for these pollutants pursuant to 40 C.F.R. section 122.44(d)(1)(vii), which does not require or contemplate a reasonable potential analysis.

i. **Diazinon and Chlorpyrifos.**

(a) **WQO.** The Central Valley Water Board completed a TMDL for diazinon and chlorpyrifos in the Sacramento and Feather Rivers and amended the Basin Plan to include diazinon and chlorpyrifos waste load allocations and water quality objectives. The Basin Plan Amendment for the Control of Diazinon and Chlorpyrifos Runoff into the Sacramento and Feather Rivers was adopted by the Central Valley Water Board on 3 May 2007 and became effective on 11 August 2008.

The amendment modified Basin Plan Chapter 3 (Water Quality Objectives) to establish site-specific numeric objectives for diazinon and chlorpyrifos in the Sacramento River from the Colusa Basin Drain to I Street Bridge and the Feather River from Fish Barrier Dam to the Sacramento River, and identified the requirements to meet the additive formula already in Basin Plan Chapter 4 (Implementation) for the additive toxicity of diazinon and chlorpyrifos.

The amendment states that the waste load allocations for all NPDES-permitted dischargers shall not exceed the sum (S) of one (1) as defined below:

$S = Cd/WQOd + Cc/WQOc \leq 1.0$

Where:

Cd = diazinon concentration in µg/L of point source discharge

Cc = chlorpyrifos concentration in µg/L of point source discharge

WQOd = acute or chronic diazinon water quality objective in µg/L

WQOc = acute or chronic chlorpyrifos water quality objective in µg/L

Available samples collected within the applicable averaging period for the water quality objective will be used to determine compliance with the allocations and loading capacity. For purposes of calculating the

sum (S) above, analytical results that are reported as 'non-detectable' concentrations are considered to be zero.

(b) **WQBELs.** WQBELs for diazinon and chlorpyrifos are required per the TMDL. This Order includes effluent limits calculated based on the WLAs contained in the TMDL, as follows:

Average Monthly Effluent Limitation (AMEL)

$$S(AMEL) = Cd\ (M\text{-}avg)/0.079 + Cc\ (M\text{-}avg)/0.012 \leq 1.0$$

Where:

Cd(M-avg) = average monthly diazinon effluent concentration in µg/L

Cc (M-avg) = average monthly chlorpyrifos effluent concentration in µg/L

Maximum Daily Effluent Limitation (MDEL)

$$S(MDEL) = Cd\ (W\text{-}avg)/0.16 + Cc\ (W\text{-}avg)/0.025 \leq 1.0$$

Where:

Cd(W-avg) = maximum daily diazinon effluent concentration in µg/L

Cc (W-avg) = maximum daily chlorpyrifos effluent concentration in µg/L

(c) **Plant Performance and Attainability.** Chlorpyrifos and diazinon were not detected in the effluent eight sampling events conducted between 1 April 20222 and 31 March 2025. Furthermore, since these pesticides have been banned for public use, they are not expected to be present in the influent to the Facility. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

b. **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. **Iron**

(a) **WQO.** The Secondary MCL – Consumer Acceptance Limit for iron is 300 µg/L. The DDW has established Secondary Maximum Contaminant Levels (MCLs) to assist public drinking water systems in managing their drinking water for public welfare considerations, such as taste, color, and odor. The Secondary MCL is used to implement the Basin Plan's chemical constituent objective for the protection of municipal and domestic supply.

(b) **RPA Results.** For priority pollutants, the SIP dictates the procedures for conducting the RPA. Iron is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to the site specific conditions of the discharge, the Central Valley Water Board used best professional judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.

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

$$Cr = (QsCs + QcCd) / (Qs + Qd)$$

Where:

Qs = Critical stream flow

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

Cs = Critical upstream pollutant concentration

Cd = Critical effluent pollutant concentration

Cr = Critical downstream receiving water pollutant concentration

For the purposes of conducting the RPA, the critical stream flow (Qs) has been set to the harmonic mean flow of 5,358 MGD in the Sacramento River and the critical effluent flow (Qd) has been set to the

permitted annual average flow of 0.75 MGD. The critical effluent pollutant concentration, Cd, has been established as the projected annual average effluent concentration. Calculating a maximum annual average concentration considers variability in the data, per 40 C.F.R. § 122.44(d)(1)(ii). The projected annual average effluent concentration was determined based on effluent data collected from April 2022 to March 2025 and projected using statistics recommended in the TSD for statistically projecting effluent concentrations (i.e., Table 3-1 of the TSD using the 99 percent probability basis and 99 percent confidence level).

The projected annual average effluent concentration (Cd) is 1,300 µg/L based on an average effluent iron concentration of 880 µg/L. The annual average upstream receiving water concentration (Cs) for iron was 48 µg/L. Using the equation above, the calculated critical downstream receiving water iron concentration (Cr) is 48 µg/L, which is comparable to ambient upstream conditions and does not exceed the Secondary MCL. Therefore, iron in the discharge does not have reasonable potential to cause or contribute to an instream excursion above the Secondary MCL.

ii. **Methylene Chloride**

(a) **WQO.** The CTR includes a criterion of 4.7 µg/L for methylene chloride for the protection of human health for waters from which both water and organisms are consumed.

(b) **RPA Results.** The maximum effluent concentration (MEC) for methylene chloride was 2.8 µg/L while and not detected in the receiving water. Therefore, methylene chloride in the discharge does not have reasonable potential to cause or contribute to an instream excursion above the CTR criterion for the protection of human health.

iii. **Nitrite**

(a) **WQO.** DDW has adopted a Primary MCL for nitrite of 1.0 mg/L, which is protective of the Basin Plan's chemical constituent objective.

(b) **RPA Results.** For priority pollutants, the SIP dictates the procedures for conducting the RPA. Nitrite is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to the site specific conditions of the discharge, the Central Valley Water Board used best professional judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.

U.S. EPA's September 2010 NPDES Permit Writer's Manual recommends using a mass-balance approach to determine the expected critical downstream receiving water concentration using a

steady-state approach. The downstream receiving water concentration is then compared to the applicable water quality threshold to determine if the discharge has reasonable potential to cause or contribute to an in-stream excursion. This approach allows assimilative capacity and dilution to be factored into the RPA. This U.S. EPA recommended approach has been used to assess the reasonable potential for nitrite in the Facility's effluent to adversely affect the receiving water beneficial uses. The critical downstream receiving water concentration is calculated using the equation below:

Cr = (QsCs + QcCd) / (Qs + Qd)

Where:

Qs = Critical stream flow

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

Cs = Critical upstream pollutant concentration

Cd = Critical effluent pollutant concentration

Cr = Critical downstream receiving water pollutant concentration

For the purposes of conducting the RPA, the critical stream flow (Qs) has been set to the harmonic mean flow of 5,358 MGD in the Sacramento River and the critical effluent flow (Qd) has been set to the permitted annual average flow of 0.75 MGD. The critical effluent pollutant concentration, Cd, has been established as the projected annual average effluent concentration. Calculating a maximum annual average concentration considers variability in the data, per 40 C.F.R. § 122.44(d)(1)(ii). The projected annual average effluent concentration was determined based on effluent data collected from April 2022 to March 2025 and projected using statistics recommended in the TSD for statistically projecting effluent concentrations (i.e., Table 3-1 of the TSD using the 99 percent probability basis and 99 percent confidence level).

The projected annual average effluent concentration (Cd) is 3.0 mg/L based on an average effluent nitrite concentration of 0.32 mg/L. The annual average upstream receiving water concentration (Cs) for nitrite was 0.025 mg/L. Using the equation above, the calculated critical downstream receiving water nitrite concentration (Cr) is 0.025 mg/L, which is comparable to ambient upstream conditions and does not exceed the Primary MCL. Therefore, nitrite in the discharge does not have reasonable potential to cause or contribute to an instream excursion above the Primary MCL.

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

i. **Ammonia**

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

The Central Valley Clean Water Association (CVCWA) organized a coordinated effort for POTWs within the Central Valley Region, the Freshwater Mussel Collaborative Study for Wastewater Treatment Plants, to determine how the latest scientific knowledge on the toxicity of ammonia reflected in the NAWQC could be implemented in the Central Valley Region. Through this effort, a Criteria Recalculation Report was developed in January 2020 using toxicity studies for the freshwater mussel species present in Central Valley Region waters.

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

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

Site-specific Criteria for Sacramento River. The recalculated site-specific criteria developed in the Criteria Recalculation Report for the

acute and chronic criteria are presented as equations that vary according to pH and temperature for situations where freshwater mussels are present and where they are absent. In this case, for the Sacramento 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, which can be implemented for receiving waters where salmonid species are present. Because the Sacramento River has a beneficial use of cold freshwater habitat and the presence of salmonids in the Sacramento River is well-documented, the criteria equations for waters where salmonids are present were used.

The acute (1-hour average) criterion or CMC was calculated using paired effluent pH and temperature data, collected during the period from 1 April 2022 to 31 March 2025. The most stringent CMC of 0.47 mg/L (ammonia as N) calculated has been implemented in this Order.

The chronic (30-day average) criterion or CCC was calculated using paired upstream receiving water pH and temperature data, collected during the period from 1 April 2022 to 31 March 2025. The most stringent 30-day rolling average CCC of 0.41 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 0.41 mg/L (ammonia as N), the 4-day average concentration that should not be exceeded is 1.0 mg/L (ammonia as N).

