CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CA0081485
ORDER R5-2025-0013

WASTE DISCHARGE REQUIREMENTS
FOR THE CUTLER-OROSI JOINT POWERS WASTEWATER AUTHORITY, WASTEWATER TREATMENT FACILITY, TULARE COUNTY

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

Table 1. Discharger Information

Discharger:	Cutler-Orosi Joint Powers Wastewater Authority
Name of Facility:	Wastewater Treatment Facility
Facility Street Address:	40401 Road 120
Facility City, State, Zip:	Cutler, CA 93615
Facility County:	Tulare County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Undisinfected and disinfected secondary treated domestic wastewater	36º 31’ 32” N	-119º 18’ 8” W	First encountered groundwater
002	Disinfected secondary treated domestic wastewater	36º 31’ 23” N	-119º 18’ 2” W	Sand Creek

Table 3. Administrative Information

This Order was Adopted on:	**21 February 2025**
This Order shall become effective on:	**1 April 2025**
This Order shall expire on:	**31 March 2030**
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a NPDES permit no later than:	**31 March 2029**
The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as follows:	**Major**

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 **21 February 2025**.

Patrick Pulupa
Date: 2025.03.10 12:37:45 -07'00'
Water Boards

PATRICK PULUPA, Executive Officer

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I. FACILITY INFORMATION

Information describing the Cutler-Orosi Joint Powers Wastewater Authority, Wastewater Treatment Facility (Facility) is summarized in Table 1 and in sections I and II of the Fact Sheet (Attachment F). Section I of the Fact Sheet also includes information regarding the Facility's permit application.

II. FINDINGS

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

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

B. California Environmental Quality Act (CEQA). Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of Chapter 3 of CEQA, (commencing with section 21100) of Division 13 of Public Resources Code. On 19 November 1996, the Discharger certified a final Environmental Impact Report (EIR) in accordance with CEQA and Section 15090 of the State CEQA Guidelines. At the time, the Central Valley Water Board considered the EIR and concurred there are no significant impacts on water quality as a result of the Facility discharge.

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

D. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections **IV.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 R5-2018-0011 except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Central Valley Water Board from taking enforcement action for violations of the previous Order.

III. DISCHARGE PROHIBITIONS

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

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

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

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

E. Discharge of pollutants to Sand Creek from Discharge Point 002 is prohibited from **1 May through 31 October** of each year.

F. **Monthly Average Daily Discharge Flow Rate.** Discharges exceeding a monthly average daily discharge flow rate of 2.0 million gallons per day (MGD) is prohibited to Sand Creek.

G. The Discharger shall not process or store residual sludge, solid waste, or biosolids on unlined surfaces. Processing and storage of residual sludge, solid waste, or

biosolids must be done on properly lined surfaces with containment surfaces to prevent runoff.

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

I. The Discharger is prohibited from discharging nitrate and other forms of nitrogen speciation (e.g., total inorganic nitrogen and total Kjeldahl nitrogen) unless the Discharger is implementing the requirements of the Nitrate Control Program.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 002 (Sand Creek)

1. Final Effluent Limitations – Discharge Point 002 (Sand Creek)

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 002 to Sand Creek. Unless otherwise specified, compliance shall be measured at Monitoring Location EFF-002, as described in the Monitoring and Reporting Program, Attachment E:

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

Table 4. Effluent Limitations

Parameters	Units	Average Monthly	Average Weekly	Maximum Daily
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD_5)	milligrams per liter (mg/L)	30	45	
Total Suspended Solids (TSS)	mg/L	30	45	
Cyanide, Total	µg/L	4.3		8.5
Copper, Total recoverable	µg/L	38		76
Un-ionized Ammonia (as N)	mg/L	0.014	0.025	
Settleable Solids	milliliters per liter (mL/L)	0.1		0.5

b. **pH:**

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

ii. 8.3 SU as an instantaneous maximum.

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

d. **Chronic Whole Effluent Toxicity MDEL.** No *Selenastrum capricornutum* 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 that sub-lethal endpoint greater than or equal to 50 percent.

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

f. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following with compliance measured immediately after disinfection:

i. 23 most probable number per 100 milliliters (MPN/100 mL), as a 7-day median; nor

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

2. Interim Effluent Limitations – Not Applicable

B. Land Discharge Specifications – Not Applicable

C. Recycling Specifications – Discharge Point 001 (Treated Wastewater Ponds and Use Area)

1. The Discharger shall maintain compliance with the following limitations at Discharge Point 001, with compliance measured at Monitoring Location EFF-001 as described in the attached MRP.

a. The recycled water discharge specifications in Table 5:

Table 5. Recycled Water Discharge Specifications

Parameter	Units	Average Monthly	Maximum Daily
Biochemical Oxygen Demand 5-day @ 20°Celsius	mg/L	30	60
Total Suspended Solids	mg/L	30	60
Settleable Solids	mL/L	0.2	0.5

b. **Percent Removal.** The average monthly percent removal of 5-day biochemical oxygen demand (BOD_5) and total suspended solids (TSS) shall not be less than 85 percent.

c. **Total Coliform Organisms.** Effluent shall be disinfected such that the total coliform organisms in the disinfected effluent do not exceed:

i. 23 most probable number (MPN) per 100 mL, as a 7-day median. If discharge occurs for less than 7-days, median of all samples collected during the period of discharge; nor

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

These limitations apply only when either actively discharging to the treated wastewater ponds and groundwater is less than five (5) feet below the bottom of the treated wastewater ponds, or when actively discharging to the Use Area and groundwater is less than five (5) feet below ground surface of the cropland where wastewater is applied. Sections VII.D of this Order specify how these limitations will be determined to be applicable to the Discharger.

d. **Average Dry Weather Discharge Flow Rate.** The average dry weather discharge flow rate shall not exceed **1.5 million gallons per day** (mgd).

2. All recycled water generated by the Facility shall be produced, distributed, and used in accordance with the 30 July 2009 Engineering Report, or alternative Engineering Report subsequently approved by the State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW; formerly the Department of Public Health).

3. For the purposes of this Order, “Use Area” means an area with defined boundaries where recycled water is used or discharged, as identified in Attachment B and the Fact Sheet.

4. The recycled water shall be at least undisinfected secondary recycled water as defined in Title 22, section 60301.

5. Recycled water shall be used in compliance with Title 22, Section 60304. Specifically, uses of recycled water shall be limited to those set forth in Title 22, section 60304(d).

6. Tailwater runoff shall be returned to the head of the fields or treatment facilities.

7. Crops shall be grown on the Use Area. Crops shall be selected based on nutrient uptake, consumptive use of water, irrigation requirements to maximize crop uptake of water and nutrients, and acceptable crops to receive undisinfected secondary recycled water.

8. Application rates of recycled water to the Use Area shall be reasonable and shall consider soil, climate, and plant demand. In addition, application of recycled water and use of fertilizers shall be at a rate that takes into consideration nutrient levels in recycled water and nutrient demand by plants. As a means of discerning compliance with this requirement:

    a. Crops or landscape vegetation shall be grown on the Use Areas, and cropping activities shall be sufficient to take up the nitrogen applied, including any fertilizers and manure.

    b. Application of waste constituents to the Use Area shall be at reasonable agronomic rates.

    c. Hydraulic loading of recycled water and supplemental irrigation water (if any) shall be managed to

        i. Provide water only when water is needed and in amounts consistent with that need;

        ii. Maximize crop nutrient uptake;

        iii. Maximize breakdown of organic wase constituents in the root zone; and

        iv. Minimize the percolation of waste constituents below the root zone.

        The Central Valley Water Board recognizes that some leaching of salts is necessary to manage salt in the root zone of crops for production. Leaching shall be managed to minimize degradation of groundwater and maintain or reduce, to the extent practicable, concentrations of saline constituents and nitrate (and other forms of nitrogen speciation) in receiving waters.

9. The discharge of recycled water to the Use Areas shall be distributed uniformly on adequate acreage.

10. Use Areas shall only be irrigated with recycled water when appropriately trained personnel are on duty.

11. The Discharger shall conduct periodic inspections of the recycled water Use Areas to determine compliance with the requirements of this Order. If an inspection reveals noncompliance or threat of noncompliance with this Order, the Discharger shall temporarily stop recycled water use immediately and implement corrective actions to ensure compliance with this Order.

12. Grazing of milking animals within the use areas is prohibited.

13. The irrigation with recycled water shall be managed to minimize erosion within the Use Area.

14. The Use Area shall be managed to prevent breeding of mosquitoes or other vectors. The Discharger shall ensure there is no standing water in the Use Area 48 hours after recycled water is applied.

15. The Use Area (e.g., cropland) and recycled water impoundments (e.g., treated wastewater ponds) shall be designed, maintained, and operated to comply with the following setback requirements:

Table 6. Minimum Setbacks for Recycled Water Use Area and Impoundments

Setback	Distance (ft.)
Edge of Use Area to Manmade or Natural Surface Water Drainage Course	50 (see 1 below)
Edge of Use Area to Domestic Water Supply Well	150
Toe of Recycled Water Impoundment Berm to Domestic Water Supply Well or Irrigation Well	150
Edge of Use Area to Any Irrigation Well	50

Table 6 Notes:

1. A 10-foot setback may be maintained, in lieu of a 50-foot setback, between Tout Ditch (canal adjacent to Road 120) and the Use Area if a double berm is constructed and maintained as a containment feature to ensure recycled water does not enter Tout Ditch.

16. Recycled water shall not be applied with spray irrigation when wind gusts exceed 30 mph.

17. Spray, mist, or runoff shall not enter dwellings, designated outdoor eating areas, or food handling facilities.

18. Drinking water fountains shall be protected against contact with recycled water spray, mist, or runoff.

19. Public contact with recycled water shall be controlled using fences, signs, and other appropriate means.

20. Areas that are accessible to the public shall be posted with signs that are visible to the public and no less than four inches high by eight inches wide. Signs shall be placed at all areas of public access and around the perimeter of all use areas and at above-ground portions of recycled water conveyances to alert the public of the use of recycled water. All signs shall display an international symbol similar to that shown in Attachment I, which is attached and forms part of this Order, and shall include the following wording:

RECYCLED WATER – DO NOT DRINK

AGUA DE DESPRERDICIO RECLAMADA – NO TOME

Alternative language will be considered by the Executive Officer if approved by DDW.

21. All recycling equipment, pumps, piping, valves, and outlets shall be marked to differentiate them from potable water facilities. Quick couplers, if used, shall be different than those used in potable water systems.

22. Recycled water controllers, valves, and similar appurtenances shall be equipped with removable handles or locking mechanisms to prevent public access or tampering.

23. Hose bibs and unlocked valves, if used, shall not be accessible to the public.

24. No physical connection shall exist between recycled water piping and any potable water supply system (including domestic wells), or between recycled water piping and any irrigation well that does not have an approved air gap or reduced pressure principle device.

25. Horizontal and vertical separation between pipelines transporting recycled water and those transporting potable water shall comply with Title 22, section 64572, except to the extent that DDW has specifically approved a variance.

26. No physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying potable water or auxiliary water source system.

27. A public water supply shall not be used as backup or supplemental source of water for a recycled water system unless the connection between the two systems is protected by an air gap separation which complies with the requirements of California Code of Regulations, title 17, sections 7602(a) and 7603(a).

28. All recycled water piping and appurtenances in new installations and appurtenances in retrofit installations shall be colored purple or distinctively wrapped with purple tape in accordance with California Health and Safety Code section 116815.

29. Any backflow prevention device installed to protect a public water system shall be inspected and maintained in accordance with Title 17, section 7605.

30. The perimeter of the Use Area shall be graded to prevent ponding along public roads or other public areas.

31. The Discharger shall annually monitor sludge/biosolids accumulation in the wastewater treatment/storage ponds and shall remove sludge/biosolids as necessary to maintain adequate treatment and storage capacity.

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

The discharge shall not cause the following in Sand Creek**:**

1. **Un-ionized Ammonia.** Un-ionized ammonia to be present in amounts that adversely affect beneficial uses nor to be present in excess of 0.025 mg/L (as N).

2. **Bacteria.** The six-week rolling geometric mean of *Escherichia coli (E. coli*) to exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 320 cfu/100 mL to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

3. **Biostimulatory Substances.** Water to contain biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

4. **Chemical Constituents.** Chemical constituents to be present in concentrations that adversely affect beneficial uses.

5. **Color.** Discoloration that causes nuisance or adversely affects beneficial uses.

6. **Dissolved Oxygen:**

    a. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass at centroid of flow

    b. The 95-percentile dissolved oxygen concentration to fall below 75 percent of saturation; nor

    c. The dissolved oxygen concentration to be reduced below 5.0 mg/L at any time.

7. **Floating Material.** Floating material to be present in amounts that cause nuisance or adversely affect beneficial uses.

8. **Oil and Grease.** Oils, greases, waxes, or other materials to be present in concentrations that cause nuisance, result in a visible film or coating on the surface of the water or on objects in the water, or otherwise adversely affect beneficial uses.

9. **pH.** The pH to be depressed below 6.5 nor raised above 8.3**.**

10. **Pesticides:**

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

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

11. **Radioactivity:**

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

    b. Radionuclides to be present in excess of the MCLs specified in Table 64442 of section 64442 and Table 64443 of section 64443 of Title 22 of the CCR.

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

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

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

15. **Taste and Odors.** Taste- or odor-producing substances to be present in concentrations that impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.

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

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

18. **Turbidity.** Turbidity to increase as follows:

    a. More than 1 Nephelometric Turbidity Units (NTU) where natural turbidity is between 0 and 5 NTUs;

    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs;

c. More than 10 NTUs where natural turbidity is between 50 and 100 NTUs; nor

d. More than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations

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

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

2. Constituents in concentrations that exceed either the Primary or Secondary MCLs established in Title 22 of the California Code of Regulations, excluding salinity, provided the Discharger complies with Provision VI.C.3.a.

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

Compliance with these limitations shall be determined annually as specified in Attachment E using approved statistical methods.

VI. PROVISIONS

A. Standard Provisions

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

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

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

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

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

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

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

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

The causes for modification include:

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

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

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

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

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

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

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

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

ii. Controls any pollutant limited in the Order.

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

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

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

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

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

i. Safeguard to electric power failure:

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

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

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

and conditions of this Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this Order.

j. The Discharger, upon written request of the Central Valley Water Board, shall file with the Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events. This report may be combined with that required under the Central Valley Water Board Standard Provision contained in section VI.A.2.i of this Order.

The technical report shall:

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

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

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

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

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

l. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in

California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

m. The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13268, 13350, 13385, 13386, and 13387.

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

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

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

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

r. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, maximum daily effluent limitation, average monthly effluent limitation, average weekly effluent limitation, instantaneous minimum or maximum effluent limitations, receiving water limitation, or groundwater limitation of this Order, the Discharger shall notify the Central Valley Water Board by telephone (559) 445-5116 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Central Valley Water

Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

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

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

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

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

c. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central Valley Water Board in 2020 with Resolution R5-2020-0057 (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf). The revisions to the Basin Plan amendments became effective on 10 November 2021. As the Central Valley Water Board moves forward to implement those provisions that are now in effect, this Order may be amended or modified to incorporate new

or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Sludge Capacity Annual Assessment and Sludge Management Work Plan.** By 1 February of each year, the Discharger shall submit a Sludge Capacity Assessment to determine if the Facility's lined sludge drying beds are sufficient to dispose of the Facility's current sludge flow for the next three years. If any annual Sludge Capacity Assessment indicates that the lined sludge drying beds are approaching capacity, a Sludge Management Work Plan would be triggered. The Sludge Management Work Plan shall be due by 1 August after the Sludge Capacity Annual Assessment that triggered it. The work plan shall be prepared for Executive Officer approval to address the Facility's method of compliance with Discharge Prohibition III.G and Special Provision VI.C.5.a.i. The Discharger previously submitted a Solids Management and Storage Work Plan on 19 March 2019 which, in part, identified mechanical dewatering as the best long term solution for solids handling at the Facility. The Sludge Management Work Plan should further explore implementing the option of mechanical dewatering or other long-term solutions for sludge management for situations of increased influent flow. The work plan shall include an implementation plan and schedule for actions.

b. **Unlined Sludge Surfaces Cleanout and Closure.** By **1 April 2026**, the Discharger shall submit for review, an Unlined Sludge Surfaces Cleanout and Closure Work Plan, proposing actions to permanently decommission the unlined sludge drying beds and the unlined sludge lagoons such that they no longer threaten to violate Special Provision VI.C.5.a.i.. The work plan shall provide a timeline for proper characterization of the extent of waste constituents in the unlined sludge surfaces, removal of waste solids, and a Final Technical Report containing an evaluation that demonstrates that the unlined sludge drying beds and unlined sludge lagoons do not pose a threat to groundwater quality. The timeline for implementation of the work plan shall not exceed seven years from the effective date of this Order.

c. **Toxicity Reduction Evaluation (TRE) Requirements.** The Discharger is required to initiate a TRE, as detailed in the Monitoring and Reporting Program (Attachment E, Section V.G), when any combination of two or more 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 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.

d. **Nitrate Reduction Workplan.** The Dischargers shall comply with the applicable provisions of the Salt and Nitrate Control Programs adopted in Resolution R5-2018-0034 (as revised per Resolution R5-2020-0057) to address ongoing salt and nitrate accumulation in the Central Valley developed as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) initiative. The Discharger shall comply with the applicable requirements of the Kings Water Alliance Management Zone Implementation Plan (MZIP). This includes collaborating with the Management Zone to collect the necessary monitoring data to refine the MZIP preliminary nitrogen load estimate and support development of the Management Zone Groundwater Protection Values and Groundwater Protection Targets.

Per the Kings Water Alliance MZIP, the Discharger is identified as a Group 3 Discharger. Therefore, within 17 years following Central Valley Water Board's authorization of the nitrate exception for the Facility, the Discharger shall submit a **Nitrate Reduction Workplan**. The Nitrate Reduction Workplan shall include the following:

i. Delineation of the Facility's Area of Contribution (AOC).

ii. Quantification of the nitrate loading to the Upper Zone of groundwater underlying the Facility's AOC.

iii. Estimation of the Facility's required minimum nitrogen load reduction and improvement in Facility's discharge quality to comply with the Management Zone's Groundwater Protection Target(s) (or alternative individual groundwater protection target applicable to the Facility).

iv. A detailed time schedule to meet the interim deadlines and milestones to ensure compliance with the Nitrate Control Program. At a minimum, the time schedule shall include the following:

(a) Be as short as practicable and include interim milestones that align with the deadlines specified in the MZIP.

(b) Provide completion dates for the following Deadlines, structured as short as practicable:

(1) Interim Deadline #1: Complete Facility Planning Process

(2) Interim Deadline #2: Select Compliance Project and Initiate Project

(3) Interim Deadline #3: Complete Compliance Project

(4) Interim Deadline #4: Demonstrate Facility Compliance

(c) Provide annual progress reports to the Central Valley Water Board and the Kings Water Alliance. The annual progress reports shall assess compliance with the Facility's approved Nitrate Reduction Workplan and provide sufficient documentation to justify the Facility need for the Nitrate Exception (if applicable).

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 average electrical conductivity concentration for any calendar year exceeds a performance-based **trigger of 950 µmhos/cm**, the Discharger shall evaluate possible sources of salinity contributing to the exceedance of the trigger and update the SEMP to include a plan of action to control salinity.

4. Construction, Operation and Maintenance Specifications

a. **UV Disinfection System Operating Specifications.** The Discharger shall test the UV disinfection system between **1 June and 1 August** to verify that it is in proper working order and submit the results of the test to the Central Valley Water Board by **1 October**. The UV disinfection system must be operated in accordance with an operations and maintenance program that assures adequate disinfection while discharging when groundwater is within 5 feet of the bottom of the treated wastewater ponds, within 5 feet of ground surface of cropland where wastewater is applied, or to Sand Creek, unless otherwise approved by DDW.

i. The Discharger shall provide continuous, reliable monitoring of: flow, ultraviolet light transmittance, and ultraviolet light power.

ii. The lamp sleeves and cleaning system components must be visually inspected per the manufacturer's operations manual for physical wear

(scoring, solarization, seal leaks, cleaning fluid levels, etc.) and to check the efficacy of the cleaning system.