(b) **RPA Results.** The maximum effluent concentration (MEC for ammonia was 0.94 mg/L, while the maximum observed upstream receiving water concentration was 0.13 mg/L. The ammonia concentration in the discharge exceeds the criteria, therefore the effluent has a reasonable potential to cause or contribute to an instream excursion above the narrative toxicity objective.

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

As noted in section IV.C.2.c.iii of this Fact Sheet, a mixing zone for pH is granted to meet the Basin Plan objective of 8.5. Since the ammonia criteria varies with pH and due to constraints with modeling pH mixing downstream of the discharge while accounting for the City of Corning's effluent, the ammonia criteria is instead calculated as a worst-case scenario using paired effluent pH and temperature.

However, the receiving water contains assimilative capacity for ammonia based on upstream samples that should be accounted for when determining effluent limits. In order to account for assimilative capacity available in the receiving water, paired upstream pH and temperature was used to calculate criteria in the receiving water to compare to the upstream samples (B).

As discussed in section IV.C.2.c, an acute aquatic life dilution credit of 38.3:1 and a chronic dilution credit of 12:1 was allowed in the development of the WQBELs for ammonia. This Order contains a final average monthly effluent limitation (AMEL) and maximum daily effluent limit (MDEL) for ammonia of 3.2 mg/L and 13 mg/L, respectively, based on the site-specific ammonia criteria for the Sacramento River.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the MEC of 0.94 mg/L is less than the applicable WQBELs. 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 during the pulsed backflush of the Zenon unit 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.

Federal regulations at 40 C.F.R. section 122.44(d)(1)(i) requires that, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." For priority pollutants, the SIP dictates the procedures for conducting the RPA. Chlorine is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA

method. Due to the site-specific conditions of the discharge, the Central Valley Water Board has used its judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.

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 WQBEL's are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBEL's for pathogens in all permits for POTW's 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."

The Discharger occasionally uses a chlorine-containing compound to periodically backflush the Zenon unit, which is extremely toxic to aquatic organisms. 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 in-stream 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 chlorine was not detected and is less than the applicable WQBELs. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iii. **Copper**

(a) **WQO.** The CTR and Basin Plan include 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. Default U.S. EPA translators were used to translate dissolved concentrations to total concentrations.

As described in section IV.C.2.e of this Fact Sheet, the applicable CTR chronic criteria for copper in the effluent is 7.5 µg/L as total and 7.2 µg/L as dissolved concentration.

The CTR acute criteria does not apply to the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City. The Basin Plan includes a hardness-dependent, site-specific objective for copper for the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City. The applicable Basin Plan objective for copper in the effluent is 10.7 µg/L as total and 10.3 µg/L as dissolved concentration, applied as the acute criteria.

(b) **RPA Results.** The maximum effluent concentration for dissolved copper was 28 µg/L, based samples collected between 1 April 2022 and 31 March 2025. The maximum observed upstream receiving water dissolved copper concentration was 8.75 µg/L, based on 32 samples collected between 1 April 2022 and 31 March 2025. However, this receiving water result was determined to be invalid because a total copper sample on the same day was 4.6 µg/L which is not procedurally possible. Therefore, the next highest observed upstream receiving water dissolved copper concentration was 2.7 µg/L based on the same time period. 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 shown in section IV.C.2.e of this Fact Sheet to compare the maximum effluent concentration. The table below shows the specific criteria used for the RPA:

Table F-11. Copper RPA Criteria

Water Type	CTR Chronic Criterion (Dissolved)	Maximum Concentration (Dissolved)	Criteria Exceeded? (Y/N)
Receiving Water	4.3 µg/L	2.7 µg/L	No
Effluent	7.2 µg/L	28 µg/L	Yes

Table F-11 Notes:

1. **Receiving Water.** The CTR Chronic Criterion (Dissolved) for the receiving water is based on lowest observed upstream hardness of 43 mg/L (as $CaCO_3$).

2. **Effluent.** The CTR Chronic Criterion (Dissolved) for the effluent is based on reasonable worst-case downstream hardness of 78 mg/L (as $CaCO_3$).

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

(c) **WQBELs.** The receiving water contains assimilative capacity for copper. The WQBELs were calculated with the allowance of acute and chronic aquatic life criteria mixing zones and dilution credits based on the CTR criteria for the protection of freshwater aquatic life as discussed in section IV.C.2.c of this Fact Sheet. The lowest observed upstream hardness of 43 mg/L was used to calculate the criteria in order to account for the available dilution in the receiving water. Using this hardness value, the most stringent criteria was used to calculate the WQBELs. The applicable criterion is the CTR chronic criteria (dissolved) of 4.5 µg/L. The default U.S. EPA translators were used to translate dissolved effluent limitations to total effluent limitations. This Order contains a final AMEL of 16 µg/L and a MDEL of 41 µg/L for total copper based on an acute dilution credit of 10:1 and a chronic dilution credit of 11:1.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the total copper MEC of 29 µg/L is less than the applicable MDEL. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iv. **pH**

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

(b) **RPA Results.** Olive processing wastewater inherently has variable pH. Additionally, some industrial 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 settleable solids and WQBELs are required.

Federal regulations at 40 C.F.R. section 122.44(d)(1)(i) requires that, “Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for

water quality." For priority pollutants, the SIP dictates the procedures for conducting the RPA. pH is not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to the site-specific conditions of the discharge, the Central Valley Water Board has used its judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.

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 WQBEL's are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBEL's for pathogens in all permits for POTW's 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."

The Facility is an industrial wastewater treatment plant that treats olive processing wastewater. The effluent pH ranged from 8.2 to 9.3 while the upstream receiving water pH ranged from 6.5 to 8.9. The pH for the Facility's influent varies due to the nature of olive processing wastewater, which provides the basis for the discharge to have a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's numeric objective for pH in the receiving water.

(c) **WQBELs.** An instantaneous minimum effluent limitation of 6.5 is included in this Order based on the Basin Plan objective for pH. The receiving water contains assimilative capacity for the maximum pH. As described in section IV.C.2.c.iii of the Fact Sheet, the Discharger completed a 2014 mixing zone study that demonstrated that the maximum Basin Plan objective of 8.5 is met at the edge of the mixing zone; therefore, no instantaneous maximum effluent limitation is required to meet the Basin Plan objective of 8.5.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the instantaneous minimum of 8.2 is less than the applicable WQBELs. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

v. **Salinity**

(a) **WQO.** Basin Plan section 3.1 contains a WQO for chemical constituents that incorporates state MCLs (Cal. Code Regs., tit. 22, §§ 64431, 64444, 64449), contains a narrative objective, and contains numeric site-specific WQOs for certain specified water bodies for electrical conductivity (EC), total dissolved solids (TDS), and chloride. The U.S. EPA Ambient Water Quality Criteria for Chloride recommends acute and chronic criteria for the protection of aquatic life. There are no U.S. EPA water quality criteria for the protection of aquatic life for EC, TDS, and/or sulfate. Additionally, there are no U.S. EPA numeric water quality criteria for the protection of agricultural, livestock, and industrial uses. Numeric values for the protection of these uses are typically based on site specific conditions and evaluations to determine the appropriate constituent threshold necessary to implement the Basin Plan's narrative WQO for chemical constituents. The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply. Table F-12, below, contains various recommended levels for EC or TDS, sulfate, and chloride.

Table F-12. Salinity Water Quality Criteria/Objectives

Parameters	Secondary MCL Recommended Level.	Secondary MCL Upper Level	Secondary MCL Short-term Maximum	U.S. EPA NAWQC	Maximum Calendar Annual Average Effluent Concentration	Maximum Daily Effluent Concentration
EC (µmhos/cm) or TDS (mg/L)	EC 900 or TDS 500	EC 1,600 or TDS 1,000	EC 2,200 or TDS 1,500	N/A	EC 7,590 TDS 4,870	EC 10,200 TDS 6,630
Sulfate (mg/L)	250	500	600	N/A	24	86
Chloride (mg/L)	250	500	600	860 1-hour / 230 4-day	1,470	2,000

Table F-12 Notes:

1. **Agricultural Water Quality Objectives.** Applicable agricultural water quality objectives vary. Basin Plan section 4.2 contains a Policy for Application of Water Quality Objectives, which provides procedures for establishing numeric water quality objectives to implement the narrative water quality objective for chemical constituents. The Basin Plan does not require improvement over naturally occurring background concentrations. In cases where the natural background concentration of a particular constituent exceeds an applicable

water quality objective, the natural background concentration will be considered to comply with the objective.

2. **Secondary MCLs.** Secondary MCLs are for protection of public welfare and are stated as a recommended level, upper level, and a short-term maximum level. Per the Basin Plan, "Recommended" concentrations are not water quality objectives per se, but should be considered water resource management goals. For waters designated for MUN beneficial use, constituent concentrations ranging to "Upper" concentration levels are only acceptable if authorized by the Central Valley Water Board based on a demonstration that it is no reasonable or feasible to achieve lower levels. Concentrations exceeding "Upper" concentration levels may only be permitted in accordance with the provisions of Title 22. (See Cal. Code Regs., tit. 22, § 64449.)

3. **Electrical Conductivity.** The Basin Plan contains a site-specific EC limit of **230 µmhos/cm (50 percentile) or 235 µmhos/cm (90 percentile)** based upon previous 10 years of record for the Sacramento River from Shasta Dam to Colusa Basin Drain.

(b) **RPA Results.** For priority pollutants, the SIP dictates the procedures for conducting the RPA. Chloride, EC, TDS, and sulfate not a priority pollutant. Therefore, the Central Valley Water Board is not restricted to one particular RPA method. Due to the site specific conditions of the discharge, the Central Valley Water Board used best professional judgment in determining the appropriate method for conducting the RPA for this non-priority pollutant constituent.

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

$$Cr = (QsCs + QcCd) / (Qs + Qd)$$

Where:

Qs = Critical stream flow

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

Cs = Critical upstream pollutant concentration

Cd = Critical effluent pollutant concentration

Cr = Critical downstream receiving water pollutant concentration

The most stringent water quality objective for chloride is the NAWQC chronic criterion for protection of freshwater aquatic life. Therefore, for chloride, a critical stream flow (Qs) of 2,540 MGD was used, which represents the 7Q10, and a critical effluent flow (Qd) of 1.4 MGD (permitted maximum daily flow) was used for the RPA.

The Basin Plan objective for electrical conductivity and the Secondary MCL for total dissolved solids are long-term objectives. Therefore, a critical stream flow (Qs) of 5,358 MGD (harmonic mean) and a critical effluent flow (Qd) of 0.75 MGD (permitted annual average flow) were used for electrical conductivity and total dissolved solids.

Additionally, the critical effluent pollutant concentration (Cd) has been established as the projected annual average effluent concentration. Calculating a maximum annual average concentration considers variability in the data, per 40 C.F.R. § 122.44(d)(1)(ii). The projected annual average effluent concentration uses statistics recommended in the TSD for statistically projecting effluent concentrations (i.e., Table 3-1 of the TSD using the 99 percent probability basis and 99 percent confidence level). The critical upstream pollutant concentration (Cs) the average upstream receiving water concentration.

(1) **Chloride.** Chloride concentrations in the effluent ranged from 3.5 to 2,000 mg/L, with an average of 1,360 mg/L. Background concentrations in Sacramento River ranged from 2.2 to 5.5 mg/L, with an average of 3.5 mg/L, for 37 samples collected by the Discharger from April 2022 to March 2025.

Using the formula above for chloride:

Qs = 2,540 MGD

Qd = 0.75 MGD

Cs = 3.5 mg/L

Cd = 1,500 mg/L

The calculated critical downstream receiving water chloride concentration (Cr) is 3.7 mg/L and does not exceed the NAWQC chronic criterion. Therefore, based on this data, the discharge does not have reasonable potential to adversely affect receiving water beneficial uses for chloride.

(2) **Electrical Conductivity or Total Dissolved Solids.** A review of the Discharger's monitoring reports shows an average effluent EC of 7,050 µmhos/cm, with a range from 4,250 to 10,200 µmhos/cm. The background receiving water EC averaged 140 µmhos/cm, with a range from 120 to 200 µmhos/cm.

Using the formula above for EC:

Qs = 5,358 MGD

Qd = 1.4 MGD

Cs = 140 µmhos/cm

Cd = 7,700 µmhos/cm

The calculated critical downstream receiving water EC concentration (Cr) is 150 µmhos/cm and does not exceed the Basin Plan objective. Therefore, based on this data, the discharge does not have reasonable potential to adversely affect receiving water beneficial uses for EC.

The average TDS effluent concentration was 4,500 mg/L with concentrations ranging from 2,070 to 6,630 mg/L. The background receiving water TDS ranged from not detected to 120 mg/L, with an average of 87 mg/L.

Using the formula above for TDS:

Qs = 5,358 MGD

Qd = 1.4 MGD

Cs = 91 mg/L

Cd = 5,000 mg/L

The calculated critical downstream receiving water TDS concentration (Cr) is 92 mg/L and does not exceed the Secondary MCL. Therefore, based on this data, the discharge does not have reasonable potential to adversely affect receiving water beneficial uses for TDS.

(3) **Sulfate.** Sulfate concentrations in the effluent ranged from 0.98 to 86 mg/L, with an average of 28 mg/L. The background receiving water ranged from 3.6 to 4.1 mg/L, with an average of 3.9 mg/L. This does not exceed the Secondary MCL. Therefore, based on this data, the discharge does not have reasonable potential to adversely affect receiving water beneficial uses for sulfate.

(c) **WQBELs.**

As discussed above, the discharge does not have reasonable potential to cause or contribute to an in-stream excursion of WQOs for salinity. However, allowing the Discharger to increase its current salt loading may be contrary to the Region-wide effort to address salinity in the Central Valley.

(1) **Electrical Conductivity.** This Order includes a performance-based effluent limitation carried forward from Order R5-2021-0021 of 9,370 µmhos/cm for EC to be applied as calendar annual average effluent limitations (AAEL) to limit the discharge to current levels. This performance-based effluent limitation represents the maximum calendar annual average effluent EC concentration plus 10 percent for a calendar year using data from 2010 through 2019. A 10 percent factor has been added to the maximum annual average effluent EC concentration to allow for fluctuations in EC concentrations that occur due to water conservation during low rainfall years (e.g., drought conditions). The maximum annual average of 8,520 µmhos/cm occurred during the year 2011.

(2) **TDS and Chloride.** The mass limits for TDS and chloride were previously specified in both the Facility's original NPDES permit (Order No. 95-113) and the WDRs for the Class II Surface Impoundments (Order No. 95-134). The sum of the annual average mass limits from these two Orders was 60,200 lbs TDS and 21,200 lbs chloride. The daily maximum limit contained in these historic permits was 87,600 lbs TDS and 31,300 lbs chloride.

The EIR of April 1993 presented a model of plume concentrations at various distances from the outfall, based on a TDS concentration of 4,556 mg/l, a chloride concentration of 1,576 mg/l and a flow of 1.75 mgd (1.0 mgd domestic flow from the City of Corning and 0.75 mgd industrial flow from Bell-Carter). This is equivalent to mass discharge of 22,993 lbs/day chloride and 66,470 lbs/day TDS for the combined discharge from the City of Corning and Bell-Carter. The analysis indicated that at minimum flows in the Sacramento River, (4,121 mgd); the increase in TDS and chloride at full mixing (1000 ft. downstream of the outfall) would be from 80 mg/l to 84.3 mg/l and from 3.0 mg/l to 3.74 mg/l respectively. The dilution factor at minimum river flow and 1.75 mgd combined flow from the City of Corning's WWTP and Bell-Carter at the time was approximately 2,350:1.

In 2000, the Discharger's NPDES permit (Order 5-00-113), contained effluent mass limits for TDS and chlorides that applied to the total discharge from Bell-Carter (discharge to the City of Corning's WWTP and the direct discharge to the City-owned outfall line). The reason for this was that TDS and chlorides discharged

from Bell-Carter to the City of Corning's WWTP were not treated. The annual average effluent limit of 59,800 lbs/day TDS in Order 5 00-113 was based on the EIR value less the contribution from the City of Corning domestic wastewater. The City of Corning's contribution was based on a flow of 1.0 mgd and a TDS concentration of 800 mg/l. The annual average effluent limit of 20,900 lbs/day chlorides in Order 5-00-113 was based on a chloride contribution from the City of Corning of 250 mg/l. The daily maximum limits of 79,800 lbs/day TDS and 27,900 lbs/day chloride were based on the ratio of the increase from the annual average flow of 0.75 to 1.0 mgd daily maximum flow.

Therefore, this Order retains the effluent limits specified for TDS and chlorides from Order 5-00-113 and previous Order R5-2021-0021.

On 17 January 2020, certain amendments to the Basin Plan incorporating a Program to Control and Permit Salt Discharges to Surface and Groundwater (Salt Control Program) became effective. Other amendments became effective on 2 November 2020 when approved by the U.S. EPA. The Salt Control Program is a three-phased program, with each phase lasting 10 to 15 years. The Basin Plan requires all salt dischargers to comply with the provisions of the program. Two compliance pathways are available for salt dischargers during Phase 1.

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

The Discharger submitted a Notice of Intent for the Salt Control Program indicating its intent to meet the Alternative Salinity Permitting Approach. This Order requires implementation of a Salinity Evaluation and Minimization Plan, participation in the Salinity P&O Study, and includes performance-based effluent limits for EC, TDS, and chloride carried forward from Order R5-2021-0021 to limit the discharge to current Facility performance. Therefore, effluent limitations for EC, TDS, and chloride are consistent with the Alternative Salinity Permitting Approach.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the MEC of 9,777 lbs/day for chloride, the maximum annual

average of 7,615 µmhos/cm for EC, and the MEC of 32,624 lbs/day for TDS in the effluent and is less than the applicable WQBELs. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

vi. **Settleable Solids**

(a) **WQO.** For inland surface waters, the Basin Plan states that "water shall not contain substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses." Order R5-2021-0021 included an AMEL of 0.1 ml/L and an MDEL of 0.2 ml/L for settleable solids to implement the narrative settleable solids objective.

(b) **RPA Results.** Olive processing wastewater inherently contains settleable solids which, if not properly controlled, would violate the Basin Plan's narrative objective for settleable solids in the receiving water. Therefore, reasonable potential exists for settleable solids and WQBELs are required.

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

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 WQBEL's are required for specific pollutants for all facilities that exhibit certain operational or discharge characteristics (e.g., WQBEL's for pathogens in all permits for POTW's 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."

The Facility is an industrial wastewater treatment plant that treats olive processing wastewater. The maximum observed effluent settleable solids concentration was non-detect with an MDL of 0.02 ml/L, based on 191 samples collected from 1 April 2022 to 31 March 2025. The settleable solids for the Facility's influent varies due to the nature of olive processing wastewater, which provides the basis for the discharge to have a reasonable potential to cause or contribute to an in-stream excursion above the Basin Plan's narrative objective for settleable solids in the receiving water.