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

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

b. **Treated Wastewater Pond Operating Requirements.**

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

ii. Objectionable odors originating from the Facility shall not be perceivable beyond the limits of the wastewater treatment, disposal, and reclamation areas at an intensity that creates or threatens to create nuisance conditions.

iii. As a means of ensuring compliance with Provision VI.C.4.b.ii, the dissolved oxygen (DO) content in the upper one foot of any wastewater treatment or storage pond shall not be less than 1.0 mg/L for three consecutive sampling events. Notwithstanding the DO monitoring frequency specified in the monitoring and reporting program, if DO in any single pond is below 1.0 mg/L or any single sampling event, the Discharger shall implement daily DO monitoring of that pond until the minimum DO concentration is achieved for at least three consecutive days. If DO in any single pond is below 1.0 mg/L for three consecutive days, the Discharger shall report the findings to the Central Valley Water Board in writing within ten (10) days and shall include a specific plan to resolve the low DO results within thirty (30) days.

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

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

vi. On or about 1 October of each year, available capacity shall at least equal the volume necessary to comply with Provisions VI.C.4.b.iv. and VI.C.4.b.v.

vii. All ponds and open containment structures shall be managed to prevent breeding of mosquitoes. Specifically:

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

(b) Weeds shall be minimized.

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

viii. Ponds shall not have a pH less than 6.0 or greater than 9.0.

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

x. The Discharger shall properly maintain the Facility's evaporation/percolation/storage ponds (e.g., disking and ripping the ponds as necessary) to ensure the ponds have sufficient percolation rates to comply with this Order.

c. **Groundwater Monitoring Network Maintenance Requirements.**

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

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

a. **Sludge/Biosolids Treatment or Discharge Specifications.** Sludge in this document means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during

preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the wastewater treatment plant. Biosolids refer to sludge that has been treated and tested and shown to be capable of being beneficially and legally used pursuant to federal and state regulations as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 C.F.R. Part 503.

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

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

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

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

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

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. COMPLIANCE DETERMINATION

A. BOD_5 and TSS Effluent Limitations (sections IV.A.1.a, IV.A.1.c, IV.C.1.a, and IV.C.1.b). Compliance with the final effluent limitations for BOD_5 and TSS required in Waste Discharge Requirements sections IV.A.1.a and IV.C.1.a shall be ascertained by 24-hour composite samples. Compliance with effluent limitations required in Waste Discharge Requirements section IV.A.1.c and IV.C.1.b for percent removal shall be calculated using the arithmetic mean of BOD_5 and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

B. Monthly Average Daily Discharge Flow Prohibition (section III.F). Compliance with the monthly average daily discharge flow prohibition will be determined based on the average daily flow when discharging to Sand Creek. The average daily flow rate is determined by dividing the total volume of flow discharged by the number of days that discharge to Sand Creek occurred during the calendar month.

C. Average Dry Weather Flow Rate (section IV.C.1.d). The average dry weather discharge flow represents the daily average flow when groundwater is at or near normal and runoff is not occurring. Compliance with the average dry weather flow discharge prohibition will be determined annually based on the average daily flow over three consecutive dry weather months (e.g., July, August, and September).

D. Groundwater Levels Requiring Disinfection (section IV.C.1.c). Effluent discharged to a treated wastewater pond shall be disinfected with ultraviolet light to comply with Section IV.C.1.c when the groundwater potentiometric surface map generated from depth to groundwater data collected from the groundwater monitoring well network, or other groundwater monitoring wells or piezometers approved by the Executive Officers, indicate groundwater is within 5 feet of the bottom of the wastewater pond.

Determination of groundwater levels requiring ultraviolet light disinfection for effluent discharge to the Use Area and wastewater ponds shall be determined based on **Table 7** below:

Table 7. Use of Ultraviolet Light Disinfection for Discharge Point 001

When Depth of Groundwater is Less Than Five Feet Below Ground Surface in this Well	Ultraviolet Light Disinfection of Effluent is Required For Discharge to This Location
Well MW-A	Field E
Well MW-C	Field D

When Depth of Groundwater is Less Than Five Feet Below Ground Surface in this Well	Ultraviolet Light Disinfection of Effluent is Required For Discharge to This Location
Well MW-E	Field C
Well MW-F	Field A and B and Ponds 1 and 2 (see Note 1)
Well MW-G	Field A and B and Ponds 1 and 2 (see Note 1)

Table 7 Notes:

1. Determination for disinfecting wastewater to Ponds 1 and 2 is determined by whether groundwater is within 5 feet of the invert of Ponds 1 and 2.

E. Total Coliform Organisms Effluent Limitations (section IV.A.1.f and IV.C.1.c). For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday, Friday, and Thursday) are used to calculate the 7-day median. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 23 per 100 milliliters, the Discharger will be considered out of compliance.

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

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

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

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

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

3. When determining compliance with an average monthly effluent limitation (AMEL) and more than one sample result is available in a month, the discharger

shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:

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

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

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

G. Dissolved Oxygen Receiving Water Limitation (section V.A.6.a-c). Weekly receiving water monitoring is required in the Monitoring and Reporting Program (Attachment E) and is sufficient to evaluate the impacts of the discharge and compliance with this Order. Weekly receiving water monitoring data, measured at monitoring locations RSW-001 and RSW-002, will be used to determine compliance with part “c” of the dissolved oxygen receiving water limitation to ensure the discharge does not cause the dissolved oxygen concentrations in Sand Creek to be reduced below 5.0 mg/L at any time. However, should more frequent dissolved oxygen and temperature receiving water monitoring be conducted, Central Valley Water Board staff may evaluate compliance with parts “a” and “b”.

H. 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 “Pass” or “Fail”). The Welch’s t-test employed by the TST statistical approach is an adaptation of Student’s t-test and is used with two samples having unequal variances.

1. **Chronic Whole Effluent Toxicity MDEL (section IV.A.1.d).** If the result of a routine 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 sublethal 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.e).** If the result of a routine chronic whole effluent toxicity test, using the TST statistical approach, is a “Fail” at the IWC, the Discharger shall conduct a maximum of two additional MMEL compliance tests during the toxicity calendar month. If one of the additional MMEL compliance test results in a “Fail” at the IWC, the Discharger will be deemed out of compliance with the MMEL.

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Regulatory Management Decision (RMD)
The decision that represents the maximum allowable error rates and thresholds for toxicity and non-toxicity that would result in an acceptable risk to aquatic life.

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

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

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

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

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

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

where:

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

Statewide Toxicity Provisions
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 receiving water limitation is a set value that approximates the 90th percentile of the water quality distribution of a bacterial population.

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

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

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

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

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

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

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

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

ATTACHMENT B – MAPS

FIGURE 1

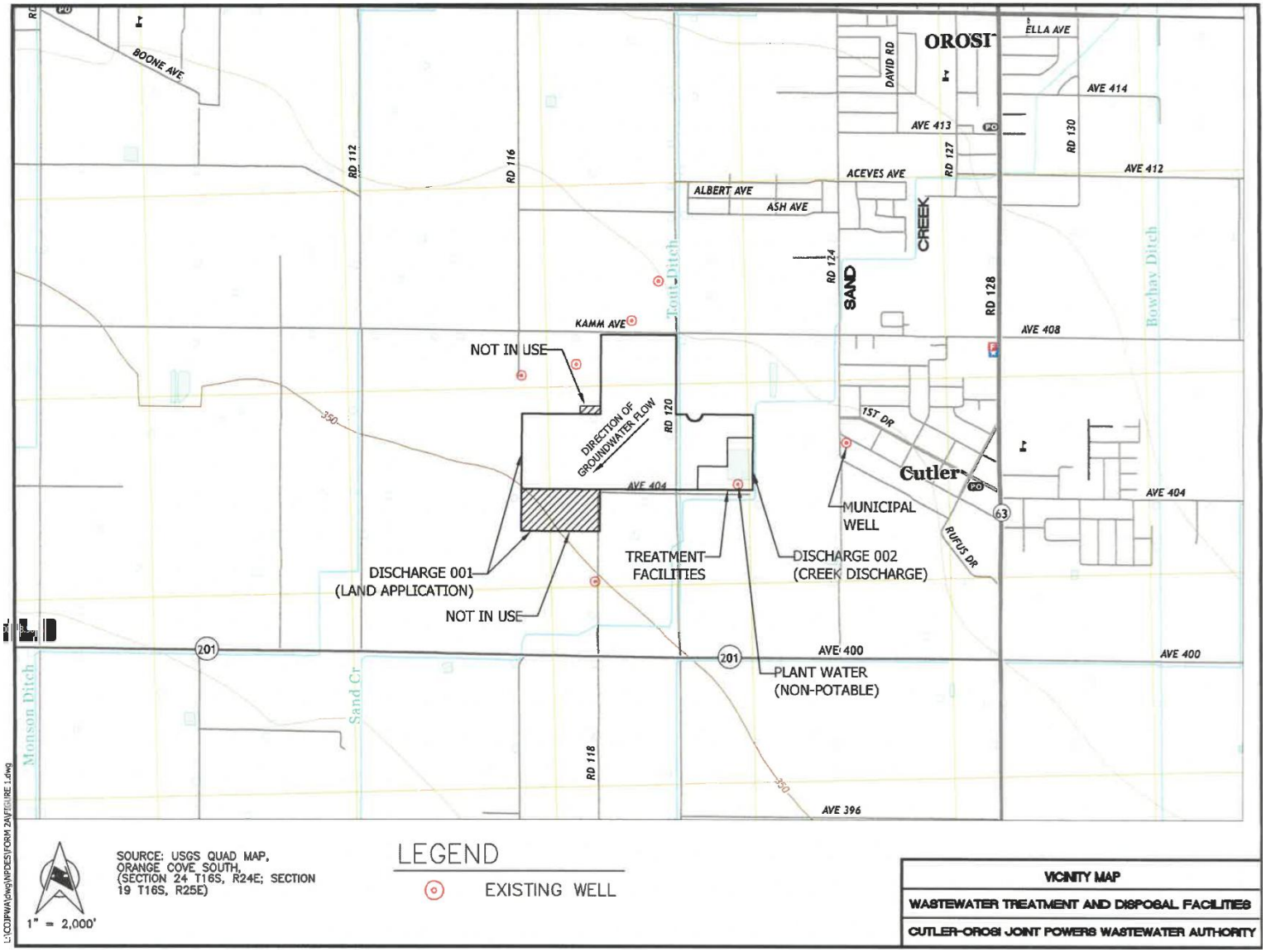


FIGURE 2

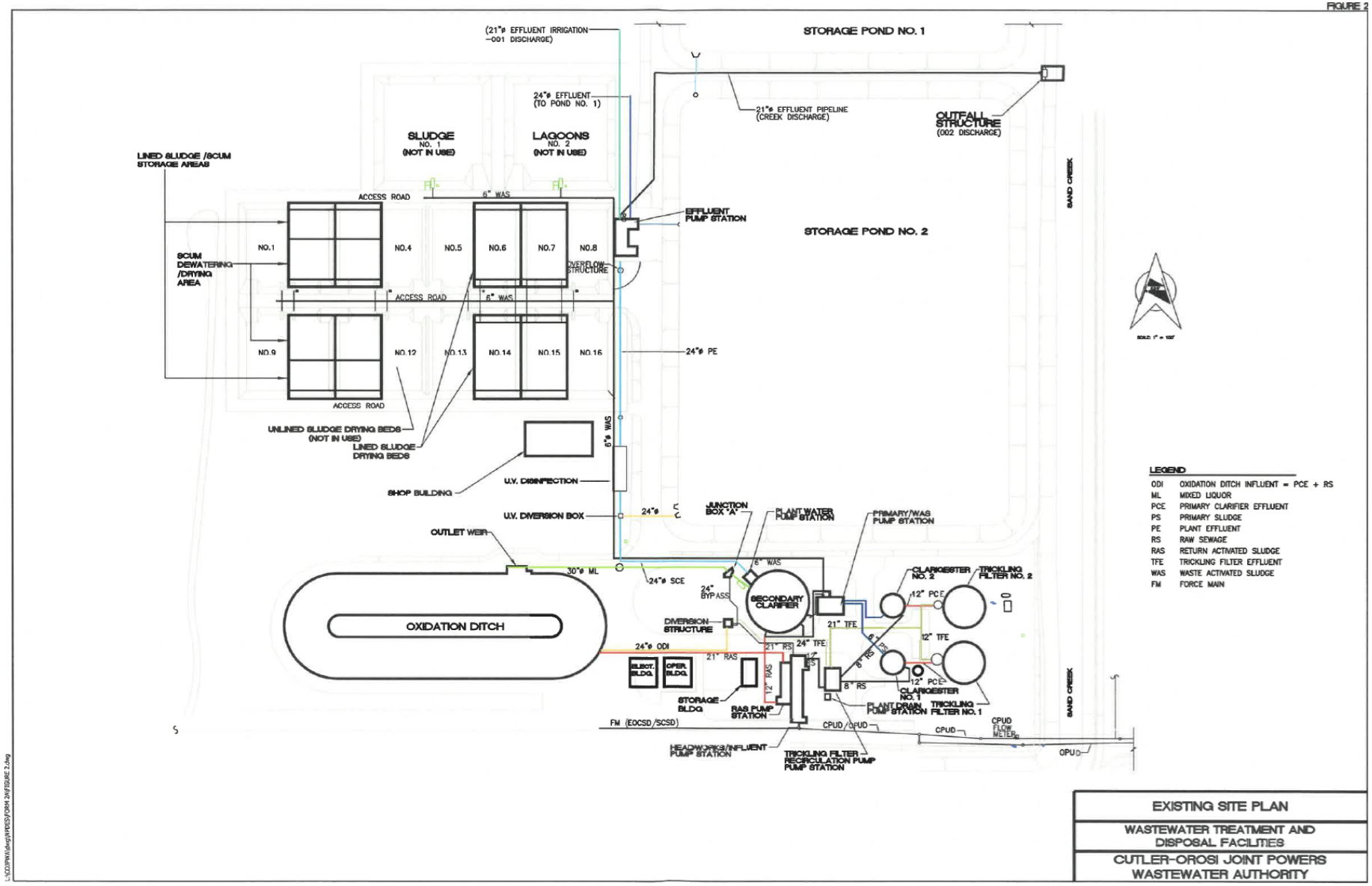
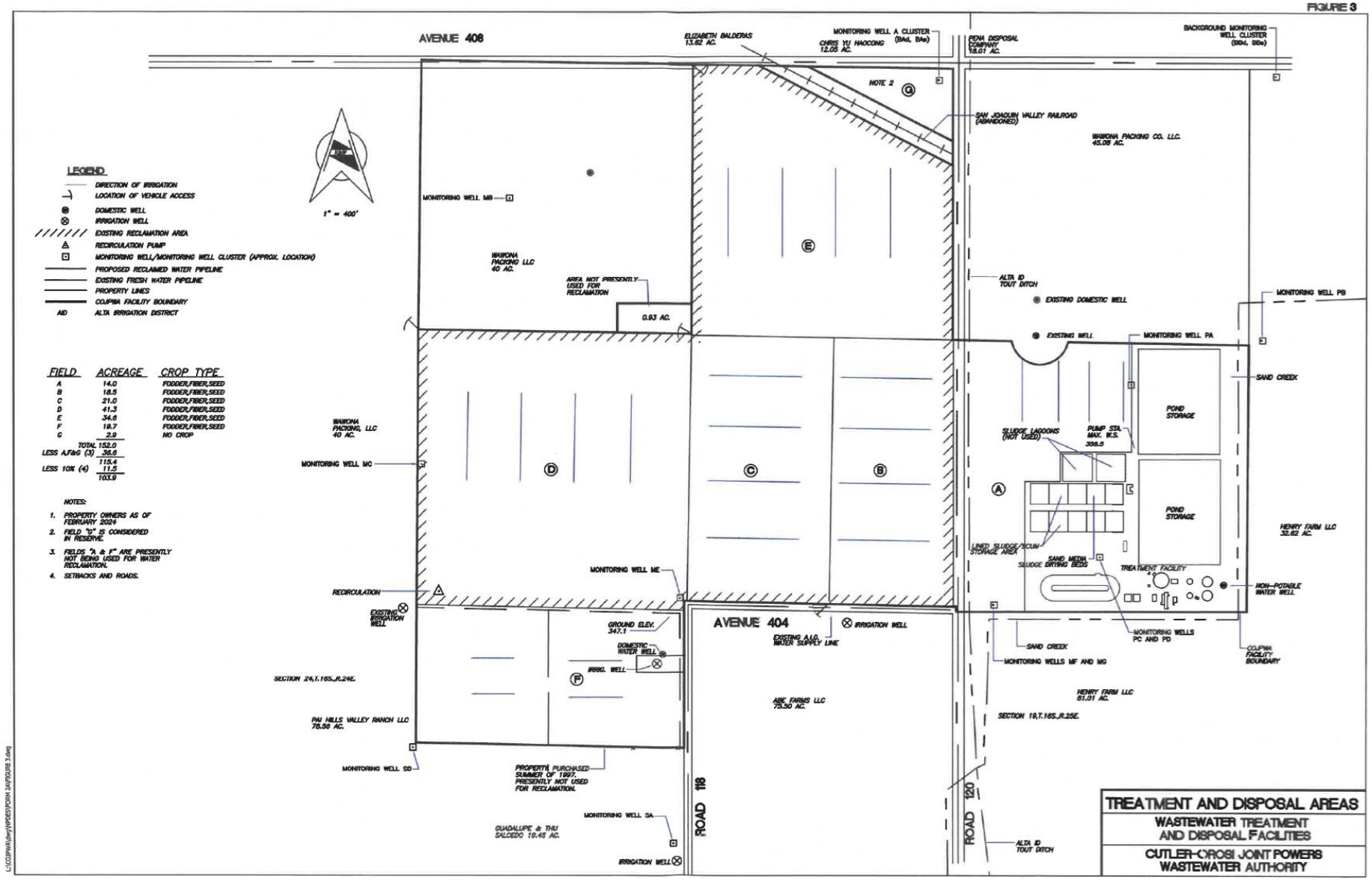
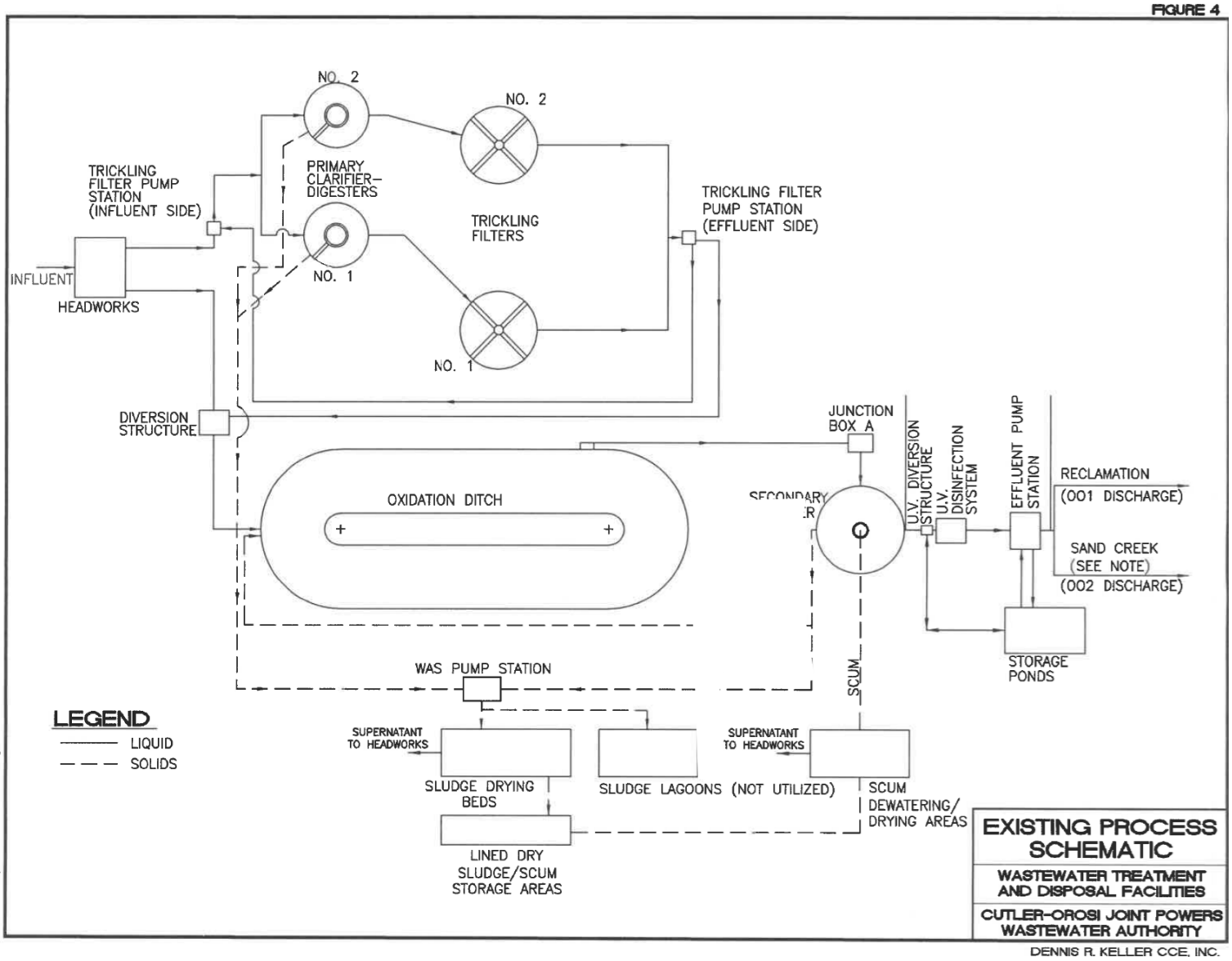