(c) **WQBELs.** This Order contains an AMEL of 0.1 ml/L and a MDEL of 0.2 ml/L for settleable solids based on the Basin Plan's narrative objective. Because the amount of settleable solids is measured in terms of volume per volume without a mass component, it is impracticable to calculate mass limitations for inclusion in this Order. A daily maximum effluent limitation for settleable solids is included in the Order, in lieu of a weekly average, to ensure that the treatment works operate in accordance with design capabilities.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that settleable solids were not detected in the effluent and is less than the applicable WQBELs. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

vii. **Zinc**

(a) **WQO.** The CTR and Basin Plan include hardness-dependent criteria for the protection of freshwater aquatic life for zinc. These criteria for zinc are presented in dissolved concentrations, as 1-hour acute criteria and 4-day chronic criteria. Default U.S. EPA translators were used to translate dissolved concentrations to total concentrations. As described in section IV.C.2.e of this Fact Sheet, the applicable CTR chronic criteria for zinc in the effluent is 97 µg/L as total and 95 µg/L as dissolved concentration.

The CTR acute criteria does not apply to the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City. The Basin Plan includes a hardness-dependent, site-specific objective for copper for the Sacramento River and its tributaries above the State Highway 32 Bridge at Hamilton City. The applicable Basin Plan objective for zinc in the effluent is 28 µg/L as total and 28 µg/L as dissolved concentration, applied as the acute criteria.

(b) **RPA Results.** The maximum effluent concentration for zinc was 29 µg/L, based on 16 samples collected between 1 April 2022 and 31 July 2023. The maximum observed upstream receiving water total zinc concentration was 87 µg/L, based on 36 samples collected between 1 April 2022 and 31 March 2025. However, due to quality control concerns with the matrix spike/matrix spike duplicate lab results after the Discharger switched labs in August 2023, samples after 31 July 2023 have been removed from the data set. Therefore, the next highest observed effluent total zinc concentration was 29 µg/L based on 16 samples collected between 1 April 2022 and 31 July 2023. The maximum observed upstream receiving water zinc concentration was 9.5 µg/L, based on 16 samples collected between 1 April 2022 and 31 July 2023. 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 shown in section IV.C.2.e of this Fact Sheet to compare the maximum effluent concentration. The table below shows the specific criteria used for the RPA:

Table F-13. Zinc RPA Criteria

Water Type	Basin Plan Acute Criterion (Total)	Maximum Concentration (Total)	Criteria Exceeded? (Y/N)
Receiving Water	17 µg/L	9.5 µg/L	No
Effluent	28 µg/L	29 µg/L	Yes

Table F-13 Notes:

1. **Receiving Water.** The Basin Plan Chronic Criterion (Total) for the receiving water is based on lowest observed upstream hardness of 43 mg/L (as $CaCO_3$).
2. **Effluent.** The Basin Chronic Criterion (Total) for the effluent is based on reasonable worst-case downstream hardness of 78 mg/L (as $CaCO_3$).

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

(c) **WQBELs.** The receiving water contains assimilative capacity for zinc. The WQBELs were calculated with the allowance of acute and chronic aquatic life criteria mixing zones and dilution credits based on the CTR criteria for the protection of freshwater aquatic life as discussed in section IV.C.2.c of this Fact Sheet. The lowest observed upstream hardness of 43 mg/L was used to calculate the criteria in order to

account for the available dilution in the receiving water. Using this hardness value, the most stringent criteria was used to calculate the WQBELs. The applicable criterion is the Basin Plan acute criterion (total) of 17 µg/L. This Order contains a final AMEL of 67 µg/L and a MDEL of 100 µg/L for total zinc based on an acute dilution credit of 11.2:1 and a chronic dilution credit of 0.31:1.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the MEC of 29 µg/L is less than the applicable WQBELs. 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, chloride, chlorine, chlorpyrifos, copper, diazinon, EC, pH, settleable solids, TDS, and zinc. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.4.b through e, below. 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 MDEL is calculated using the MDEL/AMEL multiplier 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 MDEL was calculated using the MDEL/AMEL multiplier from Table 2 of the SIP.

d. **Aquatic Toxicity Criteria.** For constituents 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. LTAacute and LTAchronic) using statistical multipliers and the lowest LTA is used to calculate the AMEL and MDEL using additional statistical multipliers.

e. **Human Health Criteria.** For constituents 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.

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

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

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

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 001

Table F-14. Summary of Water Quality-Based Effluent Limitations

Parameter	Units	Effluent Limitations
Ammonia Nitrogen, Total (as N)	mg/L	AMEL 3.2 MDEL 13
Ammonia Nitrogen, Total (as N)	lbs/day	AMEL 25 MDEL 150
Chloride	lbs/day	MDEL 27,900 AA 20,900
Chlorine	mg/L	4-day Average 0.011 1-hour Average 0.019
Chlorpyrifos	µg/L	$S_{AMEL} \leq 1.0$ $S_{MDEL} \leq 1.0$

Parameter	Units	Effluent Limitations
Copper, Total	µg/L	AMEL 16 MDEL 41
Diazinon	µg/L	$S_{AMEL} \leq 1.0$ $S_{MDEL} \leq 1.0$
Electrical Conductivity @ 25°C	µmhos/cm	AA 9,370
pH	Standard units	Instantaneous Minimum 6.5
Settleable Solids	ml/L	AMEL 0.1 MDEL 0.2
Total Dissolved Solids	lbs/day	MDEL 79,800 AA 59,800
Zinc, Total	µg/L	AMEL 67 MDEL 100

Table F-14 Notes:

1. **Mass-based Effluent Limits.** Mass-based effluent limits are based on the permitted discharge flows. Average monthly mass-based limits are based on an average monthly discharge flow of 0.95 MGD. Maximum daily mass-based limits are based on a maximum daily discharge flow of 1.4 MGD. Annual average mass-based limits are based on an annual average discharge flow of 0.75 MGD.
2. **Diazinon and Chlorpyrifos.** Effluent limitations for diazinon and chlorpyrifos are based on the concentrations that shall not exceed the sum of one (1.0) as identified below:
   a. **Average Monthly Effluent Limitation (AMEL)**
   S_{AMEL} = CD M-avg/0.079 + CC M-avg/0.012 ≤ 1.0
   CD M-AVG = average monthly diazinon effluent concentration in µg/L
   CC M-AVG = average monthly chlorpyrifos effluent concentration in µg/L.
   b. **Maximum Daily Effluent Limitation (MDEL)**
   S_{MDEL} = CD W-avg/0.14 + CC W-avg/0.021 ≤ 1.0
   CD W-AVG = maximum daily diazinon effluent concentration in µg/L.
   CC W-AVG = maximum daily chlorpyrifos effluent concentration in µg/L.

5. Whole Effluent Toxicity (WET)

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

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

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

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

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

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

The table below is chronic WET testing performed by the Discharger from July 2021 through March 2026.

Table F-15. Chronic WET Testing Results – *Pimephales promelas*

Date	***Pimephales promelas* Survival TST (Pass/Fail)**	***Pimephales promelas* Survival Percent Effect**	***Pimephales promelas* Growth TST (Pass/Fail)**	***Pimephales promelas* Growth Percent Effect**
9/1/2024	Pass	-2.63	Pass	-5.8
12/1/2024	Pass	2.56	Pass	-11.6
3/6/2025	Pass	5.31	Pass	17.41

Table F-16. Chronic WET Testing Results – *Selenastrum capricornutum*

Date	***Selenastrum capricornutum* Growth TST (Pass/Fail)**	***Selenastrum capricornutum* Growth Percent Effect**
9/1/2024	Pass	-117.29
12/1/2024	Pass	-48.07
3/6/2025	Pass	-78.33

Table F-17. Chronic WET Testing Results – *Ceriodaphnia dubia (C. dubia)*

Date	***C.dubia* Survival TST (Pass/Fail)**	***C.dubia* Survival Percent Effect**	***C.dubia* Reproduction TST (Pass/Fail)**	***C.dubia* Reproduction Percent Effect**
7/212021	N/A	0	Pass	10.93
11/17/2021	N/A	0	Pass	0.87
2/2/2022	N/A	10	Pass	7.45
5/19/2022	N/A	0	Pass	5.19
7/29/2022	N/A	-11.11	Pass	-17.6
10/25/2022	N/A	0	Fail	38.18
3/14/2023	N/A	-25	Pass	9.51
5/5/2023	N/A	10	Pass	-44.32

Date	*C.dubia* Survival TST (Pass/Fail)	*C.dubia* Survival Percent Effect	*C.dubia* Reproduction TST (Pass/Fail)	*C.dubia* Reproduction Percent Effect
8/1/2023	N/A	-11.11	Pass	-29.5
11/13/2023	N/A	0	Pass	-17.51
3/9/2024	N/A	10	Fail	18.9
9/1/2024	N/A	0	Pass	0.53
12/1/2024	N/A	0	Pass	15.79
3/6/2025	N/A	0	Fail	34.62
4/3/2025	N/A	10	Pass	11.47
5/20/2025	N/A	0	Pass	9.72
8/22/2025	N/A	0	Fail	15.86
11/29/2025	N/A	-12.5	Pass	-34.74
3/16/2026	N/A	10	Fail	36.22

i. **RPA.** As discussed in section IV.C.2.c of this Fact Sheet, a dilution credit of 19 has been granted for chronic whole effluent toxicity. Therefore, chronic toxicity testing has been conducted at an instream waste concentration (IWC) of 5 percent effluent. A test result that fails the Test of Significant Toxicity (TST) or has a percent effect of greater than 10 percent at the IWC demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Statewide Toxicity Provisions aquatic toxicity numeric objectives. Based on chronic toxicity testing conducted between July 2021 and March 2026 there were one or more fails of the TST **and/or** the percent effect exceeded 10 percent, therefore, the discharge has a reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions' numeric chronic aquatic toxicity objective.

ii. **WQBELs.** The following effluent limitations have been established for chronic whole effluent toxicity:

Chronic Whole Effluent Toxicity Median Monthly Effluent Limitation (MMEL). No more than one *Ceriodaphnia dubia* chronic aquatic toxicity test initiated in a toxicity calendar month shall result in a "Fail" at the IWC for any endpoint.