(21"ø EFFLUENT IRRIGATION -001 DISCHARGE)
STORAGE POND NO. 1
24"ø EFFLUENT (TO POND NO. 1)
21"ø EFFLUENT PIPELINE (CREEK DISCHARGE)
OUTFALL STRUCTURE (002 DISCHARGE)
SLUDGE LAGOONS NO. 1 (NOT IN USE)
LAGOONS NO. 2 (NOT IN USE)
LINED SLUDGE /SCUM STORAGE AREAS
ACCESS ROAD
6" WAS
EFFLUENT PUMP STATION
STORAGE POND NO. 2
SAND CREEK
NO.1
NO.4
NO.5
NO.6
NO.7
NO.8
SCUM DEWATERING /DRYING AREA
OVERFLOW STRUCTURE
NO.9
NO.12
NO.13
NO.14
NO.15
NO.16
24"ø PE
UNLINED SLUDGE DRYING BEDS (NOT IN USE)
LINED SLUDGE DRYING BEDS
6"ø WAS
SHOP BUILDING
U.V. DISINFECTION
U.V. DIVERSION BOX
24"ø
JUNCTION BOX "A"
PLANT WATER PUMP STATION
PRIMARY/WAS PUMP STATION
OUTLET WEIR
30"ø ML
24"ø SCE
24" BYPASS
SECONDARY CLARIFIER
CLARIGESTER NO. 2
TRICKLING FILTER NO. 2
12" PCE
21" TFE
12" TFE
OXIDATION DITCH
DIVERSION STRUCTURE
24"ø ODI
21" RAS
21" RS
24" TFE
8" RS
ELECT. BLDG.
OPER. BLDG.
STORAGE BLDG
RAS PUMP STATION
CLARIGESTER NO. 1
PLANT DRAIN PUMP STATION
TRICKLING FILTER NO. 1
FM (EOCSD/SCSD)
CPUD/OPUD
CPUD FLOW METER
HEADWORKS/INFLUENT PUMP STATION
TRICKLING FILTER RECIRCULATION PUMP STATION
LEGEND
ODI OXIDATION DITCH INFLUENT = PCE + RS
ML MIXED LIQUOR
PCE PRIMARY CLARIFIER EFFLUENT
PS PRIMARY SLUDGE
PE PLANT EFFLUENT
RS RAW SEWAGE
RAS RETURN ACTIVATED SLUDGE
TFE TRICKLING FILTER EFFLUENT
WAS WASTE ACTIVATED SLUDGE
FM FORCE MAIN
EXISTING SITE PLAN
WASTEWATER TREATMENT AND DISPOSAL FACILITIES
CUTLER-OROSI JOINT POWERS WASTEWATER AUTHORITY

FIGURE 3


AVENUE 408
AVENUE 404
ELIZABETH BALDERAS 13.82 AC.
CHRIS YU HAOCONG 12.03 AC.
MONITORING WELL A CLUSTER (BMd, BMe)
PENA DISPOSAL COMPANY 18.01 AC.
BACKGROUND MONITORING WELL CLUSTER (BMd, BMe)
NOTE 2
SAN JOAQUIN VALLEY RAILROAD (ABANDONED)
WAWONA PACKING CO. LLC. 45.08 AC.
MONITORING WELL MB
WAWONA PACKING LLC 40 AC.
AREA NOT PRESENTLY USED FOR RECLAMATION
0.93 AC.
ALTA ID TOUT DITCH
EXISTING DOMESTIC WELL
EXISTING WELL
MONITORING WELL PB
MONITORING WELL PA
SAND CREEK
POND STORAGE
SLUDGE LAGOONS (NOT USED)
PUMP STA. MAX. W.S. 306.5
WAWONA PACKING, LLC 40 AC.
MONITORING WELL MC
LINED SLUDGE/SCUM STORAGE AREA
SAND MEDIA SLUDGE DRYING BEDS
TREATMENT FACILITY
HENRY FARM LLC 32.62 AC.
NON-POTABLE WATER WELL
MONITORING WELL ME
RECIRCULATION
EXISTING IRRIGATION WELL
GROUND ELEV. 347.1
DOMESTIC WATER WELL
IRRIG. WELL
IRRIGATION WELL
EXISTING A.I.D. WATER SUPPLY LINE
MONITORING WELLS PC AND PD
SAND CREEK
MONITORING WELLS MF AND MG
COUPWA FACILITY BOUNDARY
SECTION 24,T.16S.,R.24E.
ABC FARMS LLC 75.50 AC.
HENRY FARM LLC 81.01 AC.
SECTION 19,T.16S.,R.25E.
PAI HILLS VALLEY RANCH LLC 76.56 AC.
MONITORING WELL SD
PROPERTY PURCHASED SUMMER OF 1997. PRESENTLY NOT USED FOR RECLAMATION.
GUADALUPE & THU SALCEDO 18.45 AC.
MONITORING WELL SA
IRRIGATION WELL
ROAD 116
ROAD 120
ALTA ID TOUT DITCH
1" = 400'
LEGEND
DIRECTION OF IRRIGATION
LOCATION OF VEHICLE ACCESS
DOMESTIC WELL
IRRIGATION WELL
EXISTING RECLAMATION AREA
RECIRCULATION PUMP
MONITORING WELL/MONITORING WELL CLUSTER (APPROX. LOCATION)
PROPOSED RECLAIMED WATER PIPELINE
EXISTING FRESH WATER PIPELINE
PROPERTY LINES
COUPWA FACILITY BOUNDARY
AID ALTA IRRIGATION DISTRICT
FIELD ACREAGE CROP TYPE
A 14.0 FODDER,FIBER,SEED
B 18.5 FODDER,FIBER,SEED
C 21.0 FODDER,FIBER,SEED
D 41.3 FODDER,FIBER,SEED
E 34.6 FODDER,FIBER,SEED
F 19.7 FODDER,FIBER,SEED
G 2.9 NO CROP
TOTAL 152.0
LESS A,F&G (3) 36.6
115.4
LESS 10% (4) 11.5
103.9
NOTES:
1. PROPERTY OWNERS AS OF FEBRUARY 2024
2. FIELD "G" IS CONSIDERED IN RESERVE.
3. FIELDS "A & F" ARE PRESENTLY NOT BEING USED FOR WATER RECLAMATION.
4. SETBACKS AND ROADS.
TREATMENT AND DISPOSAL AREAS
WASTEWATER TREATMENT AND DISPOSAL FACILITIES
CUTLER-OROSI JOINT POWERS WASTEWATER AUTHORITY

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

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

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

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

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

4. If an authorization under Standard Provisions – Reporting V.B.3 above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of Standard Provisions – Reporting V.B.3 above must be submitted to the Central Valley Water Board and State Water Board prior to or together with any reports, information, or applications, to be signed by an authorized representative. (40 C.F.R. section 122.22(c).)

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

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

6. Any person providing the electronic signature for such documents described in Standard Provision – V.B.1, V.B.2, or V.B.3 that are submitted electronically shall meet all relevant requirements of Standard Provisions – Reporting V.B, and shall ensure that all of the relevant requirements of 40 C.F.R. part 3 (Cross-Media Electronic Reporting) and 40 C.F.R. part 127 (NPDES Electronic Reporting Requirements) are met for that submission. (40 C.F.R section 122.22(e).)

C. Monitoring Reports

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

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Central Valley Water Board or State Water Board for reporting the results of monitoring, sludge use, or disposal practices. As of 21 December 2016, all reports and forms must be submitted electronically to the initial recipient, defined in Standard Provisions – Reporting V.J, and comply with 40 C.F.R. part 3, section 122.22, and 40 C.F.R. part 127. (40 C.F.R. section 122.41(l)(4)(i).)

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting

form specified by the Central Valley Water Board. (40 C.F.R. section 122.41(l)(4)(ii).)

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

D. Compliance Schedules

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

E. Twenty-Four Hour Reporting

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

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

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

F. Planned Changes

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

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

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

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

G. Anticipated Noncompliance

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

H. Other Noncompliance

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

I. Other Information

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

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the appropriate initial recipient, as determined by U.S. EPA, and as defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial

recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. section 122.41(l)(9).)

VI. STANDARD PROVISIONS – ENFORCEMENT

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

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTWs)

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

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

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

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

ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

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

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

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

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

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

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

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

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

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

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

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

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

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	INF-001	A location where a representative sample of the influent into the Facility can be collected prior to any plant return flows or treatment processes. Latitude 36.523227, Longitude; -119.301461

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	When discharging to the Use Area, a location after the last treatment unit and prior to discharge to treated wastewater ponds or Use Area
002	EFF-002	When discharging to Sand Creek, a location after the last treatment unit and prior to discharge to Sand Creek
	INT-001	A location where a sample of disinfected wastewater can be obtained to represent simulated discharge to Sand Creek
	RSW-001	Sand Creek, approximately 500 feet upstream of Discharge Point 002
	RSW-002	Sand Creek, approximately 500 feet downstream of Discharge Point 002
	UVS-001	A location where a representative sample of wastewater can be collected immediately upstream or immediately downstream of the ultraviolet light (UV) disinfection system
	SPL-001	A location where a representative sample of the municipal supply water can be obtained. If this is impractical, water quality data provided by the water supplier(s) may be used.
	PND-001	Treated Wastewater Pond 1 (North)
	PND-002	Treated Wastewater Pond 2 (South)
	MW-A, MW-B, MW-C, MW-D, MW-E, MW-F, MW-G, MW-H, MW-I, and all future wells added to the approved network	Groundwater monitoring wells
	CRP-001	Cropland in the Use Area that receives treated effluent for irrigation

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 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
pH	standard units	Grab	1/Day
Biochemical Oxygen Demand, 5-day @ 20° Celsius (BOD_5)	mg/L	24-hour Composite	2/Week
Total Suspended Solids (TSS)	mg/L	24-hour Composite	2/Week
Electrical Conductivity @ 25° Celsius (EC)	µmhos/cm	24-hour Composite	1/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.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor treated effluent discharged to the treated wastewater ponds and Use Area at Monitoring Location EFF-001 in accordance with Table E-3 and the testing requirements described in section IV.A.2 below:

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
Total Coliform Organisms	MPN/100 mL	Grab	1/Day
Biochemical Oxygen Demand, 5-day @ 20° Celsius (BOD_5)	mg/L	24-hour Composite	1/Week
BOD_5	% removal	Calculate	1/Month
Total Suspended Solids (TSS)	mg/L	24-hour Composite	1/Week
TSS	% removal	Calculate	1/Month
pH	standard units	Grab	1/Week
Temperature	Degrees C	Grab	1/Week
Electrical Conductivity @ 25° Celsius (EC)	µmhos/cm	24-hour Composite	1/Week
Settleable Solids	mL/L	Grab	1/Week
Total Dissolved Solids	mg/L	24-hour Composite	2/Month
Nitrate (as N)	mg/L	Grab	1/Month
Nitrite (as N)	mg/L	Grab	1/Month
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	1/Month
Total Nitrogen	mg/L	Grab	1/Month
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Month
Un-ionized Ammonia, Total (as N)	mg/L	Calculated	1/Month
Dissolved Organic Carbon	mg/L	24-hour Composite	1/Quarter
Standard Minerals	mg/L	24-hour Composite	2/Year
Priority Pollutants and Other Constituents of Concern	See Section IX.D	See Section IX.D	See Section IX.D

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

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

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

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

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

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

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

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

h. **Total Coliform Organisms.** Samples for total coliform organisms may be collected at any point following disinfection and are only required to be monitored when either (1) actively discharging to treated wastewater pond(s) and groundwater is less than five feet below bottom of the pond(s), or (2) actively discharging to the Use Area and groundwater is less than five feet below ground surface of cropland where wastewater is applied.

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

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

k. **Priority Pollutants and Other Constituents of Concern monitoring** shall be in accordance with section IX.D of this MRP

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

B. Monitoring Location EFF-002

1. The Discharger shall monitor treated effluent discharged to Sand Creek at Monitoring Location EFF-002 in accordance with Table E-4 and the testing requirements described in section IV.B.2 below:

Table E-4. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
pH	standard units	Grab	1/Day
Temperature	Degrees C	Grab	1/Day
Total Coliform Organisms	MPN/100 mL	Grab	1/Day
Turbidity	NTU	Grab	1/Day
Dissolved Oxygen	mg/L	Grab	1/Week
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD_5)	mg/L	24-hour Composite	2/Week
BOD_5	% removal	Calculate	1/Month
Total Suspended Solids (TSS)	mg/L	24-hour Composite	2/Week
TSS	% removal	Calculate	1/Month
Electrical Conductivity @ 25° Celsius (EC)	µmhos/cm	24-hour Composite	2/Week
Settleable Solids	mL/L	Grab	1/Week
Total Dissolved Solids	mg/L	24-hour Composite	2/Month
Copper, Total Recoverable	µg/L	Grab	1/Month
Cyanide, Total	µg/L	Grab	1/Month
Nitrate (as N)	mg/L	Grab	1/Month
Nitrite (as N)	mg/L	Grab	1/Month
Total Kjeldahl Nitrogen (as N)	mg/L	Grab	1/Month
Total Nitrogen	mg/L	Grab	1/Month
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Week
Un-ionized Ammonia, Total (as N)	mg/L	Calculated	1/Week
Dissolved Organic Carbon	mg/L	24-hour Composite	1/Quarter
Standard Minerals	mg/L	24-hour Composite	2/Year
Priority Pollutants and Other Constituents of Concern	See Section IX.D	See Section IX.D	See Section IX.D
Chronic WET	See Section V.	See Section V.	See Section V.

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

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

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

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

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

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

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

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

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

    i. **Priority Pollutants.** For all priority pollutant constituents listed in Table E-4 (Copper, Cyanide, and Priority Pollutants and Other Constituents of Concern) the RL shall be consistent with sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) and the SSM Rule specified under 40 C.F.R. sections 122.21(e)(3)and 122.44(i)(1)(iv).

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

k. **Priority Pollutant monitoring** shall be in accordance with section IX.D of this MRP.

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

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

A. Toxicity Calendar Month, Quarter, and Year

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

2. **Toxicity Calendar Quarter.** A toxicity calendar quarter is defined as **three consecutive toxicity calendar months**. For purposes of this Order, the toxicity calendar quarters **begin on 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 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. Chronic Toxicity Testing.

The Discharger shall meet the following chronic toxicity testing requirements:

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

2. **Routine Monitoring Frequency.** The Discharger shall perform routine chronic toxicity testing at Monitoring Location EFF-002 twice per toxicity calendar year in years in which there are at least 15 days of discharge to Discharge Point 002 in at least one toxicity calendar quarter, concurrent with effluent ammonia sampling.

3. **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 test results in a “pass”, the discharger shall complete a second chronic toxicity MMEL 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.

4. **Additional Routine Monitoring Tests for TRE Determination.** When there is one violation but not two violations of the chronic toxicity MDEL or MMEL in a single toxicity calendar month, an additional routine monitoring test is required to

determine if a TRE is necessary. This additional routine monitoring test is not required if the Discharger is already conducting a TRE. This additional routine monitoring test shall be initiated within two weeks after the end of the toxicity calendar month in which the MMEL or MDEL violation occurred. The toxicity calendar month of the violation and the toxicity calendar month of the additional routine monitoring shall be considered "successive calendar months" for purposes of determining whether a TRE is required. This additional routine monitoring test is also used for compliance purposes, and could result in the need to conduct MMEL compliance testing per section V.B.3 above.

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

6. **Test Species.** The testing shall be conducted using the most sensitive species. The Discharger shall conduct chronic toxicity tests with *Pseudokirchneriella subcapitata* (previously known as *Selenastrum capricornutum)*, unless otherwise specified in writing by the Executive Officer.

   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.

7. **Test Methods.** Discharger shall conduct the chronic toxicity tests on effluent samples at the instream waste concentration for the discharge in accordance with species and test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R02/013, 2002; Table IA, 40 C.F.R. part 136). *Pseudokirchneriella subcapitata,* the green alga test species, was previously named *Selenastrum capricornutum.* Test methods continue to use *Selenastrum capricornutum* to refer to the species for consistency between methods.

8. **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.

9. **Test Failure.** If the effluent chronic toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method in EPA/821-R-

02-013, the Discharger must conduct a Replacement Test as soon as possible, as specified in subsection B.10, below.

10. **Replacement Test.** When a required toxicity test for routine monitoring or MMEL compliance tests are 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 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 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.

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

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

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

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

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

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

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

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

D. 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.

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

1. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the IWC for the discharge, the dates of sample collection and initiation of each toxicity test, all results for effluent parameters monitored concurrently with the toxicity test(s); and progress reports on TRE investigations.

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

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

F. Most Sensitive Species Screening. The Discharger shall perform subsequent species sensitivity screening to re-evaluate the most sensitive species. The species sensitivity screening shall be conducted by 1 March 2037 (15 years from the last screening) or if the effluent at the time this Order was adopted is no longer representative of the effluent. The results of the 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 alga (*Pseudokirchneriella subcapitata*). The tests shall be performed at an IWC of no less than 100 percent effluent. If the Discharger is not discharging at Sand Creek during the calendar

quarter, the Discharger shall perform the toxicity testing on disinfected wastewater at Monitoring Location INT-001 to simulate water quality of a potential discharge to Sand Creek.

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.