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

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 MCLs) and mass limitations are not necessary to protect the beneficial uses of the receiving water.

Except for BOD_5 and TSS, the mass-based effluent limitations were calculated using the concentration-based effluent limitation and corresponding design flow permitted in section III.E of this Order with the same averaging period (e.g. the average monthly effluent limit and the permitted average monthly flow). As described in section IV.B.2 of this Fact Sheet, mass-based average monthly, maximum daily, annual average effluent limitations for BOD_5 and TSS were calculated by multiplying the effluent limitations established in by the ELG's and a reasonable measure of the processing facility's actual production.

2. Averaging Periods for Effluent Limitations

40 C.F.R. section 122.45 (d) requires maximum daily and average monthly discharge limitations for all dischargers other than POTWs unless impracticable. The rationale for using alternative averaging periods for chloride, chlorine, EC, pH, and TDS 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 BOD_5, copper, iron, methylene chloride, TSS, and acute whole effluent toxicity. The effluent limitations for these pollutants are less stringent than those in Order R5-2021-0021. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

a. **CWA section 402(o)(1) and 303(d)(4).** CWA section 402(o)(1) prohibits the establishment of less stringent water quality-based effluent limits "*except in compliance with section 303(d)(4).*" CWA section 303(d)(4) has two parts:

paragraph (A) which applies to nonattainment waters and paragraph (B) which applies to attainment waters.

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

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

The Sacramento River is considered an attainment water for BOD_5, copper, iron, methylene chloride, TSS, and acute whole effluent toxicity because the receiving water is not listed as impaired on the 303(d) list for these constituents. The exceptions in section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list. As discussed in section IV.D.4, below, relaxation or removal of the effluent limits complies with federal and state antidegradation requirements. Thus, the relaxation of effluent limitations for BOD_5, copper, and TSS and the removal of the effluent limitations for iron, methylene chloride, and acute whole effluent toxicity from Order R5-2021-0021 meets the exception in CWA section 303(d)(4)(B).

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

As described further in section IV.C.3 of this Fact Sheet, updated information that was not available at the time Order R5-2021-0021 was issued indicates that iron, methylene chloride, and acute whole effluent 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 whole effluent toxicity.** This Order removes the effluent limitation for acute whole effluent toxicity per standard approach under the new Statewide Toxicity Provisions, because chronic toxicity testing is generally protective of both acute and chronic toxicity. This Order includes effluent limitations for chronic whole effluent toxicity, consistent with the Statewide Toxicity Provisions.

ii **BOD_5 and TSS.** Previous Order R5-2021-0021 included two sets of mass-based effluent limitations: one set as required by the ELGs for Canned and Preserved Fruits Subcategory of the Canned and Preserved Fruits and Vegetables Processing Point Source Category in 40 C.F.R. part 407, subpart F; and one set calculated from the concentration-based effluent limitations and the permitted discharge flows. The mass-based effluent limitations for BOD_5 and TSS calculated from the concentration-based effluent limitations and the permitted discharge flows are duplicative of the concentration-based effluent limitations and therefore are removed in this Order. Concentration-based effluent limitations for BOD_5 and TSS remain.

This Order establishes mass-based effluent limitations for BOD_5 and TSS based only on the ELGs for Canned and Preserved Fruits Subcategory of the Canned and Preserved Fruits and Vegetables Processing Point Source Category as required by 40 C.F.R. part 407, subpart F, based on a reasonable measure of the actual production for the processing facility. The production for the processing facility varies each processing season, therefore the mass-based effluent limitations calculated from the ELGs may change, but the effluent limitations are not less stringent.

iii. **Iron.** Effluent monitoring data collected from April 2022 to March 2025 indicates that iron in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Secondary MCL.

iv **Methylene chloride.** Effluent monitoring data collected from April 2022 to March 2025 indicates that methylene chloride in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the CTR human health criteria.

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

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

The new effluent data used to calculate WQBELs for this Order has different statistical variability (i.e., coefficient of variation (CV) is different) than used in the previous Order. Changes in the CV can result in small changes to the

effluent limits. However, the slight changes in effluent limits do not allow for an increase in the pollutants discharged. The TSD states, "*Since effluents are variable and permit limits are developed based on a low probability of exceedance, the permit limits should consider effluent variability and ensure that the requisite loading from the WLA is not exceeded under normal conditions. In effect then, the limits must "force" treatment plant performance, which, after considering acceptable effluent variability, will only have a low statistical probability of exceeding the WLA and will achieve the desired loadings.*" (TSD, p. 97) Therefore, although there are slight differences in the effluent limit, the WLA is identical, so the level of treatment needed to maintain compliance with the effluent limit remains the same. Consequently, the effluent limit is not less stringent than the previous Order, and there is no backsliding.

WQBELs for copper were calculated based on monitoring data collected between 1 April 2022 and 31 March 2025, which is representative of current treatment plant performance. Therefore, Central Valley Water Board staff considers this effluent data to be the most representative and reliable dataset to use to determine current Facility performance and development of WQBELs.

The MDEL for copper in this Order was calculated as a higher value than in previous Order R5-2021-0021. However, the AMEL remains the same. The WQBELs in both Orders are based on the same WLA (i.e., the WLA is based on the CTR chronic aquatic life criterion for copper). The reason for the change in the MDEL is due to a change in the variability of the effluent data for copper. The WQBELs, however, are equally protective of the beneficial uses. The level of treatment needed to maintain compliance with the effluent limits remains the same. Consequently, the effluent limits are not less stringent than the previous permit, and there is no backsliding.

d. **Receiving water limitations.** This order removes generalized receiving water limitations contained in the discharger's prior waste discharge requirements. The removal of this requirement is consistent with the U.S. Supreme Court's holding in the case of the *City and County of San Francisco vs. U.S. Environmental Protection Agency* (2025) 145 U.S. 704. However, as discussed in Attachment F, Section V.A, the Board has determined that the existing requirements are sufficient to ensure the discharge complies with Clean Water Act section 301(b)(1)(C) (33 U.S.C. § 1311(b)(1)(C)). As a result, the discharge does not authorize violations of water quality standards, and the removal of the generalized receiving water limitation does not authorize the additional discharge of pollutants or authorize the violation of water quality standards. The order does not, therefore, authorize either backsliding or further degradation of water quality

4. Antidegradation Policies

This Order 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 Antidegradation Policy.

This Order removes effluent limitations for iron, methylene chloride, and acute whole effluent toxicity based on updated monitoring data demonstrating that the effluent does not cause or contribute to an exceedance of the applicable water quality criteria or objectives in the receiving water. This Order relaxes effluent limitations for copper based on updated data with different statistical variability than the previous data set. The removal and relaxation of WQBELs for these parameters will not result in an increase in pollutant concentration or loading, a decrease in the level of treatment or control, or a reduction of water quality. Therefore, the Central Valley Water Board finds that the removal and relaxation of the effluent limitations does not result in an increase in pollutants or any additional degradation of the receiving water. Thus, the removal and relaxation of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

This Order also removes the mass-based effluent limitations for BOD_5 and TSS calculated from the concentration-based effluent limitations and the permitted flows, based on 40 CFR parts 122.45 (d) and (f). The removal of the mass-based effluent limits for BOD_5 and TSS will not result in a decrease in the level of treatment or control or a reduction in water quality.

Furthermore, both concentration-based AMELs and MDELs remain for BOD_5 and TSS, as well as the discharge flow prohibitions that limit the amount of flow that can be discharged to the receiving. The combination of concentration-based effluent limits and a flow prohibition in this Order are equivalent to mass-based effluent limitations, which were redundant limits contained in previous Orders by multiplying the concentration-based effluent limits and permitted average dry weather flow by a conversion factor to determine the mass-based effluent limitations. The Central Valley Water Board finds that the removal of the mass-based effluent limits for BOD_5 and TSS calculated form the concentration-based effluent limitations does not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of the mass-based effluent limits for BOD_5 and TSS is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

a. **Surface Water.** The permitted surface water discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy. Compliance with these requirements will result in the use of BPTC of the discharge. The impact on existing water quality will be insignificant.

b. **Groundwater – Not Applicable**

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 BOD_5, pH, 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-18. Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations	Basis
Ammonia Nitrogen, Total (as N)	mg/L	AMEL 3.2 MDEL 13	NAWQC
Ammonia Nitrogen, Total (as N)	lbs/day	AMEL 25 MDEL 150	NAWQC
Biochemical Oxygen Demand (5-day @ 20˚C)	mg/L	AMEL 100 MDEL 150	BPJ
BOD	lbs/day	AMEL 810 MDEL 1,300	ELG
BOD	lbs/year	Annual Average 211,000	ELG
Chloride	lbs/day	MDEL 27,900 AA 20,900	EIR
Chlorine, Total Residual	mg/l	4-day Average 0.011 1-hour Average 0.019	NAWQC
Chlorpyrifos	µg/L	$S_{AMEL} \leq 1.0$ $S_{MDEL} \leq 1.0$	TMDL
Copper, Total	µg/L	AMEL 16 MDEL 41	CTR
Diazinon	µg/L	$S_{AMEL} \leq 1.0$ $S_{MDEL} \leq 1.0$	TMDL

Parameter	Units	Effluent Limitations	Basis
Electrical Conductivity @ 25°C	µmhos/cm	AA 9,370	PB
pH	Standard units	Instantaneous Min 6.5 Instantaneous Max 9.5	BP, ELG
Settleable Solids	ml/L	AMEL 0.1 MDEL 0.2	BP
Total Dissolved Solids	lbs/day	MDEL 79,800 AA 59,800	EIR
Total Suspended Solids	mg/L	AMEL 100 MDEL 200	BPJ
TSS	lbs/day	AMEL 1,700 MDEL 2,400	ELG
TSS	lbs/year	Annual Average 211,000	ELG
Zinc, Total	µg/L	AMEL 67 MDEL 100	BP

Table F-18 Notes:

1. **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.
   EIR - The 1993 Environmental Impact Report for the Bell-Carter Plant Expansion.
   ELG - Based on Effluent Limitations Guidelines and Standards for the Canned and Preserved Fruits Subcategory of the Canned and Preserved Fruits and Vegetables Processing Point Source Category.
   NAWQC – Based on U.S. EPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
   PB - Based on facility performance.
   TMDL – Based on the TMDL for chlorpyrifos and diazinon in the Sacramento and Feather Rivers.

2. **Mass-based Effluent Limits.** Mass-based effluent limits are based on the permitted discharge flows. Average monthly mass-based limits are based on an average monthly discharge flow of 0.95 MGD. Maximum daily mass-based limits are based on a maximum daily discharge flow of 1.4 MGD. Annual average mass-based limits are based on an annual average discharge flow of 0.75 MGD.

3. **Diazinon and Chlorpyrifos.** Effluent limitations for diazinon and chlorpyrifos are based on the concentrations that shall not exceed the sum of one (1.0) as identified below:

   a. **Average Monthly Effluent Limitation (AMEL)**

   S_{AMEL} = CD M-avg/0.079 + CC M-avg/0.012 ≤ 1.0
   CD M-AVG = average monthly diazinon effluent concentration in µg/L
   CC M-AVG = average monthly chlorpyrifos effluent concentration in µg/L.

   b. **Maximum Daily Effluent Limitation (MDEL)**

   S_{MDEL} = CD W-avg/0.14 + CC W-avg/0.021 ≤ 1.0

CD W-AVG = maximum daily diazinon effluent concentration in µg/L.
CC W-AVG = maximum daily chlorpyrifos effluent concentration in µg/L.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

On 4 March 2025, the U.S. Supreme Court issued a decision in the case of the *City and County of San Francisco v. U.S. Environmental Protection Agency* (2025) 145 U.S. 704, which challenged some of the limits in NPDES permits. The Court ruled that "end result" provisions (e.g. receiving water limitations) are not allowed by the federal Clean Water Act and that NPDES permits must have specific requirements to meet water quality objectives and protect beneficial uses. Based on this ruling, no receiving water limitations are included in this Order. The Clean Water Act and implementing regulations specify that effluent limitations are required when there is reasonable potential for a discharge to cause or contribute to an exceedance of any applicable water quality standard. A Reasonable Potential Analysis (RPA) is a key step taken by permit writers to determine if a discharge has the potential to violate water quality standards. An RPA includes characterization of the effluent and receiving waters and an assessment of the water quality standards to see if projected concentrations in the receiving water after mixing with the effluent have the "reasonable potential" (RP) to exceed the water quality criteria. Effluent limitations and other permit conditions are prescribed based on an evaluation of this information. RPAs and effluent limitation calculations follow established NPDES program procedures and requirements (State Water Resources Control Board, 2005 and U.S. Environmental Protection Agency, 1991). This Order also requires regular effluent and receiving water sampling to document any potential effects to the receiving water. In addition, this Order requires characterization monitoring of priority pollutants in the upstream receiving water and effluent during the permit term. All Central Valley NPDES permits contain a general re-opener provision that allows the Central Valley Water Board to amend the permit and include conditions, effluent limitations, provisions, or prohibitions. This would include scenarios where monitoring data indicate the need for new effluent limitations to ensure receiving water quality objectives are met. As an additional assurance, this Order prohibits operational changes that would significantly impact the character of the waste discharge. Nonetheless, the question remains as to whether an NPDES permit is adequately protective of water quality when the receiving water limitations are removed; or alternatively, whether additional conditions should be considered when removing receiving water limitations.

1. **Summary of the specific considerations for the removal of receiving water limitations.** These considerations include associated effluent limitations, best management practices (BMPs) and/or water quality monitoring requirements.

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

   The wastewater is sourced from industrial process water so bacteria is not expected to be in the effluent.

   b. **Biostimulatory Substances and Dissolved Oxygen.** The Basin Plan contains a biostimulatory narrative water quality objective (WQO) and dissolved oxygen numeric water quality objectives that have been incorporated into previous permits as receiving water limitations. Biostimulatory substances and low dissolved oxygen can cause eutrophication and excessive algal growth in the receiving water along with other water quality issues related to taste, odor, color and toxicity. Discharges with high Biochemical Oxygen Demand (BOD) and/or Chemical Oxygen Demand (COD) may contribute to dissolved oxygen problems downstream.

   Since the wastewater is sourced from industrial process water, the discharge is subject to the Effluent Limitation Guidelines (ELGs) for the Canned and Preserved Fruits Subcategory of the Canned and Preserved Fruits and Vegetables Processing Point Source Category contained in 40 C.F.R. part 407, subpart F for BOD_5. This Order includes final effluent limitations for BOD_5 based on best professional judgement and the ELGs.

   This Order also requires effluent monitoring for BOD_5 and receiving water monitoring for DO alongside visual observations for low DO effects.

   c. **Chemicals, Pesticides, and Radioactive.** The Basin Plan has narrative and numeric water quality objectives for chemicals, pesticides, and radionuclides that are typically used as receiving water limitations in NPDES permits. As with other water quality constituents, NPDES regulations require effluent limitations where existing data indicate reasonable potential to cause or contribute to an exceedance in the receiving water. Attachments G and H provide details regarding the specific chemical constituents with reasonable potential and associated effluent limitations. These effluent limitations ensure the protection of beneficial uses in the receiving water.

There is no reasonable potential (RP) based on existing data for any radioactive constituents on the characterization monitoring list.

d. **Color, Taste, and Odors.** The Basin plan has a narrative water quality objective for color as well as one for taste and odors. These have been incorporated into previous permits as receiving water limitations.

   Color is a known concern with the discharge due to the dark coloration of the industrial process water. The Discharger completed a handful of studies to evaluate minimizing/eliminating discoloration in the receiving water. A daytime discharge flow prohibition is included in this Order as a result of these studies.

   This Order also includes frequent visual monitoring of the receiving water for discoloration and other potential nuisance conditions.

e. **pH.** The Basin Plan has narrative water quality objectives for pH that have been used as receiving water limitations in previous permits. A pH that is too high or too low can influence the solubility of metals and nutrients in the receiving water and impact the overall health of aquatic life.

   The discharge does have reasonable potential for pH based on existing data; however, the permit includes pH effluent limitations and requires frequent monitoring of pH in the receiving water.

f. **Temperature.** The Basin Plan has numeric receiving water limitations for receiving waters with beneficial uses of COLD or WARM to ensure the wastewater does not significantly increase the receiving water temperature above the natural receiving water temperature. Significant changes in temperature can affect the ability of aquatic organisms to survive in the receiving water.

   There is no RP for temperature based on existing data. This Order includes frequent effluent and receiving water temperature monitoring.

g. **Toxicity.** The Basin Plan contains a narrative water quality objective for toxicity that has been incorporated into previous permits as a receiving water limitation. However, with the adoption of the Statewide Toxicity Provisions (State Water Resources Control Board, 2021) in 2023, numeric aquatic toxicity water quality objectives were established along with required effluent limitations and/or targets for non-stormwater NPDES permits to ensure the protection of aquatic life beneficial uses in receiving waters.

   There is reasonable potential for chronic whole effluent toxicity and ammonia in the effluent. This Order includes effluent limitations for ammonia and chronic whole effluent toxicity. This Order also requires frequent effluent monitoring for chronic whole effluent toxicity, acute whole effluent toxicity, and ammonia.

h. **Turbidity.** The Basin Plan includes numeric turbidity water quality objectives that are based on existing turbidity in the receiving waters. These have been

incorporated into previous permits as receiving water limitations.

The discharge does not have reasonable potential or effluent limitations for turbidity; however, the permit requires frequent monitoring of turbidity in the receiving waters.

i. **Floating Material, Oil and Grease, Suspended Sediments, Suspended Material, and Settleable Substances.** The previous permit contained receiving water limitations relative to narrative water quality objectives in the Basin Plan for Floating Material, Oil and Grease, Suspended Sediments, Suspended Material and Settleable Substances. These constituents can affect water quality by reducing water clarity and light penetration which can ultimately lead to increased water temperatures, decreased dissolved oxygen levels, and eutrophication. Contamination from these substances can impact both aquatic and human health.