G. Toxicity Reduction Evaluations (TRE)

1. **TRE Implementation.** The Discharger is required to initiate a TRE when there is any combination of two or more chronic toxicity 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 at EFF-002 to complete a routine monitoring test or MMEL compliance test, or if the routine monitoring test or MMEL compliance test was otherwise not completed or conducted.

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

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

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

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

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

2. **TRE Work Plan.** The Discharger shall submit to the Central Valley Water Board a TRE Work Plan for approval by the Executive Officer **at least 90 days before the first discharge to Sand Creek under this Order**. If the Executive Officer does not disapprove the work plan within 60 days, the work plan shall become effective. The TRE Work Plan shall outline the procedures for identifying the source(s) of and reducing or eliminating effluent toxicity. The TRE Work Plan must be of adequate detail to allow the Discharger to immediately initiate a TRE and shall be developed in accordance with U.S. EPA guidance as discussed below.

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

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

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

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

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

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

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

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

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

VI. LAND DISCHARGE MONITORING REQUIREMENTS

A. Monitoring Locations PND-001 and PND-002

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

Table E-5 Land Discharge Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow into each pond	Mgd	Estimate	1/Day
Freeboard	0.1 feet	Visual	1/Week
Dissolved Oxygen	mg/L	Grab	1/Week
Visual Observation		Visual	1/Week
Percolation Rate	in/day	Calculation	1/Year
Sludge Accumulation	in	Estimate	1/Year

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. **Flow.** The Discharger shall report whether or not the effluent was disinfected by ultraviolet light prior to discharge due to groundwater elevations.

   b. **Dissolved Oxygen.** Dissolved oxygen measurements shall be collected from the upper one-foot of each pond near the outlet between 0800 and 0900 hours. Monitoring frequency shall be daily when in noncompliance with Treated Wastewater Pond Operating Requirements (section VI.C.4.b of this Order) and shall continue at least one week after return to compliance.

   c. **Handheld Field Meter.** A handheld field meter may be used for dissolved oxygen, 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. **Visual Observations.** Visual observations shall include the presence of weeds, scum, odors, solids build-up on the pond surface, berm seepage, and conditions that threaten berm integrity (e.g., animal burrows and significant erosion or cracks).

   e. **Pond Percolation Rate.** Pond percolation rates shall be calculated using known water storage, known precipitation amounts, assumed or measured

evaporation amounts, and known wastewater distributions to and from the treated wastewater ponds. Supporting values, assumptions, and calculations shall be included in the self-monitoring report. Pond percolation rate calculations must be prepared by a professional engineer registered to practice in California or by another appropriately qualified individual as specified in section VI.A.2.l of this Order.

VII. RECYCLING MONITORING REQUIREMENTS

A. Monitoring Location CRP-001

1. The Discharger shall monitor irrigation operations in the Use Area at Monitoring Location CRP-001 in accordance with Table E-6 and the testing requirements described in section VII.A.2 below:

Table E-6. Recycled Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Effluent Applied	mgd	Meter	1/Day
Location and Type of Crop Where Effluent is Applied		Observation	1/Day
Rainfall	inches	Observation	1/Day
Effluent Application Rate	gal/acre/day	Calculated	1/Day
Supplemental Irrigation Rate	gal/acre/day	Calculated	1/Day
BOD_5 Loading Rate	lbs/acre/day	Calculated	1/Day
Total Nitrogen Loading Rate from Wastewater	lbs/acre/month	Calculated	1/Month
Total Nitrogen Loading Rate from Fertilizer	lbs/acre/month	Calculated	1/Month
Salt Loading Rate	lbs/acre/month	Calculated	1/Month
Hydraulic/Nutrient Balance	varies	Calculated	1/Year

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

   a. **Use Area Fields.** The Discharger shall identify which field (A, B, C, D, and/or E) that received effluent and whether or not the effluent was disinfected by ultraviolet light prior to discharge due to groundwater elevation.

   b. **Application Rate Calculations.** Nitrogen and salt loading rates from wastewater shall be calculated using the effluent application rate and the monthly average concentrations of total nitrogen and total dissolved solids. The nitrogen loading rate from fertilizer shall be calculated from any sources other than wastewater (i.e., organic matter and manure).

c. **Hydraulic/Nutrient Balance.** The hydraulic/nutrient balance shall include the total water application to cropland, including treated effluent and other irrigation water; the total nutrient loading from wastewater, sludges, and chemical fertilizers; and amount of nutrients removed through harvest of the crop.

3. The Discharger shall keep a log of routine monitoring observations (e.g., areas of ponding, broken irrigation pipes, odors and/or flies within the Use Area, etc.).

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations RSW-001 and RSW-002

1. The Discharger shall monitor Sand Creek upstream and downstream of Discharge Point 002 at Monitoring Locations RSW-001 and RSW-002 in accordance with Table E-7 and the testing requirements described in section VIII.A.2 below:

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

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	mgd	Estimate	1/Day
Dissolved Oxygen	mg/L	Grab	1/Week
pH	standard units	Grab	1/Week
Temperature	Degrees C	Grab	1/Week
Turbidity	NTU	Grab	1/Week
E. coli Organisms	cfu/100 mL	Grab	1/Week
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month
Hardness (as $CaCO_3$)	mg/L	Grab	1/Month
Ammonia, Total (as N)	mg/L	Grab	1/Month
Un-ionized Ammonia (as N)	mg/L	Calculated	1/Month
Priority Pollutants and other Constituents of Concern	See Section IX.D	See Section IX.D	See Section IX.D

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. **Monitoring Frequencies.** Samples for **dissolved oxygen, pH, temperature, turbidity, *E. coli*, and electrical conductivity** only need to be collected from RSW-001 and RSW-002 when discharge is occurring at Discharge Point 002. Samples for **hardness, ammonia, and un-ionized ammonia** need to be collected between 1 November through 30 April when there is (1) flow in Sand Creek OR (2) discharge is occurring at Discharge Point 002.

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

c. **Handheld Field Meter.** A handheld field meter may be used for temperature, pH, turbidity, and dissolved oxygen, 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. **Priority Pollutants.** For all priority pollutant constituents listed in Table E-4 (Bis (2-ethylhexyl) phthalate, Persistent Chlorinated Hydrocarbon Pesticides and Priority Pollutants and Other Constituents of Concern) the RL shall be consistent with sections 2.4.2 and 2.4.3 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (State Implementation Policy or SIP) and the SSM Rule specified under 40 C.F.R. sections 122.21(e)(3)and 122.44(i)(1)(iv).

f. **Priority Pollutants and other Constituents of Concern** monitoring is only required at Monitoring Location RSW-001.

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

   g. Potential nuisance conditions; and

   h. Persons recreating in and around Sand Creek.

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

B. Monitoring Locations MW-A, MW-B, MW-C, MW-D, MW-E, MW-F, MW-G, MW-H, MW-I, and all Future Wells added to the Approved Network

1. The Discharger shall conduct groundwater monitoring at MW-A, MW-B, MW-C, MW-D, MW-E, MW-F, MW-G, MW-H, MW-I, and any new groundwater monitoring wells in accordance with Table E-8 and the testing requirements described in section VIII.B.2 below:

Table E-8. Groundwater Monitoring Requirements

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

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

   a. **Prior to construction and/or beginning a sampling program** of any new groundwater monitoring wells, the Discharger shall submit plans and specifications to the Central Valley Water Board for approval. Once installed, all new wells shall be added to the monitoring network (which currently consists of Monitoring Wells MW-A, MW-B, MW-C, MW-D, MW-E, MW-F, MW-G, MW-H, and MW-I) and shall be sampled and analyzed according to the schedule below. All samples shall be collected using approved U.S. EPA methods.

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

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

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

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

f. **Filtration**. For constituents with Secondary MCLs listed in California Code of Regulations Title 22 Table 64449-A (e.g., iron and manganese), samples shall be filtered with a 1.5-micron filter prior to preservation, digestion, and analysis. For all other constituents, samples shall be filtered with a 0.45-micron filter prior to preservation, digestion, and analysis.

g. **Sampling for total dissolved solids and total organic carbon** is required quarterly. After three years of quarterly monitoring, the monitoring frequency shall be reduced to yearly.

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids Monitoring – Not Applicable

B. Municipal Water Supply

1. **Monitoring Location SPL-001.** The Discharger shall monitor the municipal water supply of the communities that the Facility serves at SPL-001 in accordance with Table E-9 and the testing requirements described in section IX.B.2. below. Sampling stations shall be established where representative samples of the municipal water supply can be obtained. Publicly available data may be used in lieu of the monitoring established in Table E-9 below to demonstrate the average water quality of the water supply.

Table E-9. Municipal Water Supply Monitoring Requirements

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

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

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

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

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

C. Ultraviolet Light (UV) Disinfection System

1. **Monitoring Locations UVS-001.** The Discharger shall monitor the UV disinfection system at Monitoring Locations UVS-001 in accordance with Table E-10 and the testing requirements described in section IX.C.2 below:

Table E-10. UV Disinfection System Monitoring Requirements

Parameter	Units	Sample Type	Monitoring Location	Minimum Sampling Frequency
Annual System Test				1/Year
Flow	MGD	Meter	UVS-001	Continuous
Turbidity	NTU	Meter	UVS-001	Continuous
Number of UV banks in operation	Number	Observation	N/A	Continuous
UV Transmittance	Percent (%)	Meter	UVS-001	Continuous
UV Dose	mJ/cm^2	Calculated	N/A	Continuous
Total Coliform Organisms	MPN/100mL	Grab	UVS-001	1/Day

2. **Table E-10 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-10:

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

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

c. **Turbidity.** Report daily average and maximum turbidity.

d. **UV Dose.** Report daily minimum hourly average UV dose and daily average UV dose. The minimum hourly average dose shall consist of lowest hourly average dose provided in any channel that had at least one bank of lamps operating during the hour interval. For channels that did not operate for the entire hour interval, the dose will be averaged based on the actual operation time.

e. **Annual System Test.** The annual system test shall be conducted between 1 June and 1 August to verify that the ultraviolet light disinfection system is in proper working order. The results of the test shall be submitted to the Central Valley Water Board by 1 October.

D. Effluent and Receiving Water Characterization

1. Monitoring Frequency

The Discharger does not discharge to the receiving water on a continuous basis. The characterization monitoring is required whether the Discharger is discharging to Discharge Point 002 or not.

a. **Effluent Sampling.** Samples shall be collected from the effluent (Monitoring Location EFF-002) twice during the period of **1 November 2026 through 30 April 2027** and twice during the period of **1 November 2027 through 30 April 2028**. If Discharge Point 002 is not used during the effluent sampling periods, the effluent samples shall be disinfected wastewater collected at Monitoring Location INT-001.

b. **Receiving Water Sampling.** Samples shall be collected from the upstream receiving water (Monitoring Location RSW-001) annually between 1 November through 30 April each year. If Discharge Point 002 is not used during sampling periods, the receiving water samples are still required at Monitoring Location RSW-001.

2. **Analytical Methods.** Constituents shall be collected and analyzed consistent with the Discharger's Analytical Methods Report (MRP, X.D.2) using sufficiently sensitive analytical methods and Reporting Levels (RLs) per the SSM Rule specified in 40 C.F.R. 122.21(e)(3) and 122.44(i)(1)(iv). The "Reporting Level" is synonymous with the "Method Minimum Level" described in the SSM Rule. The results of the monitoring shall be submitted to the Central Valley Water Board

with the monthly self-monitoring reports. Each individual monitoring event shall provide representative sample results for the effluent and upstream receiving water.

3. **Analytical Methods Report Certification.** Prior to beginning the Effluent and Receiving Water Characterization monitoring, the Discharger shall provide a certification acknowledging the scheduled start date of the Effluent and Receiving Water Characterization monitoring and confirming that samples will be collected and analyzed as described in the previously submitted Analytical Methods Report. If there are changes to the previously submitted Analytical Methods Report, the Discharger shall outline those changes. A one-page certification form will be provided by Central Valley Water Board staff with the permit's Notice of Adoption that the Discharger can use to satisfy this requirement. The certification form shall be submitted electronically via CIWQS submittal by the due date in the Technical Reports Table E-13.

4. The Discharger shall conduct effluent and receiving water characterization monitoring in accordance with Table E-11 and the testing requirements described in section IX.D.5 below.

Table E-11. Effluent and Receiving Water Characterization Monitoring

VOLATILE ORGANICS

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

CTR Number	Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
44	Vinyl Chloride	75-01-4	µg/L	Grab
	Methyl-tert-butyl ether (MTBE)	1634-04-4	µg/L	Grab
41	1,1,1-Trichloroethane	71-55-6	µg/L	Grab
42	1,1,2-Trichloroethane	79-00-5	µg/L	Grab
28	1,1-Dichloroethane	75-34-3	µg/L	Grab
30	1,1-Dichloroethylene (DCE)	75-35-4	µg/L	Grab
31	1,2-Dichloropropane	78-87-5	µg/L	Grab
32	1,3-Dichloropropylene	542-75-6	µg/L	Grab
37	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	Grab
101	1,2,4-Trichlorobenzene	120-82-1	µg/L	Grab
29	1,2-Dichloroethane	107-06-2	µg/L	Grab
75	1,2-Dichlorobenzene	95-50-1	µg/L	Grab
76	1,3-Dichlorobenzene	541-73-1	µg/L	Grab
77	1,4-Dichlorobenzene	106-46-7	µg/L	Grab

SEMI-VOLATILE ORGANICS

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
60	Benzo(a)Anthracene	56-55-3	µg/L	Grab
85	1,2-Diphenylhydrazine	122-66-7	µg/L	Grab
45	2-Chlorophenol	95-57-8	µg/L	Grab
46	2,4-Dichlorophenol	120-83-2	µg/L	Grab
47	2,4-Dimethylphenol	105-67-9	µg/L	Grab
49	2,4-Dinitrophenol	51-28-5	µg/L	Grab
82	2,4-Dinitrotoluene	121-14-2	µg/L	Grab
55	2,4,6-Trichlorophenol	88-06-2	µg/L	Grab
83	2,6-Dinitrotoluene	606-20-2	µg/L	Grab
50	2-Nitrophenol	88-75-5	µg/L	Grab
71	2-Chloronaphthalene	91-58-7	µg/L	Grab
78	3,3-Dichlorobenzidine	91-94-1	µg/L	Grab
62	Benzo(b)Fluoranthene	205-99-2	µg/L	Grab
52	4-Chloro-3-methylphenol	59-50-7	µg/L	Grab
48	2-Methyl-4,6-Dinitrophenol	534-52-1	µg/L	Grab
51	4-Nitrophenol	100-02-7	µg/L	Grab
69	4-Bromophenyl Phenyl Ether	101-55-3	µg/L	Grab
72	4-Chlorophenyl Phenyl Ether	7005-72-3	µg/L	Grab
56	Acenaphthene	83-32-9	µg/L	Grab
57	Acenaphthylene	208-96-8	µg/L	Grab
58	Anthracene	120-12-7	µg/L	Grab
59	Benzidine	92-87-5	µg/L	Grab
61	Benzo(a)Pyrene	50-32-8	µg/L	Grab
63	Benzo(ghi)Perylene	191-24-2	µg/L	Grab

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
64	Benzo(k)Fluoranthene	207-08-9	µg/L	Grab
65	Bis (2-Chloroethoxy) Methane	111-91-1	µg/L	Grab
66	Bis (2-Chloroethyl) Ether	111-44-4	µg/L	Grab
67	Bis (2-Chloroisopropyl) Ether	108-60-1	µg/L	Grab
68	Bis(2-Ethylhexyl) Phthalate	117-81-7	µg/L	Grab
70	Butylbenzyl Phthalate	85-68-7	µg/L	Grab
73	Chrysene	218-01-9	µg/L	Grab
81	Di-n-butyl Phthalate	84-74-2	µg/L	Grab
84	Di-n-Octyl Phthalate	117-84-0	µg/L	Grab
74	Dibenzo(a,h)anthracene	53-70-3	µg/L	Grab
79	Diethyl Phthalate	84-66-2	µg/L	Grab
80	Dimethyl Phthalate	131-11-3	µg/L	Grab
86	Fluoranthene	206-44-0	µg/L	Grab
87	Fluorene	86-73-7	µg/L	Grab
88	Hexachlorobenzene	118-74-1	µg/L	Grab
90	Hexachlorocyclopentadiene	77-47-4	µg/L	Grab
91	Hexachloroethane	67-72-1	µg/L	Grab
92	Indeno(1,2,3-cd) Pyrene	193-39-5	µg/L	Grab
93	Isophorone	78-59-1	µg/L	Grab
98	N-Nitrosodiphenylamine	86-30-6	µg/L	Grab
96	N-Nitrosodimethylamine	62-75-9	µg/L	Grab
97	N-Nitrosodi-n-Propylamine	621-64-7	µg/L	Grab
95	Nitrobenzene	98-95-3	µg/L	Grab
53	Pentachlorophenol (PCP)	87-86-5	µg/L	Grab
99	Phenanthrene	85-01-8	µg/L	Grab
54	Phenol	108-95-2	µg/L	Grab
100	Pyrene	129-00-0	µg/L	Grab

INORGANICS

CTR Number	Inorganic Parameters	CAS Number	Units	Effluent Sample Type
NL	Aluminum	7429-90-5	µg/L	24-hour Composite
1	Antimony, Total	7440-36-0	µg/L	24-hour Composite
2	Arsenic, Total	7440-38-2	µg/L	24-hour Composite
15	Asbestos	1332-21-4	µg/L	24-hour Composite
3	Beryllium, Total	7440-41-7	µg/L	24-hour Composite
4	Cadmium, Total	7440-43-9	µg/L	24-hour Composite
5a	Chromium, Total	7440-47-3	µg/L	24-hour Composite
6	Copper, Total	7440-50-8	µg/L	24-hour Composite
	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

CTR Number	Inorganic Parameters	CAS Number	Units	Effluent Sample Type
NL	Mercury, Methyl	22967-92-6	µg/L	Grab
NL	Manganese, Total	7439-96-5	µg/L	24-hour Composite
9	Nickel, Total	7440-02-0	µg/L	24-hour Composite
10	Selenium, Total	7782-49-2	µg/L	24-hour Composite
11	Silver, Total	7440-22-4	µg/L	24-hour Composite
12	Thallium, Total	7440-28-0	µg/L	24-hour Composite
13	Zinc, Total	7440-66-6	µg/L	24-hour Composite

NON-METALS/MINERALS

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

PESTICIDES/PCBs/DIOXINS

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

CTR Number	Pesticide/PCB/Dioxin Parameters	CAS Number	Units	Effluent Sample Type
123	PCB 1248	12672-29-6	µg/L	24-hour Composite
124	PCB 1254	11097-69-1	µg/L	24-hour Composite
125	PCB 1260	11096-82-5	µg/L	24-hour Composite
126	Toxaphene	8001-35-2	µg/L	24-hour Composite
16	2,3,7,8-TCDD (Dioxin)	1746-01-6	mg/L	24-hour Composite

CONVENTIONAL PARAMETERS

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

NON-CONVENTIONAL PARAMETERS

CTR Number	Nonconventional Parameters	CAS Number	Units	Effluent Sample Type
NL	Foaming Agents (MBAS)	MBAS	mg/L	24-hour Composite
NL	Hardness (as CaCO3)	471-34-1	mg/L	Grab
NL	Specific Conductance (Electrical Conductivity or EC)	EC	µmhos /cm	24-hour Composite
NL	Total Dissolved Solids (TDS)	TDS	mg/L	24-hour Composite
NL	Dissolved Organic Carbon (DOC)	DOC	mg/L	24-hour Composite

NUTRIENTS

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

5. **Table E-11 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table E-11:

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

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

    c. **24-hour Composite Samples.** All 24-hour composite samples shall be collected from a 24-hour 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-4, with the exception of hardness which shall be sampled concurrently with the hardness-dependent metals (cadmium, chromium III, lead, nickel, silver, and zinc).

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

f. **Sample Type.** All receiving water samples shall be taken as grab samples. Effluent samples shall be taken as described in Table E-11.

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

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

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

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

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

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

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

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

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

B. Self-Monitoring Reports (SMRs)

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

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

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

Table E-12. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
1/Hour	Permit effective date	Hourly	Submit with monthly SMR
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
1/Week or 2/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR
1/Month or 2/Month	Permit effective date	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/Quarter or 2/Quarter	Permit effective date	1 January through 31 March 1 April through 30 June 1 July through 30 September 1 October through 31 December	1 May 1 August 1 November 1 February of following year
2/Year	Permit effective date	1 January through 30 June 1 July through 31 December	Submit with monthly SMR
2/Year (Chronic Toxicity)	Permit effective date	1 January through 30 June 1 July through 31 December	Within 30 days following completion of tests
1/Year	Permit effective date	1 January through 31 December	1 February of following year
1/Year (UV Test)	Permit effective date	1 June through 1 August	Submit with monthly SMR for 1 October
1/Three Years	Permit effective date	Coincident with monitoring required by Division of Drinking Water	Submit with monthly SMR

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

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

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

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

e. **Turbidity Receiving Water Limitations.** The Discharger shall calculate and report the turbidity increase in the receiving water applicable to the natural turbidity condition specified in section V.A.18.a-e. of the Waste Discharge Requirements.

f. **Temperature Receiving Water Limitations.** The Discharger shall calculate and report the temperature increase in the receiving water based on the difference in temperature at Monitoring Locations RSW-001 and RSW-002.

C. Discharge Monitoring Reports (DMRs)

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

D. Other Reports

1. **Analytical Methods Report.** The Discharger shall complete and submit an Analytical Methods Report, electronically via CIWQS submittal, by the due date shown in the Technical Reports Table E-13. 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-13:

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

   The annual report to GeoTracker must include volumetric reporting of the items listed in section 3.2 of the Recycled Water Policy (https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2018/121118_7_final_amendment_oal.pdf). A pdf of the upload confirmation from GeoTracker for the Recycled Water Policy Annual Report shall be uploaded into CIWQS annually as a technical report per Table E-13, to demonstrate compliance with this reporting requirement.

4. **Report of Waste Discharge (ROWD).** For the 5-year permit renewal, the Discharger shall submit a written report to the Central Valley Water Board, electronically via CIWQS submittal, containing, at minimum, the following by the due date in the Technical Reports Table E-13:

   a. Report of Waste Discharge (Form 200);

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

   c. NPDES Form 2A;

   d. NPDES Form 2S;

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

f. **Most Sensitive Species Screening.** If most sensitive species screening was performed in accordance with MRP section V.F, the results shall be submitted with the ROWD.

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-13 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-13. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
Intentionally left blank	[FOR ALL DISCHARGERS] Standard Reporting Requirements	Intentionally left blank	Intentionally left blank
1	Report of Waste Discharge	31 March 2029	ROWD
2	Analytical Methods Report	31 May 2025	MRP X.D.1
3	Analytical Methods Report Certification	1 August 2026	MRP IX.D.3
4	Annual Operations Report	1 February 2026	MRP X.D.2
5	Annual Operations Report	1 February 2027	MRP X.D.2
6	Annual Operations Report	1 February 2028	MRP X.D.2
7	Annual Operations Report	1 February 2029	MRP X.D.2
8	Annual Operations Report	1 February 2030	MRP X.D.2
9	Recycled Water Policy Annual Submittal Confirmation	30 April 2026	MRP X.D.3
10	Recycled Water Policy Annual Submittal Confirmation	30 April 2027	MRP X.D.3
11	Recycled Water Policy Annual Submittal Confirmation	30 April 2028	MRP X.D.3
12	Recycled Water Policy Annual Submittal Confirmation	30 April 2029	MRP X.D.3
13	Recycled Water Policy Annual Submittal Confirmation	30 April 2030	MRP X.D.3
Intentionally left blank	Other Reports	Intentionally left blank	Intentionally left blank
14	Toxicity Reduction Evaluation (TRE) Workplan	At least 90 days before the start of discharge to Sand Creek	MRP V.G.2

Report #	Technical Report	Due Date	CIWQS Report Name
15	Salinity Evaluation and Minimization Plan	31 March 2029	WDR VI.C.3.a
16	Annual UV System Test	1 October 2025	MRP IX.C.1
17	Annual UV System Test	1 October 2026	MRP IX.C.1
18	Annual UV System Test	1 October 2027	MRP IX.C.1
19	Annual UV System Test	1 October 2028	MRP IX.C.1
20	Annual UV System Test	1 October 2029	MRP IX.C.1
21	Sludge Capacity Annual Assessment	1 February 2026	WDR VI.C.2.a
22	Sludge Capacity Annual Assessment	1 February 2027	WDR VI.C.2.a
23	Sludge Capacity Annual Assessment	1 February 2028	WDR VI.C.2.a
24	Sludge Capacity Annual Assessment	1 February 2029	WDR VI.C.2.a
25	Sludge Capacity Annual Assessment	1 February 2030	WDR VI.C.2.a
26	Sludge Management Work Plan	1 August, following the Sludge Capacity Annual Assessment that triggers the requirement	WDR VI.C.2.a
27	Unlined Sludge Surfaces Cleanout and Closure Work Plan	1 April 2026	WDR VI.C.2.b
28	Nitrate Reduction Workplan	17 years following Water Board approval of MZIP	WDR VI.C.2.d

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:	5D540132001
CIWQS Facility Place ID:	273166
Discharger:	Cutler-Orosi Joint Powers Wastewater Authority
Name of Facility:	Wastewater Treatment Facility
Facility Address:	40401 Road 120
Facility City, State Zip:	Cutler, CA 93615
Facility County:	Tulare County
Facility Contact, Title and Phone Number:	James Peacher, Chief Plant Operator, 559-528-2504
Authorized Person to Sign and Submit Reports:	Johnny Sandoval, Cutler-Orosi Joint Powers Wastewater Authority
Mailing Address:	SAME
Billing Address:	SAME
Type of Facility:	Publicly Owned Treatment Works
Major or Minor Facility:	Major
Threat to Water Quality:	2
Complexity:	A
Pretreatment Program:	No
Recycling Requirements:	Producer and User
Facility Permitted Flow:	1.5 million gallons per day (MGD) year-round at Discharge Point 001 (treated wastewater ponds and Use Area). 2.0 MGD at Discharge Point 002 (Sand Creek) from 1 November through 30 April
Facility Design Flow:	2.0 MGD

Watershed:	Tulare-Buena Vista Lakes
Receiving Water:	Sand Creek and First Encountered Groundwater
Receiving Water Type:	Inland Surface Water

A. Cutler Public Utility District and Orosi Public Utility District form the Cutler-Orosi Joint Powers Wastewater Authority (hereinafter Discharger) for the purpose of operating the wastewater treatment facility (hereinafter Facility). The Facility is a Publicly-Owned Treatment Works (POTW) that is mutually owned by Cutler Public Utility District and Orosi Public Utility District.

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 Sand Creek, a water of the United States, tributary to Cross Creek via Cottonwood Creek within Tulare-Buena Vista Lakes Watershed. The Facility also discharges treated wastewater to two unlined treated wastewater ponds and cropland in the Use Area. The Discharger was previously regulated by Order R5-2018-0011 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0081485 adopted on 5 April 2018 and expired on 31 May 2023. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. When applicable, state law requires dischargers to file a petition with the State Water Board, Division of Water Rights and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of a watercourse. The State Water Board retains separate jurisdictional authority to enforce any applicable requirements under Water Code section 1211. This is not an NPDES permit requirement.

D. On 16 February 2023, the Discharger filed a Report of Waste Discharge (ROWD) for renewal of waste discharge requirements (WDRs) for only the waste discharge to land (Discharge Point 001) and confirmed that the Discharger would not be renewing the NPDES permit for Discharge Point 002. The Discharger later filed a new ROWD and submitted an application for reestablishment of both its WDRs and NPDES permit on 30 May 2024. Supplemental information was requested on 30 May 2024 and 25 June 2024. The Discharger submitted supplemental information on 25 July 2024. The application was deemed complete on 22 August 2024.

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

continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the communities of Cutler, Orosi, East Orosi, Yettem, Seville, and Sultana and serves a population of approximately 14,700. The design daily average flow capacity of the Facility is 2.0 MGD.

A. Description of Wastewater and Biosolids Treatment and Controls

The treatment system at the Facility consists of mechanical screens; an influent pump station; trickling filter treatment train consisting of two primary clarigesters, two trickling filters, and a recirculation pump station; an oxidation ditch treatment train consisting of an oxidation ditch, secondary clarifier, and return and waste activated sludge pump stations; an ultraviolet light disinfection system; an effluent pump system; two unlined treated wastewater ponds; and the recycled water use area for application of treated wastewater. The trickling filter treatment train typically handles a fixed flow of 0.5 MGD, which is then diverted to the oxidation ditch treatment train, which receives the entire wastewater flow.

Treated wastewater is discharged to any of the following: two unlined treated wastewater ponds, the recycled water Use Area, or Sand Creek. The unlined treated wastewater ponds allow for storage, percolation, and evaporation of treated effluent and together have a capacity of approximately 21.8 million gallons. The Facility also has the capability to discharge treated effluent contained in the treated wastewater ponds to the recycled water use area and Discharge Point 002 (discharge to Sand Creek between 1 November and 30 April).

The recycled water use area includes 117 acres of cropland (Fields A, B, C, D, and E) with principal crops of feed grains, green-chopped silage, and sudan grass. Field A has been modified to provide the required setback distance from the off-site domestic water supply well, and now has a revised useable acreage of approximately 10.5 acres. The Discharger may in the future add approximately 21.5 additional acres to the irrigated area. The use area is typically double cropped with winter wheat and summer sudan grass, or similar crops.

The Discharger recently submitted updated water balances on 25 July 2024 that indicate the Facility is capable of discharging up to 1.16 mgd to the use area under 100-year precipitation without having to utilize Discharge Point 002 to Sand Creek. The 25 July 2024 submittal was signed and stamped by a professional engineer and included a thorough water balance discussion, including several different water balance scenarios that included different flow rates, variations on the number of Use Area fields utilized, and both average precipitation and 100-year precipitation projections. The 25 July 2024 water balances differed from the previous submittal, 30 July 2009 Recycled Water Engineering Report, by including (1) increased percolation rates based on wastewater pond monitoring from 2019 through 2023 and soil maps from the United States Department of Agriculture; (2) increased

evapotranspiration rates to represent double-cropping of winter wheat and summer sudan grass; and (3) decreased water needs to account for irrigation efficiency/leaching. The 25 July 2024 submittal also identified invalid flow data for Discharge Point 001 based on drift in the flow totalizer. The Discharger identified drift of 2.9 million gallons recorded while the discharge valve was closed for three days in June 2023 as an example of the magnitude of the reporting error. The Discharger has since updated its flow documentation protocol to reduce future drift errors. Since installation in 2018, the identified errors in the flow totalizer reporting may have contributed to reports of higher discharge to the Use Area than had actually occurred.

The Facility includes eight unlined sludge drying beds, four Deskins-lined sludge drying beds (constructed in 2010), two concrete-lined sludge drying beds (constructed in 2022), and two unlined sludge lagoons. Dried sludge is hauled off-site for disposal to a landfill or composting facility. The Discharger intends to utilize only the lined sludge drying beds, but has in recent years utilized the unlined beds for drying and storage of excess sludge due to capacity limitations of the lined sludge drying beds. Construction of the concrete-lined sludge drying beds in 2022 is expected to eliminate use of unlined surfaces at the current flow rate. The unlined drying beds and lagoons have not been used since construction was completed in 2022.

If the groundwater elevation is within five feet of the ground surface where wastewater is applied or within five feet of the bottom of the treated wastewater ponds, or if discharge is to Sand Creek, the effluent must also be disinfected with ultraviolet light. Table 7 of this Order provides a table for determination of which irrigation fields must receive disinfected wastewater based on the groundwater monitoring results. The direction of groundwater flow is primarily to the southwest with depth to groundwater typically approximately 70-75 feet below ground surface.

B. Discharge Points and Receiving Waters

1. The Facility and Field A of the Use Area is located in section 19, T16S, R25E, MDB&M, as shown in Attachment B, a part of this Order. Fields B, C, D, and E are located in section 19, T16S, R24E MDB&M.

2. Treated municipal wastewater is discharged at Discharge Point 001 to treated wastewater ponds and the Use Area, and ultimately first encountered groundwater in Section 24, T16S, R24E, MDB&M and Discharge Point 002 to Sand Creek, a water of the United States and a tributary to Cross Creek at a point latitude 36° 31’ 23” N and longitude 119° 18’ 2” W.

3. The Use Area at Discharge Point 001 consists of 117 acres total planted with fodder, fiber, and/or seed crops. Crop patterns vary annually and by field including the option to double crop with combinations such as winter wheat and a summer sudan grass.

4. Groundwater underlying the Facility, treated wastewater ponds, and Use Area is in the Detailed Analysis Unit 239 of the Kings Basin Hydrologic Unit. Groundwater monitoring in the vicinity indicate generally good quality groundwater.

5. Sand Creek is an intermittent stream that mainly carries local storm water runoff southerly to Cottonwood Creek and ultimately Cross Creek. Sand Creek is usually dry during the summertime and is not used for irrigation deliveries. Maximum flow capacity is approximately 500 cubic feet per second (cfs), though flows do not typically exceed 5 to 10 cfs. Sand Creek is categorized as a Valley Floor water in the Water Quality Control Plan for the Tulare Lake Basin, Third Edition, revised May 2018 (Basin Plan).

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

Effluent limitations and Discharge Specifications contained in Order R5-2018-0011 for discharges from Discharge Points 001 and 002 (Monitoring Locations EFF-001 and EFF-002) and representative monitoring data from the term of Order R5-2018-0011 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
Flow	MGD	AMEL 1.5	1.1	1.6	4.1
pH	standard units	Instantaneous Max 6.5 Instantaneous Min 8.3	7.6 7.2 (see Note 1)	7.8 7.0 (see Note 1)	7.8 7.0 (see Note 1)
Settleable Solids	mL/L	AMEL 0.1 MDEL 0.5	0.14	0.2	0.2
Total Coliform	MPN/ 100 mL	7-day median 23 Maximum daily 240	79	79	79
Acute Toxicity	% survival	Minimum 70% Median 90%	100% survival	100% survival	100% survival
BOD_5	mg/L	AMEL 30 AWEL 45	32	130	130
TSS	mg/L	AMEL 30 AWEL 45	90	330	330
Chloride	mg/L	MDEL 175	79	79	79
Boron	mg/L	MDEL 1.0	0.37	0.38	0.38
Un-ionized Ammonia	mg/L	AMEL 0.014 AWEL 0.025	0.5	0.5	0.5
Electrical Conductivity	µmhos/ cm	12-month rolling average 1,000 or 500 plus source	807	888	955
Copper	µg/L	AMEL 40 MDEL 83	79	79	79

Table F-2 Notes:

1. Summarized value is lowest pH for comparison to the instantaneous minimum limitation.

D. Compliance Summary

The Discharger was issued Notices of Violation on 13 August 2018 and 13 April 2021 following Compliance Evaluation Inspections of the Facility. Violations during the 2018 inspection were typically associated with recordkeeping, missed monitoring, and late reports. Violations in both the 2018 and 2021 include identification of storage of scum and sludge on unlined surfaces in threatened violation of groundwater limits. Sludge handling was modified with construction of the new lined sludge drying beds in response to the 2021 Notice of Violation.

E. Planned Changes

The Discharger has expressed interest in modifying its sludge handling facilities, particularly the addition of mechanical sludge dewatering. However, no definitive plans have been submitted. Section VI.C.2.a of the Order requires the Discharger to submit a plan for completing its sludge dewatering activities.

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. On 19 November 1996, the Discharger certified a final Environmental Impact Report (EIR) in accordance with CEQA and Section 15090 of the State CEQA Guidance. At the time, the Central Valley Water Board considered the EIR and concurred there are no significant impacts on water quality as a result of the Facility discharge.

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 Tulare Lake Basin, Third Edition, May 2018 (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Sand Creek falls within a group of streams termed in the Basin Plan as Valley Floor Waters, which do not have a municipal or domestic supply beneficial use designation. Beneficial uses applicable to Sand Creek and underlying groundwater are as follows:

Table F-3 Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Groundwater	Existing: Municipal and domestic supply (MUN); agricultural supply, including irrigation and stock watering (AGR); industrial process supply (PRO); industrial service supply (IND); water contact recreation (REC-1); and wildlife habitat (WILD).
002	Sand Creek	Existing: AGR; PRO; IND; REC-1; WILD; non-contact water recreation (REC-2); warm freshwater habitat (WARM); rare, threatened, or endangered species (RARE); and groundwater recharge (GWR).

   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.

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

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

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

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

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

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

8. **Emergency Planning and Community Right to Know Act.** Section 13263.6(a) of the Water Code, requires that "the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. Sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective".

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

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

9. **Storm Water Requirements.** U.S. EPA promulgated federal regulations for storm water on 16 November 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from

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

10. **Statewide General Waste Discharge Requirements for Sanitary Sewer Systems.** The State Water Board issued General Waste Discharge Requirements for Sanitary Sewer Systems, Water Quality Order 2006-0003-DWQ (General Order) on 2 May 2006. The State Water Board amended the MRP for the General Order through Order WQ 2013-0058-EXEC on 6 August 2013. The State Water Board renewed the General Order and adopted Order 2022-0103-DWQ on 6 December 2022, which became effective on 5 June 2023. The General Order requires public agencies that own or operate sanitary sewer systems with greater than 1 mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

    The Discharger does not own the sanitary sewer system. Instead, it is maintained individually by Cutler Public Utility District and Orosi Public Utility District.

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

12. **Findings on 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 taken into account environmental justice, tribal impact, and racial equity considerations in issuing this Order. A Formal Notification of Determination that a Project Application is Complete and a Notification for Consultation Opportunity was distributed on 24 July 2024 to Local Native American Tribes and Community Groups. The discharges regulated by this Order may impact one or more disadvantaged communities or tribal communities. The Facility regulated by this Order discharges treated municipal wastewater to Sand Creek and is subject to discharge limitations given potential to cause or contribute to exceedances of water quality objectives for certain constituents, including nitrate. The Discharger participates in the Nitrate Control

Program via the collective permitting approach, which is further discussed in Section VI.B.1 of this Fact Sheet. This Order requires compliance with the Nitrate Control Program and the Kings Water Alliance Management Implementation Plan (MZIP), including submittal of progress reports and development of a Nitrate Reduction Workplan. Active compliance with the MZIP will serve to collect the necessary monitoring data to refine the MZIP preliminary nitrogen load estimate and support development of the Management Zone Groundwater Protection Values and Groundwater Protection Targets. This Order addresses potential adverse impacts to water quality from the Facility's discharge by setting prohibitions and limits on the discharge of wastewater, requiring ongoing monitoring and reporting of the discharged wastewater and receiving water, and imposing other specifications on the facility's wastewater treatment operations.

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

1. Under section 303(d) of the 1972 CWA, states, territories, and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 6 April 2018 U.S. EPA gave final approval to California's 2014 – 2016 section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of Water Quality Limited Segments (WQLSs), which are defined as "…those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 C.F.R. part 130, et seq.)." The Basin Plan also states, "Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLSs]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment." Sand Creek is not listed as an impaired water body on the 2020-2022 303(d) list.

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

E. Other Plans, Polices and Regulations

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

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

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

c. The treatment and storage facilities described herein are associated with a municipal wastewater treatment plant.