Since the wastewater is sourced from industrial process water, the discharge is subject to the Effluent Limitation Guidelines (ELGs) for the Canned and Preserved Fruits Subcategory of the Canned and Preserved Fruits and Vegetables Processing Point Source Category contained in 40 C.F.R. part 407, subpart F for TSS. This Order includes final effluent limitations for TSS based on best professional judgement and the ELGs. This order also includes effluent limits for settleable solids.

This Order requires effluent monitoring for TSS and settleable solids and requires frequent visual monitoring in the receiving waters for floating material, visible films, sheens or coating, suspended matter, and bottom deposits.

2. **Review of Other Relevant Factors.** In addition to the considerations listed in Section V.A.1 above, Central Valley Water Board staff also considered the other relevant factors below in the review of receiving water limitations.

a. **Synergistic effects.** There are no known concerns for adverse synergistic effects in the receiving water.

b. **Limitations enforced within the receiving water.** The discharge does not demonstrate exceedances of the Basin Plan's receiving water quality objectives for this category of chemicals and/or pesticides.

c. **Other site-specific information.** This Order considers the Clean Water Act 303(d) List of Impaired Water Bodies when they are developed. The receiving water has Total Maximum Daily Load (TMDL) requirements for chlorpyrifos and diazinon. This Order includes effluent limitations for chlorpyrifos and diazinon based on the TMDLs.

Salinity constituents are also a concern in Central Valley water bodies. The Discharger submitted a Notice of Intent for the Salinity Control Program indicating its intent to meet the Alternative Permitting Approach. This Order

includes effluent limitations and frequent effluent monitoring for chloride, EC, and TDS consistent with the Alternative Permitting approach.

d. **Data Characterization.** This Order requires characterization monitoring in the effluent and receiving water every permit term. A full scan of priority pollutants and other constituents of concern is required.

e. **Compliance History.** The Facility does not have ongoing compliance issues.

3. **Review of Receiving Water Limitations.** Table F-19 below provides a summary of the considerations in removing the receiving water limitations.

Table F-19. Receiving Water (RW) Limitations Review

Parameter	Objective	Effluent Limitations and/or Monitoring
Bacteria	Numeric	No RP, limits and monitoring not needed.
Biostimulatory Substances	Narrative	Order includes effluent limits and monitoring for BOD_5. Order includes visual observations in the receiving water for DO effects.
Chemical Constituents	Narrative	No RP for these constituents. Order includes characterization monitoring of the effluent and receiving water every permit term.
Color	Narrative	Order includes daytime flow prohibitions to mitigate color concerns in the receiving water. Order includes observation monitoring for nuisance conditions in the receiving water.
Dissolved Oxygen	Numeric	No RP. Order includes receiving water monitoring for DO and visual observations of low DO effects.
Floating Material	Narrative	Order includes receiving water monitoring for visual observations of floating material.
Oil and Grease	Narrative	No RP. Order includes receiving water monitoring for visible films, sheens, or coatings.
pH	Numeric	Has RP, Order includes effluent limits for pH. Order includes effluent and receiving water monitoring for pH.
Pesticides	Narrative/ Numeric	No RP for pesticides in the characterization monitoring list. Order includes characterization monitoring of the effluent and receiving water every permit term.
Radioactivity	Narrative/ Numeric	No RP for radioactive constituents in the characterization monitoring list. Order includes characterization monitoring of the effluent and receiving water every permit term.
Salinity	Numeric	Discharger participates in the Salinity Control Program Alternative permitting approach. Order includes effluent limitations for chloride, EC, and TDS. Order includes effluent and receiving water monitoring for chloride, EC, and TDS.

Parameter	Objective	Effluent Limitations and/or Monitoring
Suspended Sediments	Narrative	Order includes effluent limits for TSS and suspended solids. Order includes effluent monitoring for suspended solids and visual observations of floating/suspended matter and bottom deposits in the receiving water.
Settleable Substances	Narrative	Order includes visual observations of floating/suspended matter and bottom deposits in the receiving water.
Suspended Material	Narrative	Order includes effluent limits for TSS and suspended solids. Order includes effluent monitoring for suspended solids and visual observations of floating/suspended matter and bottom deposits in the receiving water.
Taste and Odors	Narrative	Monitoring of potential nuisance conditions is required in the receiving water.
Temperature	Numeric	No RP. Order includes effluent and receiving water monitoring.
Toxicity	Narrative	Has RP. Order includes effluent limits and monitoring for chronic whole effluent toxicity and ammonia. Order also includes effluent monitoring for acute whole effluent toxicity.
Turbidity	Numeric	No RP. Order includes receiving water monitoring.

B. Groundwater – None

The Facility is also regulated as a Class II Surface Impoundment facility under Title 27, California Code of Regulations (CCR). The operational and construction factors associated with the Facility's Class II Surface Impoundments for groundwater protection are regulated by WDR Order No. R5-2018-0069.

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. **Whole Effluent Toxicity.** This Order may be reopened for modification to revise the aquatic toxicity provisions if the California Supreme Court determines that the test of significant toxicity cannot be used in NPDES permits and the State Water Board suspends or revises the aquatic toxicity water quality standards. See Fact Sheet Section III.C.1.c for more information.

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

c. **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/)

d. **Dilution Credits.** This provision allows the Central Valley Water Board to reopen this Order, as appropriate, to modify dilution credits, should the Facility performance, treatment, or characteristics of the discharge or receiving water change. Modification for the dilution credit may include increasing the allowed dilution credit, if appropriate.

e. **Daytime Discharge Flows.** The daytime discharge flow prohibition contained in WDR III.G has been revised from Order R5-2021-0021 based in the Project Memorandum submitted by the Discharger on 20 August 2026. The daytime discharge flow prohibition is based on preventing a color nuisance in the receiving water during the daytime. This Order may be reopened to revise the daytime discharge flows if discoloration is seen in the receiving water based on aerial photographs submitted in the SMRs, color complaints received, or other evidence indicating a color nuisance from the discharge.

2. Special Studies and Additional Monitoring Requirements

a. **Toxicity Reduction Evaluation (TRE).** Pursuant to the Toxicity Provisions, the Discharger is required to initiate a TRE when any combination of two or more MDEL or MMEL exceedances occur within a single toxicity calendar month or within two successive toxicity calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity), the Central Valley Water Board may require a TRE. A TRE may also be required when there is no effluent available to complete a routine monitoring test or MMEL compliance test. MRP Section V.H. provides additional details regarding the TRE.

3. Best Management Practices and Pollution Prevention

a. **Salinity Evaluation and Minimization Plan (SEMP).** The Basin Plan includes a Salt Control Program for discharges to groundwater and surface water. The Salt Control Program is a phased approach to address salinity in the Central Valley Region. During Phase I the focus will be on conducting a Prioritization and Optimization (P&O) Study to provide information for subsequent phases of the Salt Control Program. During Phase I, the Salt Control Program includes two compliance pathways for dischargers to choose; a Conservative Salinity Permitting Approach and an Alternative Salinity Permitting Approach.

The Discharger submitted a notice to intent for the Salt Control Program on 14 July 2021 indicating its intent to meet the Alternative Salinity Permitting Approach. Under the Alternative Permitting Approach, the Basin Plan requires dischargers implement salinity minimization measures to maintain existing salinity levels and participate in the P&O Study. The Discharger's NOI demonstrated adequate participation in the P&O and this Order requires continued participation to meeting the requirements of the Alternative Salinity Permitting Approach. This Order also requires continued implementation of the Discharger's SEMP and includes chloride, EC, and TDS effluent limitations to ensure salinity levels do not increase.

4. Construction, Operation, and Maintenance Specifications

a. **Membrane Filtration.** As discussed in Section II, the Zenon membrane unit was installed to improve effluent quality and enable an increase in effluent discharge directly from the Facility in the early 2000's (rather than relying on the City of Corning's WWTP for additional treatment). In addition, when the Zenon membrane unit was installed, the DAF unit was removed from use at the Facility ponds, which originally aided TSS removal. Furthermore, the Discharger completed a Treatability Study Report in February 2016 that demonstrates that the Zenon membrane unit produces higher quality effluent for TSS, copper, iron, and zinc compared to wastewater only treated at the Facility's ponds. In order to allow for increased removal efficiency of certain constituents and to satisfy antidegradation policies (as discussed in Section

IV.C.4.a of this Order), the Zenon membrane unit shall be operated year-round and to the fullest extent practicable.

b. **Class II Surface Impoundments.** Construction, operations, and maintenance specifications related to the Class II Surface Impoundments is regulated by WDR Order No. R5-2018-0069.

c. **Treatment Pond Operating Requirements.** The operation and maintenance specifications for the treatment ponds are necessary to avoid objectionable odors perceived beyond the limits of the industrial WWTP property that creates or threatens to create nuisance conditions. Ongoing odor complaints from a neighboring resident were received in 2016 and Central Valley Water Board staff observed the continuing presence of odors. Therefore, the Discharger provided multiple technical reports detailing the necessary aeration practices required at the treatment ponds and to ensure the potential for future odor nuisance at the Facility is reduced, including the Pond DO Operations and Maintenance Report and the DO Follow-Up Report. These reports detailed standard operating procedures related to pond DO control, and the information provided is reflected herein as treatment pond operating requirements.

5. Special Provisions for POTWs – Not Applicable

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, pH, DO, and temperature (40 C.F.R. section 136.3(e), Table II). Due to the location of the Facility, it is both legally and factually impossible for the Discharger to comply with section 13176 for constituents with short holding times.