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

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

2. **Prohibition III.B (No bypasses or overflow of untreated wastewater, except under the conditions at CFR 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 is based on Water Code section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance

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

5. **Prohibition III.E (No discharge to Sand Creek from 1 May through 31 October of each year).** This prohibition is based on guidance from Division of Drinking Water that indicates adequately diluted discharges may be protective of

REC-1 beneficial use when a total coliform limit of 23 MPN/100 mL (7-sample median) is met. Dilution flows are not typically available during the prohibited discharge period. In addition, Division of Drinking Water guidance also indicates that a total coliform limit of 23 MPN/100 mL (7-sample median) is appropriate when there is a limited degree of public exposure. Sand Creek downstream of the discharge does not flow through any population centers, and there are no known recreational areas on Sand Creek downstream of the discharge point. This prohibition also limits the discharge to the cooler times of the year when recreational use is far less likely to occur.

The Basin Plan and Central Valley Water Board Resolution No. R5-2009-2008, *In Support of Regionalization, Reclamation, Recycling and Conservation for Wastewater Treatment Plants*, encourage wastewater reclamation and indicate discharges to surface waters will not be considered a permanent solution when the potential exists for wastewater reclamation. This prohibition also ensures that the currently feasible reclamation opportunities are maximized.

6. **Prohibition III.F (Monthly Average Daily Discharge Flow)**. This prohibition is based on the fact that the Facility is designed to provide a secondary level of treatment for up to a design flow of 2.0 MGD.

7. **Prohibition III.G (No use of unlined sludge surfaces)**. The Facility includes unlined sludge drying beds and unlined sludge lagoons that are no longer in use. Use of these unlined sludge surfaces threatens to violate groundwater limitations and Special Provision VI.C.5.a.i.

8. **Prohibition III.H (Discharge of salinity).** The Discharger has elected to participate in the Alternative Compliance Pathway for the Salinity Control Program. While the Discharger is fully participating in the Salt Control Program, including the P&O Study), the Discharger is not restricted to the 700 µmhos/cm limitation. If the Discharger's standing and participation in the Salt Control Program changes, the Discharger is prohibited from discharging salinity at concentrations exceeding 700 µmhos/cm (as a monthly average).

9. **Prohibition III.I (Discharge of nitrogen)**. The Discharger is prohibited from discharging nitrate and other forms of nitrogen unless the Discharger is implementing the requirements of the Nitrate Control Program (i.e., fully participating with the requirements of the MZIP).

B. Technology-Based Effluent Limitations

1. Scope and Authority

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

technology-based requirements based on Secondary Treatment Standards at 40 C.F.R. part 133.

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

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

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

2. Applicable Technology-Based Effluent Limitations

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

b. **Flow.** The Facility was designed to provide a secondary level of treatment for up to a design flow of 2.0 mgd. Therefore, this Order contains a discharge prohibition that prohibits the discharge from exceeding a monthly average daily discharge flow of 2.0 mgd.

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

Summary of Technology-based Effluent Limitations
Discharge Point 002

Table F-4 Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations
BOD_5	mg/L	AMEL 30 AWEL 45
BOD_5	Percent removal	AMEL 85
Total Suspended Solids	mg/L	AMEL 30 AWEL 45
Total Suspended Solids	Percent removal	AMEL 85
pH	standard units	Instantaneous Max 6.0 Instantaneous Min 9.0 (see Note 1)

Table F-4 Notes:

1. Note that more stringent WQBELs for pH are applicable and are established as final effluent limitations in this Order (see section IV.C.3.b.v of this Fact Sheet).

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

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

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

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

Finally, 40 C.F.R. section 122(d)(1)(vii) requires effluent limits to be developed consistent with any available WLAs developed and approved for the discharge.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution No. 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply. Sand Creek falls within a group of streams termed in the Basin Plan as Valley Floor Waters that do not have a municipal or domestic supply beneficial use designation.

The Basin Plan on page 2-1 states: “Protection and enhancement of beneficial uses of water against quality degradation is a basic requirement of water quality planning under the Porter-Cologne Water Quality Control Act. In setting water quality objectives, the Regional Water Board must consider past, present, and probable future beneficial uses of water.” and with respect to disposal of wastewaters states that “...use of waters for disposal of wastewaters is not included as a beneficial use…and are subject to regulation as activities that may harm protected 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 March 2021 through December 2023, which includes effluent data submitted in SMRs, the ROWD, and supplemental

information to the ROWD. Additional data outside of this range was also analyzed where there was inadequate data to perform an analysis. Cases where additional data were used are noted and include receiving water data for hardness-based and dissolved organic carbon-based metals.

c. **Conversion Factors.** The default U.S. EPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total criteria when developing effluent limitations for CTR metals, including for arsenic, cadmium, chromium III, chromium VI, copper, lead, nickel, silver, and zinc. Furthermore, a conservative dissolved-to-total metal translator of 1 has been used when developing effluent limitations for copper, lead, and zinc. Per the Reopener Provisions of this Order, if the Discharger performs studies to determine site-specific dissolved-to-total metal translators this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

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

The ambient hardness for Sand Creek ranges from 89 mg/L to 220 mg/L based on collected ambient data from January 2017 through December 2023. Given the high variability in ambient hardness values, there is no single hardness value that describes the ambient receiving water for all possible scenarios (e.g., minimum, maximum). Because of this variability, staff has determined that based on the ambient hardness concentrations measured in the receiving water, the Central Valley Water Board has discretion to select ambient hardness values within the range of 89 mg/L (minimum) up to 220 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-5 to conduct the reasonable potential analysis (RPA) and calculate WQBELs, protect beneficial uses under all ambient receiving water conditions and comply with the SIP, CTR, and Basin Plan.

Table F-5. 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	180	76	48
Chromium III	180	2800	340
Cadmium	170 (acute) 180 chronic)	8.2	3.9
Lead	170	160	6.3
Nickel	180	770	86
Silver	160	9.1	
Zinc	180	200	200

Table F-5 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-5 represent actual observed ambient water hardness measurements.
3. **Copper.** This Order allows a site-specific WER of 3.1 for total recoverable copper to calculate the criteria.

3. Determining the Need for WQBELs

Clean Water Act section 301(b)(1)(C) requires effluent limitations necessary to meet water quality standards, and 40 C.F.R. section 122.44(d) requires NPDES permits to include conditions that are necessary to achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality. Federal regulations at 40 C.F.R 122.44(d)(1)(i) state, "Limitations must control all pollutants or pollutant parameters (either conventional, nonconventional, or toxic pollutants) which the Director determines are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." Additionally, 40 C.F.R. section 122(d)(1)(vii) requires effluent limits to be developed consistent with any available WLAs developed and approved for the discharge. The process to determine whether a WQBEL is required as described in 40 C.F.R. section 122.44(d)(1)(i) is referred to as a reasonable potential analysis or RPA. Central Valley Water Board staff conducted RPAs for nearly 200 constituents, including the 126 U.S. EPA priority toxic pollutants. This section includes details of the RPAs for constituents of concern for the Facility. The entire RPA is included in the administrative record and a summary of the constituents of concern is provided in Attachment G.

For priority pollutants, the SIP dictates the procedures for conducting the RPA. For non-priority pollutants the Central Valley Water Board is not restricted to one particular RPA method; therefore, the RPAs have been conducted based

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

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

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

   i **Aluminum**

      (a) **WQO.** The State Water Board Division of Drinking Water (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 for aluminum is 200 µg/L for protection of the MUN beneficial use. However, MUN beneficial use does not apply to Sand Creek, and therefore, the Secondary MCL does not apply.

The 2018 U.S. EPA NAWQC for protection of freshwater aquatic life for aluminum recommends acute (1-hour average; criteria maximum concentration or CMC) and chronic (4-day average; criteria continuous concentration or CCC) standards based upon Multiple Linear Regression (MLR) models for vertebrate and invertebrate species that use pH, dissolved organic carbon (DOC), and total hardness to quantify the effects of these water chemistry parameters on the bioavailability and resultant toxicity of aluminum to aquatic organisms. The U.S. EPA aluminum criteria have been used to implement the Basin Plan's narrative toxicity objective.

A CMC of 1,600 µg/L and CCC of 590 µg/L were calculated considering pH, hardness, and DOC representative of the receiving water and effluent conditions. Effluent and receiving water sampling results for pH, DOC, and hardness from January 2017 through December 2023 were used in the evaluation. In the absence of effluent DOC data, the criteria were calculated considering a conservative assumption of DOC for the effluent of 5 mg/L.

(b) **RPA Results.** The aluminum data collected by the Discharger from 2014 through 2023 is shown in the table below.

Table F-6 Summary of Aluminum Effluent Data

Date of Sample	EFF-001 (µg/L)
5/22/2014	Non-detect (<50)
9/3/2015	32J (detected, but not quantified)
11/24/2015	19J (detected, but not quantified)
6/23/2016	40J (detected, but not quantified)
7/6/2017	49
4/22/2021	150
4/29/2021	Non-detect (<50)
4/21/2022	2200
4/28/2022	260
12/23/2023	59

Of the ten samples in the dataset dating back to over 10 years ago, nine had results significantly lower than the criteria.

Effluent aluminum in one sample exceeded the criteria on 21 April 2022. As discussed further in this section, laboratory results from 21 April 2022 exhibited similarly high results for lead and zinc. Although there were no laboratory errors noted, it is unlikely that these constituents all would exceed water quality criteria only on the 21 April 2022 sampling event under typical Facility operation and proper laboratory analysis.

Therefore, in accordance with section 1.2 of the SIP, the Central Valley Water Board finds that the data collected for aluminum on 21 April 2022 is insufficient to be used to determine reasonable potential. The remaining effluent data are below water quality criteria and results in no reasonable potential.

ii. **Lead**

(a) **WQO.** The CTR includes hardness dependent criteria for the protection of freshwater aquatic life for lead. These criteria for lead are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default USEPA translators were used in this Order. Using the default conversion factors and a reasonable worst-case measured ambient hardness as described in section IV.C.2.d of this Fact Sheet, the applicable acute (short-term average) and chronic (4-day average) criteria for the effluent (which is receiving water at times) are 160 µg/L and 6.3 µg/L, respectively, as total recoverable.

(b) **RPA Results.** The lead data collected by the Discharger from 2014 through 2023 is shown in the table below.

Table F-7 Summary of Lead Effluent Data

Date of Sample	EFF-001 (µg/L)
5/22/2014	Non-detect (<1.0)
9/3/2015	0.092J (detected, but not quantified)
11/24/2015	Non-detect (<5.0)
6/23/2016	Non-detect (<1.0)
7/6/2017	0.11J (detected, but not quantified)
4/22/2021	0.4
4/29/2021	0.12
4/21/2022	6.8
4/28/2022	0.95
12/23/2023	0.19

Of the ten samples in the dataset dating back to over 10 years ago, nine had results significantly lower than the criteria. Effluent lead in one sample exceeded the criteria on 21 April 2022. As discussed in this section, laboratory results from 21 April 2022 exhibited similarly high results for aluminum and zinc. Although there were no laboratory errors noted, it is unlikely that these constituents all would exceed water quality criteria only on the 21 April 2022 sampling event under typical Facility operation and proper laboratory analysis.

Therefore, in accordance with section 1.2 of the SIP, the Central Valley Water Board finds that the data collected for lead on 21 April 2022 is insufficient to be used to determine reasonable potential. The remaining effluent data are below water quality criteria and results in no reasonable potential.

iii. **Zinc**

(a) **WQO.** The CTR includes hardness dependent criteria for the protection of freshwater aquatic life for zinc. These criteria for zinc are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default USEPA translators were used in this Order. Using the default conversion factors and a reasonable worst-case measured ambient hardness as described in section IV.C.2.d of this Fact Sheet, the applicable acute (short-term average) and chronic (4-day average) criteria for the effluent (which is receiving water at times) are 200 µg/L and 200 µg/L, respectively, as total recoverable.

(b) **RPA Results.** The zinc data collected by the Discharger from 2014 through 2023 is shown in the table below.

Table F-8 Summary of Zinc Effluent Data

Date of Sample	EFF-001 (µg/L)
5/22/2014	48
9/3/2015	35
11/24/2015	42
6/23/2016	34
7/6/2017	42
4/22/2021	86
4/29/2021	58
4/21/2022	670
4/28/2022	99
12/23/2023	45

Of the ten samples in the dataset dating back to over 10 years ago, nine had results significantly lower than the criteria. Effluent zinc in one sample exceeded the criteria on 21 April 2022. As discussed further in this section, laboratory results from 21 April 2022 exhibited similarly high results for aluminum and lead. Although there were no laboratory errors noted, it is unlikely that these constituents all would exceed water quality criteria only on the 21 April 2022 sampling event under typical Facility operation and proper laboratory analysis.

Therefore, in accordance with section 1.2 of the SIP, the Central Valley Water Board finds that the data collected for zinc on 21 April 2022 is insufficient to be used to determine reasonable potential. The remaining effluent data are below water quality criteria and results in no reasonable potential.

iv. **Iron**

(a) **WQO.** U.S. EPA recommended National Ambient Water Quality Criteria (NAWQC) for iron for the protection of freshwater aquatic life in the Quality Criteria for Water of 1976 (commonly known as the “Red Book”) at 1 mg/L, based on information gathered between 1937 and 1974. The 1976 Red Book does not clearly state whether the criteria concentration is as dissolved iron or total iron. U.S. EPA updated the 1976 Red Book for certain constituents in the document titled, Quality Criteria for Water 1986, commonly known as the “Gold Book,” however, iron was not updated. Nevertheless, U.S. EPA clarifies the intent and usage of the recommended NAWQC in the Gold Book which states, “These criteria are not rules and they do not have regulatory impact. Rather, these criteria present scientific data and guidance of the environmental effects of pollutants which can be useful to derive regulatory requirements based on considerations of water quality impacts.”

The recommended NAWQC for iron of 1.0 mg/L applicable to freshwater aquatic life was based on a 1964 European Inland Fisheries Advisory Commission recommendation for waters managed for aquatic life, but the 1976 Red Book also cited scientific data for iron from other studies. One study conducted on the toxicity of industrial wastes stated that “trout (species not known) died at iron concentrations of 1 – 2 mg/L” [unknown whether in the form of dissolved or total iron]. Another study conducted in iron polluted waters in Colorado (1967) indicated that “trout was not observable until the waters were diluted or the iron had precipitated to effect a concentration of less than 1.0 mg/L.” Also, field studies regarding stream pollution in a report from 1937 showed “that in 69 of 75 study sites with good fish fauna, the iron concentration was less than 10 mg/L.” The

1976 Red Book also suggests the water quality characteristics of the receiving water affect the toxicity of iron, “Ambient natural waters will vary with respect to alkalinity, pH, hardness, temperature and the presence of ligands which change the valence state and solubility, and therefore the toxicity of the metal.”

Based on the scientific data and information presented in the 1976 Red Book, the Central Valley Water Board determined that the recommended NAWQC for iron is not applicable to the receiving water, and thus, is not appropriate to determine compliance with the Basin Plan’s narrative toxicity objective.

The State Water Resources Control Board, Division of Drinking Water (formerly California Department of Public Health) has established Secondary MCLs to assist public drinking water systems in managing their drinking water for aesthetic conditions such as taste, color, and odor. However, municipal and domestic supply (MUN) beneficial use does not apply to Sand Creek, and therefore, the Secondary MCL does not apply.

(b) **RPA Results.** The MEC for iron is 1,600 ug/L, based on five effluent samples from April 2021 through December 2023. Effluent iron during this period average of 425 ug/L. Since there is no applicable water quality criteria for iron, the discharge does not have reasonable potential to cause or contribute to an exceedance of a water quality standard.

v. **Salinity**

(a) **WQO.** The Basin Plan contains a chemical constituent objective that incorporates state MCLs, contains a narrative objective, and contains numeric water quality objectives for certain specified water bodies for electrical conductivity, total dissolved solids, sulfate, and chloride. The U.S. EPA Ambient Water Quality Criteria for Chloride recommends acute and chronic criteria for the protection of aquatic life. There are no U.S. EPA water quality criteria for the protection of aquatic life for electrical conductivity and total dissolved solids. Additionally, there are no U.S. EPA numeric water quality criteria for the protection of agricultural, livestock, and industrial uses. Numeric values for the protection of these uses are typically based on site specific conditions and evaluations to determine the appropriate constituent threshold necessary to interpret the narrative chemical constituent Basin Plan objective. The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply. Table F-6, below, contains various recommended levels for EC or TDS and chloride.

Table F-9 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 759 or TDS 508	EC 955 or TDS 620
Chloride (mg/L)	250	500	600	860 1-hour / 230 4-day	71	79

Table F-9 Notes:

1. **Agricultural Water Quality Objectives.** Applicable agricultural water quality objectives vary. Procedures for establishing the applicable numeric limitation to implement the narrative chemical constituent objective can be found in the Policy for Application of Water Quality Objectives, section 4.2.2.1.9 of the Basin Plan. However, the Basin Plan does not require improvement over naturally occurring background concentrations. In cases where the natural background concentration of a particular constituent exceeds an applicable water quality objective, the natural background concentration will be considered to comply with the objective.
2. **Secondary MCLs.** Secondary MCLs are for protection of public welfare and are stated as a recommended level, upper level, and a short-term maximum level.
3. **Chloride.** The Secondary MCL for chloride is 250 mg/L, as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.
4. **Electrical Conductivity or Total Dissolved Solids.** The Secondary MCL for EC is 900 µmhos/cm as a recommended level, 1,600 µmhos/cm as an upper level, and 2,200 µmhos/cm as a short-term maximum, or when expressed as TDS is 500 mg/L as a recommended level, 1,000 mg/L as an upper level, and 1,500 mg/L as a short-term maximum.

(b) **RPA Results.**

(1) **Chloride.** Chloride concentrations in the effluent ranged from 35 mg/L to 79 mg/L, with an average of 69 mg/L. These levels do not exceed the water quality criteria.

(2) **Electrical Conductivity or Total Dissolved Solids.** A review of the Discharger's monitoring reports shows an average effluent EC of 715 µmhos/cm, with a range from 482 µmhos/cm to 955 µmhos/cm. These levels do not exceed the Secondary MCL as an annual average. The

average TDS effluent concentration was 503 mg/L with concentrations ranging from 410 mg/L to 620 mg/L. These levels exceed the Secondary MCL, however, the Secondary MCL does not apply because the MUN beneficial use does not apply to Sand Creek.

(c) **WQBELs.**

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

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

The Discharger submitted a Notice of Intent for the Salinity Control Program indicating its intent to meet the Alternative Salinity Permitting Approach. This Order requires implementation of a Salinity Evaluation and Minimization Plan, participation in the Salinity P&O Study, and includes a performance-based trigger for EC consistent with the Alternative Salinity Permitting Approach. The performance-based trigger is based on the maximum annual average effluent EC of 759 µmhos/cm with a safety factor of approximately 25 percent, resulting in an EC trigger of 950 µmhos/cm. This Order also includes a discharge prohibition during Phase I of the Salt Control Program, wherein the Discharger is prohibited from discharging salts at concentrations exceeding the salinity numeric value of 700 µmhos/cm (as a monthly average) unless the Discharger is implementing the Phase I requirements of the Salt Control Program (i.e., fully participating in the P&O Study).

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

i. **Ammonia**

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

The Central Valley Clean Water Association (CVCWA) organized a coordinated effort for POTWs within the Central Valley Region, the Freshwater Mussel Collaborative Study for Wastewater Treatment Plants, to determine how the latest scientific knowledge on the toxicity of ammonia reflected in the 2013 Criteria could be implemented in the Central Valley Region. Through this effort a Criteria Recalculation Report was developed in January 2020 using toxicity studies for the freshwater mussel species present in Central Valley Region waters.

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

U.S. EPA Office of Science and Technology reviewed and approved the Criteria Recalculation Report with a more conservative approach for utilizing the acute-to-chronic ratio procedure for developing the site-specific chronic criterion. The Central Valley Water Board finds that the site-specific ammonia criteria provided in the January 2020 Criteria Recalculation

Report implements the Basin Plan's narrative toxicity objective to protect aquatic life beneficial uses of the receiving water.

Site-specific Criteria for Sand Creek. The recalculated site-specific criteria developed in the Criteria Recalculation Report for the acute and chronic criteria are presented based on equations that vary according to pH and temperature for situations where freshwater mussels are present and where they are absent. On 30 March 2015, the Discharger submitted an individual study for the presence of mussels in Sand Creek, prepared by Pacific EcoRisk. The study concluded that no mussels of the Family Unionidae are currently present or have recently been present in Sand Creek or the waters to which it is tributary, based on the ephemeral nature of the receiving water and historic survey records. In addition, the recalculated criteria include equations that provide enhanced protection for important salmonid species in the genus Oncorhynchus, that can be implemented for receiving waters where salmonid species are present. Because Sand Creek does not have the beneficial use of cold freshwater habitat and the environmental conditions do not support the presence of salmonids, the criteria equations for waters where salmonids are absent were used.

The acute (1-hour average) criterion or CMC was calculated using paired effluent pH and temperature data, collected during the period from January 2018 December 2023. The most stringent CMC of 5.63 mg/L (ammonia as N) calculated has been implemented in this Order.

The chronic (30-day average) criterion or CCC was calculated using paired effluent pH and temperature data, collected during the period from January 2018 and December 2023. The most stringent 30-day rolling average CCC of 4.48 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 4.48 mg/L (ammonia as N), the 4-day average concentration that should not be exceeded is 11.19 mg/L (ammonia as N).

The Tulare Lake Basin Plan includes an objective that states "*[w]aters shall not contain un-ionized ammonia in amounts which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH3) to exceed 0.025 mg/L (as N) in receiving waters."*

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

(c) **WQBELs.** The Central Valley Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents, and ammonia is a non-CTR constituent. The SIP procedure assumes a 4-day averaging period for calculating the long-term average discharge condition (LTA). However, U.S. EPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day CCC. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA corresponding to the 30-day CCC was calculated assuming a 30-day averaging period. The AMEL and AWEL for total ammonia are 1.83 mg/L and 3.98 mg/L, respectively, based on the site-specific ammonia criteria for Sand Creek. However, this Order does not contain WQBELs for total ammonia because the calculated WQBELs for un-ionized ammonia are more protective of the beneficial uses, given the temperature and pH typically experienced in the receiving water.

This Order includes a final AWEL of 0.025 mg/L for un-ionized ammonia (as N) based on the Basin Plan water quality objective. This Order also includes the AMEL of 0.014 mg/L.

(d) **Plant Performance and Attainability.** Although the Discharger's effluent data indicate un-ionized ammonia is at times greater than 0.025 mg/L, discharge has not occurred to Sand Creek over the past several permit terms. The Discharger has indicated that the Facility operations can be slightly modified during discharge to Sand Creek to consistently meet the un-ionized ammonia effluent limitations. Therefore, immediate compliance with these effluent limitations is feasible.

ii. **Copper**

(a) **WQO.** The Discharger submitted a Water Effect Ratio (WER) Study for copper prepared by Pacific EcoRisk on 2 July 2014. The WER Study was conducted per USEPA's streamlined Water-Effect Ratio Procedure for Dischargers of Copper (EPA-822-R-01-005). Based on the results of the study, the Central Valley Water Board concludes that a dissolved and total recoverable WER of 3.1 is applicable to the Facility's discharge to Sand Creek.

The CTR includes hardness dependent criteria for the protection of freshwater aquatic life for copper. These criteria for copper are presented in dissolved concentrations. USEPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default USEPA translators were used in this Order. Using the default conversion factors, a WER of 3.1, and a reasonable worst-case measured ambient hardness as described in section IV.C.2.d of this Fact Sheet, the applicable acute (short-term average) and chronic (4-day average) criteria for the effluent (which is receiving water at times) are 76 µg/L and 48 µg/L, respectively, as total recoverable.

(b) **RPA Results.** The MEC for copper was 79 µg/L based on effluent samples collected between April 2021 through December 2023. Therefore, copper in the discharge has a reasonable potential to cause or contribute to an in-stream excursion.

(c) **WQBELs.** Due to no assimilative capacity, dilution credits are not allowed for development of the WQBELs for copper. This Order contains a final AMEL and maximum daily effluent limitation (MDEL) for copper of 38 µg/L and 76 µg/L, respectively, based on the CTR criteria for protection of freshwater aquatic life.

(d) **Plant Performance and Attainability.** Analysis of the effluent data shows that the MEC of 79 µg/L is greater than the applicable effluent limitations. Based on five effluent samples taken between April 2021 and December 2023, concentrations ranged from 2.8 to 79 µg/L with an average 29 µg/L. If multiple samples are taken a month, the Discharger is expected to comply with the AMEL.

iii. **Cyanide**

(a) **WQO.** The CTR includes a chronic criterion of 5.2 µg/L for cyanide for the protection of freshwater aquatic life.

(b) **RPA Results.** The MEC for cyanide was 8.6 µg/L based on effluent samples collected between April 2021 through December 2023. Therefore, cyanide in the discharge has reasonable potential to cause or contribute to an in-stream excursion.

(c) **WQBELs.** Due to no assimilative capacity, dilution credits are not allowed for development of the WQBELs for cyanide. This Order contains a final AMEL and MDEL of 4.3 µg/L and 8.5 µg/L, respectively, based on the CTR chronic criterion for the protection of freshwater aquatic life.

(d) **Plant Performance and Attainability.** Analysis of the effluent data for cyanide shows that the MEC of 8.6 µg/L is greater than the applicable WQBELs. Based on five effluent samples taken between April 2021 and December 2023, concentrations ranged from non-detect to 8.6 µg/L with a median of a non-detect at a reporting level of 5.0 µg/L. If multiple samples are taken a month, the Discharger is expected to comply with the AMEL.

iv. **Pathogens**

(a) **WQO.** In a 1992 memorandum, DDW provided an update on general recommendations for appropriate levels of disinfection for the protection of beneficial uses of waters downstream of sewage treatment plant discharges. The recommendations indicate that a 7-day median coliform limitation of 23 MPN/100 mL may be protective of beneficial uses in scenarios where: discharges are to ephemeral streams that have little or no natural flow all or part of the year; there is no nearby habitation; there is limited use of the discharge area; and contact with the effluent is not encouraged. Furthermore, in a letter to the Central Valley Water Board dated 8 April 1999, DDW indicated it would consider wastewater discharged to water bodies with identified beneficial uses of irrigation or contact recreation and where the wastewater receives dilution of more than 20:1 to be adequately disinfected if the effluent coliform concentration does not exceed 23 MPN/100 mL as a 7-day median and if the effluent coliform concentration does not exceed 240 MPN/100 mL more than once in any 30 day period.

Habitation downstream of the discharge is sparse and there is limited opportunity for contact with Sand Creek in the vicinity of the discharge. The Facility is prohibited from discharging to Sand Creek during the summer months when upstream flow in the creek is most likely to be low or non-existent. Discharges are only permitted from November 1 through April 30 when dilution flows are more likely and when cooler temperatures will

discourage REC-1 and REC-2 uses. The conditions of the discharge are similar to scenarios identified in the scenarios discussed in the 1992 memorandum and the 8 April 1999 letter. Therefore, the DDW recommended effluent limitations of 23 MPN/100 mL as a 7-day median and 240 MPN/100 mL more than once in any 30 day period are applicable to the discharge.

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

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

(d) **Plant Performance and Attainability.** The Facility has the ability to disinfect the effluent with an ultraviolet light disinfection system prior to discharging to either Discharge Point 001 or Discharge Point 002. The ultraviolet light disinfection system undergoes routine maintenance in case a disinfected discharge is necessary. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

v. **pH**

(a) **WQO.** The Basin Plan includes a water quality objective for surface waters that the “pH shall not be depressed below 6.5 nor raised above 8.3.”

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

(c) **WQBELs.** Effluent limitations for pH of 6.5 as an instantaneous minimum and 8.3 as an instantaneous maximum are included in

this Order based on protection of the Basin Plan objectives for pH.

(d) **Plant Performance and Attainability.** Based on data from January 2021 through December 2023, the Discharger's effluent pH has not exceeded the bounds of 6.5 to 8.3. Therefore, the Central Valley Water Board finds 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."

(b) **RPA Results.** The discharge of secondary treated municipal wastewater has a reasonable potential to cause or contribute to an excursion above the Basin Plan's narrative objective for settleable solids.

(c) **WQBELs.** This Order contains average monthly and average daily effluent limitations for settleable solids. 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.** Data from January 2018 through December 2023 indicate three weekly monitoring results of settleable solids of 0.2 mL/L as the MEC. None of these exceed the MDEL. However, when compared the AMEL, the discharge has exceeded the limit of 0.1 mL/L twice during the span of the six years of data analyzed. Therefore, the Central Valley Water Board finds that the Discharger can in general comply with the effluent limitations immediately.

4. WQBEL Calculations

a. This Order includes WQBELs for un-ionized ammonia (as N), total recoverable copper, total coliform organisms, pH, electrical conductivity, and settleable solids. 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. **Basin Plan Objectives.** For non-priority pollutant WQBELs based on site-specific numeric Basin Plan objectives (e.g., un-ionized ammonia), the ECA is applied directly as the AWEL, and an AMEL is calculated using statistical multipliers based on a 95th percentile.

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

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

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

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

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

where:

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

Summary of Water Quality-Based Effluent Limitations
Discharge Point 002

Table F-10 Summary of Water Quality-Based Effluent Limitations

Parameter	Units	Average Monthly Effluent Limitations	Average Weekly Effluent Limitations	Maximum Daily Effluent Limitations
Copper, Total Recoverable	µg/L	38		76
Cyanide, Total (as CN)	µg/L	4.3		8.5
pH	standard units			6.5-8.3
Settleable Solids	mL/L	0.1		0.5
Un-ionized Ammonia (as N)	mg/L	0.014	0.025	
Total Coliform Organisms	MPN/100 mL	See notes	See notes	See notes

Table F-10 Notes:

1. **pH.** Applied as a range from instantaneous minimum to instantaneous maximum.
2. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following:
   i. 23 most probable number per 100 milliliters (MPN/100 mL), as a 7-day median
   ii. 240 MPN/100 mL, more than once in any 30-day period.

5. Whole Effluent Toxicity (WET)

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

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

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

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

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

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

The table below is acute WET testing performed by the Discharger from March 2021 through March 2022.

Table F-11 Acute Whole Effluent Toxicity Testing Results – Test of Significant Toxicity

Date	**Fathead Minnow (*Pimephales promelas*) Survival**	
	Pass/Fail	Percent Effect
3/2/2022	Pass	0
3/1/2022	Pass	0

i. **RPA.** The Toxicity Provisions do not require a reasonable potential analysis for acute toxicity for the Facility and there are no special circumstances (e.g., high dilution rate, threatened/endangered aquatic species, etc.) for the Facility that may warrant one. However, acute toxicity results during the previous permit term were available for analysis and included and summarized in this section. No dilution has been granted for acute whole effluent toxicity. Therefore, acute toxicity testing has been conducted at an instream waste concentration (IWC) of 100 percent effluent. Based on acute toxicity testing conducted between March 2021 and March 2022 there were no fails of the TST.

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

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

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

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

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

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 during the permit term from during March 2021 and March 2022 on disinfected effluent.

Table F-12 Chronic Whole Effluent Toxicity Testing Results – Test of Significant Toxicity at the IWC (100 Percent Effluent)

Date	Fathead Minnow (*Pimephales promelas)* Survival		Fathead Minnow (*Pimephales promelas)* Growth		Water Flea (*Ceriodaphnia dubia)* Survival		Water Flea (*Ceriodaphnia dubia)* Reproduction		Green Algae (*Selenastrum capricornutum)* Growth	
	Pass/ Fail	Percent Effect	Pass/ Fail	Percent Effect	Pass/ Fail	Percent Effect	Pass/ Fail	Percent Effect	Pass/ Fail	Percent Effect
3/2/2021	Pass	-4.3	Pass	6.7	Pass	0	Pass	-46	Pass	-16
3/1/2022	Pass	0	Pass	0.1	Pass	0	Pass	-4.7	Fail	79

i. **RPA.** No dilution has been granted for chronic whole effluent toxicity. Therefore, chronic toxicity testing has been conducted at an instream waste concentration (IWC) of 100 percent effluent. A test result that fails the Test of Significant Toxicity (TST) or has a percent effect of greater 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 March 2021 and March 2022 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 *Selenastrum capricornutum* 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 *Selenastrum capricornutum* 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 that sub-lethal endpoint greater than or equal to 50 percent.

D. Final Effluent Limitation Considerations

1. Mass-based Effluent Limitations – Not Applicable

2. Averaging Periods for Effluent Limitations

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

3. Satisfaction of Anti-Backsliding Requirements

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

The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of effluent limitations for chloride, boron, electrical conductivity, acute whole effluent toxicity, and un-ionized ammonia. The effluent limitations for these pollutants are less stringent than those in Order R5-2018-0011. 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.

   Sand Creek is considered an attainment water for chloride, boron, electrical conductivity, acute whole effluent toxicity, and un-ionized ammonia because the receiving water is not listed as impaired on the 303(d) list for this constituent. The exceptions in section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list. As discussed in section IV.D.4, below, relaxation or removal of the effluent limits complies with federal and state antidegradation requirements. Thus, removal or relaxation of the effluent limitations for chloride, boron, electrical conductivity, and acute whole effluent toxicity and removal of mass-based effluent limitations for un-ionized ammonia from Order R5-2018-0011 meets the exception in CWA section 303(d)(4)(B).

   Furthermore, a concentration-based average monthly effluent limitation and average weekly effluent limitation is included in this Order for un-ionized ammonia, as well as a prohibition (section III.G of this Order) on discharging flows greater than 2.0 mgd. The combination of flow and concentration-based effluent limitations in this Order are equivalent to mass-based effluent limitations, which were redundant limitations contained in previous Orders by multiplying the concentration-based effluent limitations and the permitted average dry weather flow by a conversion factor in order to determine the mass-

based effluent limitation. The removal of mass-based effluent limitations for un-ionized ammonia will not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, removal of mass-based effluent limitations for un-ionized ammonia is consistent with the antidegradation provisions of 40 CFR 131.12 and the State Antidegradation Policy.

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

As described further in section IV.C.3.b of this Fact Sheet, updated information that was not available at the time Order R5-2018-0011 was issued indicates that electrical conductivity 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 relaxation of effluent limitations for these constituents includes the following:

i. **Electrical Conductivity (EC).** Effluent monitoring data collected between January 2021 through December 2023 indicates that EC in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives. In addition, the previous effluent limitation was based on an effluent limitation specified in the Tulare Lake Basin Plan for discharges to navigable waters. This effluent limitation was removed from the Tulare Lake Basin Plan with the adoption of the Central Valley Salt and Nitrate Control Program Basin Plan Amendment that went into effect since adoption of the previous Order. The effluent limitation for electrical conductivity is replaced with a performance-based salinity trigger to ensure salinity levels do not increase.

ii. **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 and whole effluent toxicity testing from March 2021 through March 2022 indicate no reasonable potential for acute toxicity. This Order does include effluent limitations for chronic whole effluent toxicity, consistent with the Statewide Toxicity Provisions.

4. Antidegradation Policies

a. **Surface Water.**

This Order removes mass-based effluent limitations for un-ionized ammonia based on 40 CFR parts 122.45 (d) and (f). The removal of the mass-based effluent limits for un-ionized ammonia will not result in a decrease in the level of treatment or control or a reduction in water quality.

Furthermore, both concentration-based AMELs and AWELs remain for un-ionized ammonia, as well as an average dry weather flow prohibition that limits the amount of flow that can be discharged to the receiving water during dry weather months. 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 un-ionized ammonia does not result in an allowed increase in pollutants or any additional degradation of the receiving water. Thus, the removal of the mass-based effluent limits for un-ionized ammonia 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 boron and chloride, since the CV-SALTS amendments removed the Basin Plan effluent limitations for these constituents. Historically, effluent results for boron and chloride are much lower than the previous effluent limitations. Removal of the effluent limitations for these constituents will not result in a decrease in the level of treatment or control or a reduction in water quality.

b. **Groundwater.** The Statement of Policy with Respect to Maintaining High Quality Waters in California, State Water Board Resolution 68-16 (Antidegradation Policy), which is incorporated as part of the Basin Plan, prohibits the Central Valley Water Board from authorizing degradation of “high quality waters” unless it is shown that such degradation: (1) will be consistent with the maximum benefit to the people of California; (2) will not unreasonably affect beneficial uses, or otherwise result in water quality less than as prescribed in applicable policies; and (3) is minimized through the discharger’s best practicable treatment or control (BPTC).

Constituents of concern that have the potential to degrade groundwater include electrical conductivity, total dissolved solids, nitrate, and total nitrogen as discussed below and in Table F-13.

Table F-13 Constituents with Potential for Groundwater Degradation

Constituent	Effluent (2021-2023)	Upgradient Wells (MW-A and MW-I) (2021-2023)	Downgradient Wells (MW-D and MW-H) (2021-2023)	Water Quality Objectives
Electrical Conductivity (µmhos/cm)	482-955	500-900	920-1,100	700
Total Dissolved Solids (mg/L)	410-620	360-670	610-870	500-1,000
Nitrate as Nitrogen (mg/L)	ND-32	5.6-16	6.9-46	10
Total Nitrogen (mg/L)	2.1-35	6.5-17	7.9-46	
Total Coliform Organisms	ND-79	ND-100	ND-2,000	2.2

i. **Salinity: Electrical Conductivity (EC) and Total Dissolved Solids (TDS).** The Facility's annual average effluent EC was 759, 717, and 759 µmhos/cm in 2021, 2022, and 2023, respectively. These concentrations are above the 700 µmhos/cm numeric value to fully protect the AGR beneficial use. The Discharger selected to participate in the Prioritization and Optimization (P&O) Study for the Salt Control Program. To help ensure the Discharger continues to implement salinity reduction measures, this Order includes a Salinity Action Level of 950 µmhos/cm. Furthermore, this Order requires the Discharger to comply with the new Salinity Control Program (i.e., to participate in the P&O Study).

ii. **Nitrate (as Nitrogen) and Total Nitrogen.** Background groundwater quality shows existing high nitrate concentrations in groundwater. The *CV-SALTS Region 5: Updated Groundwater Quality Analysis and Resolution Mapping for the Central Valley Salt Management Plan, June 2016* indicates a mean nitrate concentration of 17.33 mg/L for the upper zone in the northern Kings Basin. The Facility's annual average nitrate (as N) was 13, 15, and 13 mg/L in 2021, 2022, and 2023. While at times the effluent nitrate concentration is below water quality objectives, effluent from the Facility has the potential to degrade water quality with respect to nitrate. This Order incudes continued monitoring

for nitrate and nitrogen. Furthermore, the Discharger has elected to participate in CV-SALTS Pathway B for a Local Management Zone to work collectively with other Pathway B permittees to implement best management practices and nitrogen management plans.

iii. **Total Coliform Organisms.** Groundwater monitoring data indicate that total coliform organisms are not consistently detected in the monitoring well network. Sampling events for upgradient wells and downgradient wells were non-detect for total coliform organisms for 64% and 71% of the results, respectively. Results for the effluent are from undisinfected effluent. However, in the event groundwater is within 5 feet from the surface of the recycled water use area or within 5 feet from the bottom of the wastewater ponds, the effluent would be disinfected.

Degradation of groundwater by some of the typical waste constituents associated with discharges from a municipal wastewater utility, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. This technology, energy, water recycling, and waste management advantages of municipal utility service far exceed any benefits derived from reliance on numerous, concentrated individual wastewater systems, and the impact on water quality will be substantially less. The economic prosperity of valley communities and associated industry is of maximum benefit to the people of the State, and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this Order.