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). The monitoring frequencies and sample types have been retained from Order R5-2021-0021.

B. Effluent Monitoring

1. Pursuant to the requirements of 40 C.F.R. section 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Effluent monitoring is necessary to assess compliance with effluent limitations, assess the effectiveness of the treatment process, and to assess the impacts of the discharge on the receiving stream and groundwater.

2. Effluent monitoring frequencies and sample types have been retained from Order R5-2021-0021, except as noted in Table F-20, below.

Table F-20. Revised Effluent Monitoring

Parameter	Units	Previous Sample Frequency	Revised Sample Frequency
Standard Minerals	mg/L	1/Year	Remove

Table F-20 Notes:

1. **Standard Minerals.** Standard minerals effluent monitoring is not needed for assessing surface water effects of the discharge.

C. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess the impacts of the discharge on the receiving stream. Receiving surface water monitoring frequencies and sample types have been retained from Order R5-2021-0021.

2. Groundwater – Not Applicable

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).

A chronic aquatic toxicity test is generally protective of both chronic and acute aquatic toxicity; however, high dilution may mask chronic effects. Therefore, due to high dilution in the receiving water, twice per toxicity calendar year acute whole effluent toxicity testing is required to assess protection of aquatic life beneficial uses. Quarterly chronic whole effluent toxicity testing is required to demonstrate compliance with the chronic toxicity effluent limitations.

1. The discharge is subject to determination of “Pass” or “Fail” from an acute toxicity test and 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 and the acute RMD = 0.80.

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

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

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

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

4. **Species Sensitivity Screening.** The Discharger conducted an initial species sensitivity screening resulting in *Ceriodaphnia dubia* as the most sensitive species.

   Under the Toxicity Provisions, the Discharger shall perform subsequent species sensitivity screening to re-evaluate the most sensitive species if the effluent used in the initial species sensitivity screening is no longer representative of the effluent or if a species sensitivity screening has not been performed in the last fifteen years. Subsequent species sensitivity screening may also be required prior to every order issuance, renewal or reopening, if reopening to address aquatic toxicity.

   Pursuant to Section V.G of the MRP, the Discharger is required to perform species sensitivity screening and submit the results with the Report of Waste Discharge. Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing four consecutive calendar quarters using the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green algae (*Pseudokirchneriella subcapitata*). The tests shall be performed at an IWC of no less than 5 percent effluent and one control. For subsequent species sensitivity screening, if the first two species sensitivity screening events result in no change in the most sensitive species, the Discharger may cease the subsequent species sensitivity screening and the most sensitive species will remain unchanged.

   The most sensitive species to be used for chronic toxicity testing was determined in accordance with the process outlined in the MRP section V.G. Based on the Discharger's last 5 years of chronic toxicity data, the species that failed and 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 numeric chronic toxicity effluent limitation. The Discharger is required to initiate a TRE when there is any combination of two or more chronic toxicity MDEL or MMEL violations within a single toxicity calendar month or within two successive toxicity calendar months has occurred. In addition, if other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity), the Central Valley Water Board may require a TRE. A TRE may also be required when there is no effluent available to complete a routine monitoring test, MMET test, or MMEL compliance test.

E. Other Monitoring Requirements

1. **Internal Flow Monitoring.** Internal flow monitoring is required to collect data on the ratio of effluent flow from the Zenon filter and the Facility's ponds. The

monitoring frequency and sampling types have been retained from Order R5-2021-0021.

2. **Pond Monitoring**. Treatment pond monitoring is required to ensure proper operation of the storage pond. The monitoring frequency and sampling types have been retained from Order R5-2021-0021.

3. **Production Monitoring.** Production monitoring is required to evaluate the technology-based effluent limitations for BOD and TSS in accordance with 40 C.F.R. part 407, subpart F. The monitoring frequency and sampling types have been retained from Order R5-2021-0021.

4. **Rainfall and Storm Water Monitoring.** Monitoring of the monthly amount of storm water generated and discharged to the Facility is required to ensure proper operation and capacity of the treatment ponds. In addition, the rainfall volume is subtracted from the total measured influent flow to determine compliance with Discharge Prohibition III.G (Olive Processing Wastewater Flow). The monitoring frequency and sampling types have been retained from Order R5-2021-0021.

5. **Effluent and Receiving Water Characterization Monitoring.** This Order requires characterization monitoring of the effluent and receiving water to compare parameters with their respective water quality objectives. The effluent and receiving water characterization monitoring will aid in determining any changes to current or future effluent and/or monitoring.

6. **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 Bell-Carter Industrial 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. Additionally, consistent with Water Code section 189.7, the Central Valley Water Board conducted outreach to potentially affected disadvantaged and/or tribal communities concerning tentative WDRs. Notification was provided through the following <**Describe Notification Process (e.g.,posting of the Notice of Public Hearing (NOPH) at the Facility and name other locations if applicable)**>. Additionally, the NOPH was posted on the Central Valley Water Board's Tentative Orders webpage.

The public had access to the agenda and any changes in dates and locations through the Central Valley Water Board's website (http://www.waterboards.ca.gov/centralvalley/board_info/meetings/).

B. Written Comments

Interested persons were invited to submit written comments concerning tentative WDRs as provided through the notification process. Comments were due either in person or by mail to the Executive Office at the Central Valley Water Board at the address on the cover page of this Order.

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due at the Central Valley Water Board office by 5:00 p.m. on <**Date**>.

C. Public Hearing

The Central Valley Water Board held a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **XX February 2027**
Time: **8:30 a.m.**
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

Physical Meeting with Remote Meeting Option

Interested persons were invited to attend. At the public hearing, the Central Valley Water Board heard testimony pertinent to the discharge, WDRs, and permit. For accuracy of the record, important testimony was requested in writing.

D. Reconsideration of Waste Discharge Requirements

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water board to review the action in accordance with Water Code section 13320 and CCR, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., within 30 calendar days of the date of adoption of this Order at the following address, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day:

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

Or by email at waterqualitypetitions@waterboards.ca.gov

Instructions on how to file a petition for review (http://www.waterboards.ca.gov/public_notices/petitions/water_quality/wqpetition_instr.shtml) are available on the Internet.

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (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 Sarah Curry at 916-464-4713, or sarah.curry@waterboards.ca.gov.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	RP
Ammonia Nitrogen, Total (as N)	mg/L	0.94	0.13	0.41	0.47	0.41	--	--	--	--	Yes
Chloride	mg/L	2,000	5.5	230	860	230	--	--	--	250	No
Copper, Total	µg/L	29	2.8	7.5	--	7.5	1,300	--	11	1,000	Yes
Electrical Conductivity	µmhos/cm	10,170	200	230	--	--	--	--	--	900	No
Iron, Total	µg/L	1,590	1,600	300	--	1,000	--	--	--	300	No
Methylene Chloride	µg/L	2.8	ND	4.7	--	--	4.7	1,600	--	5	No
Nitrite, Total (as N)	mg/L	2.1	NA	1	--	--	--	--	--	1	No
Total Dissolved Solids	mg/L	6,630	117	500	--	--	--	--	--	500	No
Zinc, Total	µg/L	29	9.5	17	--	97	7,400	26,000	29	5,000	Yes

Attachment G Table Notes:

1. All inorganic concentrations are given as a total concentration.
2. **Chloride.** Chloride does not have reasonable potential based on the critical downstream receiving water concentration (see section IV.C.3.c.v of the Fact Sheet).
3. **Electrical Conductivity.** Electrical conductivity does not have reasonable potential based on the critical downstream receiving water concentration (see section IV.C.3.c.v of the Fact Sheet).
4. **Iron.** Iron does not have reasonable potential based on the critical downstream receiving water concentration (see section IV.C.3.b.i of the Fact Sheet).
5. **Nitrite.** Nitrite does not have reasonable potential based on the critical downstream receiving water concentration (see section IV.C.3.b.iii of the Fact Sheet).

6. **Total Dissolved Solids.** Total dissolved solids does not have reasonable potential based on the critical downstream receiving water concentration (see section IV.C.3.c.v of the Fact Sheet).

Abbreviations used in this table:

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

ATTACHMENT H – CALCULATION OF WQBELS

TABLE H-1. 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	0.47	0.41	0.13	1.2	38.3	12	13	2.3	3.7	2.3	1.4	--	5.9	3.2	--	13
Copper, Total	µg/L	6.3	4.5	2.8	0.98	10	11	0.21	8.2	0.38	8.4	1.9	--	4.8	16	--	41
Zinc, Total	µg/L	17	59	9.5	0.30	11.2	0.30	0.53	53	0.71	53	1.3	--	1.9	67	--	100

Table H-1 Notes:

1. AMEL calculated according to section 1.4 of the SIP using a 95th percentile occurrence probability.
2. AWEL calculated according to section 1.4 of the SIP using a 98th percentile occurrence probability.
3. MDEL calculated according to section 1.4 of the SIP using a 99th percentile occurrence probability.
4. **Copper.** Total copper effluent data was converted to dissolved concentrations using the U.S. EPA's default dissolved-to-total metal translators to assess assimilative capacity.
5. **Copper and Zinc Criteria.** The lowest upstream receiving water hardness was used to calculate criteria for hardness-dependent metals to assess the availability for dilution in the receiving water and calculate final effluent limitations.

Abbreviations used in Table H-1:

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
AMEL = Average Monthly Effluent Limitation
MDEL = Maximum Daily Effluent Limitation
AWEL = Average Weekly Effluent Limitation