The Discharger implements, or will implement, as required by this Order the following BPTC measures, which will minimize the extent of water quality degradation resulting from the Facility's continued operation:

- Providing secondary treatment of wastewater;
- Recycling of water for crop irrigation;
- Complying with limitations for BOD_5, TSS, and flow;
- Complying with a Salinity Action Level of 950 µmhos/cm;
- Complying with the Salt and Nitrate Control Programs;
- Using certified operators to ensure proper operation and maintenance of the WWTF;
- Off-site disposal of dried sludge to a landfill or composting facility; and
- Implementing influent, effluent, and groundwater monitoring.

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, TSS, and pH. Restrictions on BOD, TSS, and pH 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, technology-based effluent limitations and water quality-based effluent limitations are applicable. The more stringent of these effluent limitations are implemented by this Order. These limitations are not more stringent than required by the CWA.

WQBELs have been derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant WQBELs were derived from the CTR, the CTR is the applicable standard pursuant to 40 C.F.R. section 131.38. The procedures for calculating the individual WQBELs for priority pollutants are based on the CTR implemented by the SIP, which was approved by U.S. EPA on 18 May 2000. Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the requirements of the CWA.

Summary of Final Effluent Limitations
Discharge Point 002

Table F-14 Summary of Final Effluent Limitations

Parameter	Units	Effluent Limitations	Basis
BOD_5	mg/L	AMEL 30 AWEL 45	CFR
TSS	mg/L	AMEL 30 AWEL 45	CFR
pH	standard units	Instantaneous Min 6.5 Instantaneous Max 8.3	BP
Cyanide, Total	µg/L	AMEL 4.3 MDEL 8.5	CTR
Copper, Total Recoverable	µg/L	AMEL 38 MDEL 76	CTR
Total Coliform Organisms	MPN/100 mL	7-day median 23 30-day max 240	DDW

Parameter	Units	Effluent Limitations	Basis
Un-ionized Ammonia (as N)	mg/L	AMEL 0.014 AWEL 0.025	BP
Settleable Solids	mL/L	AMEL 0.1 MDEL 0.5	BP
Chronic Toxicity	TST	MMEL No more than 1 Fail MDEL Fail & >=50 percent effect	TOX

Table F-14 Notes:

1. **CFR** – Based on secondary treatment standards contained in 40 CFR part 133.
   BP – Based on water quality objectives contained in the Basin Plan.
   CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
   TOX – Based on the Statewide Toxicity Provisions.
   NAWQC – Based on water quality criteria contained in the U.S. EPA National Ambient Water Quality Criteria

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications

1. Treated wastewater discharged for reclamation is regulated under separate waste discharge requirements and must meet the requirements of CCR, Title 22.

2. **TSS and BOD_5.** The Basin Plan establishes that secondary treatment should remove 85 percent or reduce to 30 mg/L, whichever is more restrictive, of both BOD_5 and TSS.

3. **Salinity.** Order R5-2018-0011 contained a recycling specification for electrical conductivity, which required that the 12-month rolling average electrical conductivity of the discharge not exceed the 12-month rolling average electrical conductivity of the source water plus 500 µmhos/cm, or a maximum of 1,000 µmhos/cm, whichever is more stringent, based on the Tulare Lake Basin Plan. 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. Therefore, this Order establishes an average annual electrical

conductivity performance-based trigger of 1,000 µmhos/cm for electrical conductivity.

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

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

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

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

      The Bacteria Provisions provide that where a permit, waste discharge requirement (WDR), or waiver of WDR includes an effluent limitation or discharge requirement that is derived from a water quality objective or other guidance to control bacteria (for any beneficial use) that is more stringent than the Bacteria Water Quality Objective, the Bacteria Water Quality Objective would not be implemented in the permit, WDR, or waiver of WDR. This standard has not been met in this Order, therefore, the Bacteria Water Quality Objective has been implemented as a receiving water limitation.

      The bacteria receiving water limitation in this Order has been established based on the Bacterial Water Quality Objective for inland surface waters, which requires the six-week rolling geometric mean of *Escherichia coli* (*E.*

coli) shall not exceed 100 colony forming units (cfu) per 100 milliliters (mL), calculated weekly, and a statistical threshold value (STV) of 320 cfu/100 mL not to be exceeded by more than 10 percent of the samples collected in a calendar month, calculated in a static manner.

B. Groundwater

1. The beneficial uses of the underlying groundwater are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, water contact recreation, and wildlife habitat.

2. Basin Plan water quality objectives include narrative objectives for chemical constituents, tastes and odors, and toxicity of groundwater. The toxicity objective requires that groundwater be maintained free of toxic substances in concentrations that produce detrimental physiological responses in humans, plants, animals, or aquatic life. The chemical constituent objective states groundwater shall not contain chemical constituents in concentrations that adversely affect any beneficial use. The tastes and odors objective prohibits taste- or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses. The Basin Plan also establishes numerical water quality objectives for chemical constituents and radioactivity in groundwaters designated as municipal supply. These include, at a minimum, compliance with MCLs in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 mL. The Basin Plan requires the application of the most stringent objective necessary to ensure that waters do not contain chemical constituents, toxic substances, radionuclides, taste- or odor-producing substances, or bacteria in concentrations that adversely affect municipal or domestic supply, agricultural supply, industrial supply or some other beneficial use.

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

VI. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which apply to all NPDES permits in accordance with 40 C.F.R. section 122.41, and additional conditions applicable to specified categories of permits in accordance with 40 C.F.R. section 122.42, are provided in Attachment D. The discharger must comply with all standard provisions and with those additional conditions that are applicable under section 122.42.

Sections 122.41(a)(1) and (b) through (n) of 40 C.F.R. establish conditions that apply to all state issued NPDES permits. These conditions must be incorporated into the permits either expressly or by reference. If incorporated by reference, a specific citation to the regulations must be included in the Order. Section 123.25(a)(12) of 40 C.F.R. allows the state to omit or modify conditions to impose more stringent

requirements. In accordance with 40 C.F.R. section 123.25, this Order omits federal conditions that address enforcement authority specified in 40 C.F.R. sections 122.41(j)(5) and (k)(2) because the enforcement authority under the Water Code is more stringent. In lieu of these conditions, this Order incorporates by reference Water Code section 13387(e).

B. Special Provisions

1. Reopener Provisions

a. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central Valley Water Board in 2020 with Resolution R5-2020-0057 (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/resolutions/r5-2020-0057_res.pdf). The revisions to the Basin Plan amendments became effective on 10 November 2021. As the Central Valley Water Board moves forward to implement those provisions that are now in effect, this Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

Under the Salt Control Program, dischargers that are unable to comply with the stringent salinity requirements may instead, to the extent, reasonable, feasible and practicable (and while accounting for conservation and drought, salinity levels in the water supply source, and some appropriate increment of growth), be subject to performance-based requirements as determined appropriate by the Central Valley Water Board, and participate in a basin-wide effort known as the Prioritization and Optimization Study (P&O Study) to develop a long-term salinity strategy for the Central Valley. The Discharger's election into the P&O Study is discussed further in section VI.B.3.a of this Fact Sheet.

The Nitrate Control Program is a prioritized program. The Facility is within Groundwater Basin 5-022.08 (San Joaquin Valley – Kings), which is a Priority 1 Basin. The Board issued Notices to Comply to dischargers in Priority 1 Basins in May 2020. These notices provided dischargers with a choice to participate in an individual permitting approach (Pathway A) or in a collective permitting approach (Pathway B). Under the collective approach, dischargers jointly form "Management Zones" that fulfill the requirements of the Nitrate Control Program. In response to the Notice to

Comply, the Discharger selected Pathway B and joined the Kings Water Alliance Management Zone.

Under the Nitrate Control Program, dischargers that cause or contribute to nitrate pollution in groundwater must qualify for a limited term “exception” from meeting nitrate limits. Compliance time schedules must be as short as practicable and are not to exceed 35 years. The Central Valley Water Board will only grant exceptions upon finding that all elements of the Board’s Exceptions Policy are met. For nitrate, the Exceptions Policy dictates that exceptions will not be considered unless an adequate supply of clean, safe, reliable and affordable drinking water is available for those who have been adversely affected by the non-compliant discharge.

Management Zones in Priority 1 Basins were required to submit Management Zone Implementation Plans (MZIPs). The Kings Water Alliance Management Zone submitted an MZIP on 5 September 2023. The MZIP was deemed complete by the Board’s Executive Officer in November 2023. The MZIP contains a proposal for how dischargers within the Kings Water Alliance Management Zone will meet requirements of the Nitrate Control Plan and the Exceptions Policy.

To meet the requirements of the Nitrate Control Plan, the Kings Water Alliance Management Zone MZIP includes sector-based Nitrate Reduction Programs, including one for Non-15 dischargers including the Discharger. The MZIP proposes that the Discharger prepare and submit a facility-specific Nitrate Reduction Work Plan that would characterize the facility’s impact on groundwater, quantify the facility’s nitrate loading to the Upper Zone of groundwater, estimate the necessary improvements to the facility’s discharge to comply with the Management Zone’s Groundwater Protection Target(s) and/or other developed compliance metrics, and provide an implementation schedule that will ensure that the facility complies with the Nitrate Control Program.

The Kings Water Alliance Management Zone MZIP proposes to meet the requirements of the Exceptions Policy by, among other things, continuing an interim drinking water program that performs outreach to residents potentially affected by nitrate contamination, offers free nitrate well testing, and provides free replacement water to households whose wells are found to exceed the nitrate drinking water standard.

The MZIP will serve as the basis for permit amendments for all dischargers in the Management Zone. The Board proposes to consider a package of permit amendments for all dischargers in the Management Zone in a single permitting action, where the Board will also make findings as to whether the requirements of the Exceptions Policy are met by the proposals in the MZIP. In the interim, the Discharger is subject to a Conditional Prohibition that requires that the discharger continue to

participate in funding and implementing the drinking water program described in the MZIP.

As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of this Order. As such this Order may be amended or modified to incorporate any newly applicable requirements to ensure that the goals of the Salt and Nitrate Control Programs are met.

2. Special Studies and Additional Monitoring Requirements

a. **Sludge Capacity Annual Assessment and Sludge Management Work Plan.** This Order requires the Discharger to submit an annual assessment to determine if the Facility's lined sludge drying beds are sufficient to dispose of the Facility's current flow for the next three years. If an assessment indicates that the lined sludge drying beds are approaching capacity, the Discharger must submit a work plan to address how the Facility will maintain compliance with Discharge Prohibition III.G and Special Provision VI.C.5.a.i to limit application of sludge to lined surfaces only. This work plan must explore long term solutions for sludge handling, including implementing additional dewatering mechanisms. The work plan shall include an implementation plan and a schedule of actions.

b. **Unlined Sludge Surfaces Cleanout and Closure.** This Order does not authorize onsite disposal of waste solids. Waste solids/sludge may be present in the out of service unlined sludge drying beds and unlined sludge lagoons. The Discharger is not authorized for long-term onsite storage of sludge leftover from treatment activities, and, eventually, the unlined sludge surfaces will require sludge removal. This provision requires the Discharger to address the former unlined sludge drying beds and unlined sludge lagoons by developing an Unlined Sludge Surfaces Cleanout and Closure Work Plan and Final Technical Report to certify that the former unlined sludge surfaces do not pose a threat to underlying groundwater quality. The work plan shall include an implementation plan and a schedule of actions that shall not exceed seven years from the effective date of the permit.

c. **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.F. provides additional details regarding the TRE.

d, **Nitrate Reduction Workplan.** The Discharger shall comply with the applicable requirements of the Kings Water Alliance Management Zone Implementation Plan (MZIP) in order to fully comply with the Nitrate Control Program. Per the Kings Water Alliance MZIP, a Nitrate Reduction Workplan is required to collect necessary monitoring data to refine the MZIP preliminary nitrogen load estimate and support development of the Management Zone Groundwater Protection Values and Groundwater Protection Targets.

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 29 June 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 meet the requirements of the Alternative Salinity Permitting Approach. This Order also requires continued implementation of the Discharger's SEMP and includes a performance-based salinity trigger to ensure salinity levels do not increase. In accordance with the Basin Plan, the salinity trigger was developed based on existing facility performance and considers possible temporary increases that may occur due to water conservation and/or drought.

4. Construction, Operation, and Maintenance Specifications

a. **UV Disinfection System Operating Specifications.** To ensure that the UV disinfection system is operated to achieve the required pathogen removal, this Order includes effluent limits for total coliform organisms and UV disinfection system operating specifications. Compliance with total coliform effluent limits alone does not ensure that pathogens in the municipal wastewater have been deactivated by the UV disinfection system. Compliance with the effluent limits and UV disinfection operating specifications demonstrates compliance with the limitations recommended by DDW.

b. **Treated Wastewater Pond Operating Requirements.** The operation and maintenance specifications for the treated wastewater ponds are necessary to prevent nuisance conditions. The specifications included in this Order are generally retained from Order R5-2018-0011.

c. **Groundwater Monitoring Network Maintenance Requirements.** The groundwater monitoring network maintenance requirements are necessary to ensure monitoring and reporting requirements of this Order can consistently be fulfilled.

5. Special Provisions for POTWs

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

6. Other Special Provisions – Not Applicable

7. Compliance Schedules – Not Applicable

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

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

Section 13176 cannot be interpreted in a manner that would violate federal holding time requirements that apply to NPDES permits pursuant to the CWA. (Wat. Code sections 13370, subd. (c), 13372, 13377.). Section 13176 is inapplicable to NPDES permits to the extent it is inconsistent with CWA requirements. (Wat. Code section 13372, subd. (a).) Lab accreditation is not required for field tests such as tests for color, odor, turbidity, pH, temperature, dissolved oxygen, electrical conductivity, and disinfectant residual. The holding time requirements are 15 minutes for pH and dissolved oxygen, and immediate analysis is required for temperature. (40 C.F.R. section 136.3(e), Table II)

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). The monitoring frequencies and sample types have been retained from Order R5-2018-0011.

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 R5-2018-0011, except as noted in Table F-15, below.

3. This Order includes effluent monitoring for dissolved organic carbon (once per quarter) to calculate site-specific freshwater aluminum criteria in accordance with the 2018 United States Environmental Protection Agency (U.S. EPA) National Ambient Water Quality Criteria (NAWQC) for aluminum in freshwater.

C. Receiving Water Monitoring

1. Surface Water

a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge on the receiving stream. Receiving surface water monitoring frequencies and sample types have been retained from Order R5-2018-0011.

2. Groundwater

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

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

c. This Order requires the Discharger to continue groundwater monitoring and includes a regular schedule of groundwater monitoring in the attached Monitoring and Reporting Program. The groundwater monitoring reports

are necessary to evaluate impacts to waters of the State to assure protection of beneficial uses and compliance with Central Valley Water Board plans and policies, including the State Anti-Degradation Policy. Evidence in the record includes effluent monitoring data that indicates the presence of constituents that may degrade groundwater and surface water.

d. Groundwater monitoring frequencies and parameters have been retained from Order R5-2018-0011, except as noted in Table F-15, below:

Table F-15 Summary of Monitoring Changes

Parameter	Monitoring Location	Prior Sample Frequency	Revised Sample Frequency	Reason for Change
Chloride	EFF-001, EFF-002	1/Month	2/Year	Limits were removed. Monitoring is now included in the standard minerals group only.
Boron	EFF-001, EFF-002	1/Month	2/Year	Limits were removed. Monitoring is now included in the standard minerals group only.
Dissolved Organic Carbon	EFF-001, EFF-002		1/Quarter	Monitoring is necessary to calculate appropriate criteria for aluminum
Oil and Grease	EFF-001, EFF-002	2/Year		History of no reasonable potential
Methylene Blue Active Substances	EFF-001, EFF-002	2/Year		History of no reasonable potential
Cyanide, Total	EFF-002		1/Month	New effluent limitations
Acute Toxicity	EFF-002	2/Year		Limits were removed.
Total Organic Carbon	MW-A, MW-B, MW-C, MW-D, MW-E, MW-F, MW-G, MW-H, MW-I		1/Quarter for 3 years and 1/Year thereafter	Needed to characterize groundwater
Total Dissolved Solids	MW-A, MW-B, MW-C, MW-D, MW-E, MW-F, MW-G, MW-H, MW-I		1/Quarter for 3 years and 1/Year thereafter	Needed to characterize groundwater

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).

Semi-annual chronic whole effluent toxicity testing is required to demonstrate compliance with the chronic toxicity effluent limitations/targets.

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

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

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

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

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

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

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

4. **Sensitive Species Screening.** Under the Toxicity Provisions, dischargers shall perform subsequent species sensitivity screening to re-evaluate the most sensitive species if the effluent used in the species sensitivity screening is no longer representative of the effluent or if a species sensitivity screening has not been performed in the last fifteen years. Subsequent species sensitivity

screening may also be required prior to every order issuance, renewal, or reopening, if reopening to address aquatic toxicity. Pursuant to Section V.F of the MRP, the Discharger is required to perform species sensitivity screening at least once every fifteen years or if the effluent used in the last species sensitivity screening is no longer representative of the effluent 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 alga (*Pseudokirchneriella subcapitata*). The tests shall be performed at an IWC of no less than 100 percent effluent and one control. For subsequent sensitivity screening, if the first two species sensitivity re-screening events result in no change in the most sensitive species, the Discharger may cease the species sensitive re-screening testing and the most sensitive species will remain unchanged.

The most sensitive species to be used for chronic toxicity testing was determined in accordance with the process outlined in the MRP section V.F. Based on the Discharger's chronic toxicity data, there were results of "Fail" at the IWC using the TST statistical approach. The species that exhibited the highest percent effect was green alga (*Pseudokirchneriella subcapita*), with a percent effect of 79 percent. Consequently, *P. subcapita* 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 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 or MMEL compliance test.

E. Other Monitoring Requirements

1. Biosolids Monitoring

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

2. Water Supply Monitoring

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

3. **UV Disinfection System Monitoring**

   UV system monitoring and reporting are required to ensure that the UV system is operated to adequately inactivate pathogens in the wastewater.

4. **Pond Monitoring**

   Treatment pond monitoring is required to ensure proper operation of the storage pond. Weekly monitoring for freeboard, dissolved oxygen, and qualitative observations and daily monitoring of flow has been retained from Order R5-2018-0011.

5. **Recycled Water Monitoring**

   Monitoring of the effluent discharged to the cropland is required to ensure that the discharge to the use area complies with the Recycled Water Specifications in section IV.C.1 of this Order. Daily monitoring for effluent application, location and type of crop, rainfall, effluent application rate, supplemental irrigation rate, and BOD_5 loading rate; monthly monitoring for total nitrogen loading rates, and salt loading rates; and yearly monitoring of the hydraulic and nutrient balance have been retained from Order R5-2018-0011.

6. **Effluent and Receiving Water Characterization Monitoring**

   Full characterization monitoring of the effluent and receiving water is necessary to inform future permitting decisions. The four total effluent monitoring events and two total receiving water monitoring events have been retained from Order R5-2018-0011.

7. **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 Cutler-Orosi Joint Powers Wastewater Authority, Wastewater Treatment Facility. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Persons

The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. 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 posting of the Notice of Public Hearing at the Facility, the offices of the Cutler Utility District and Orosi Utility District, and the Orosi Post Office. Additionally, the NOPH was posted on the Central Valley Water Board's Tentative Orders webpage.

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

B. Written Comments

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

To be fully responded to by staff and considered by the Central Valley Water Board, the written comments were due at the Central Valley Water Board office by 5:00 p.m. on **27 December 2025**.

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: 21 February 2025
Time: 9:00 a.m.
Location: Regional Water Quality Control Board, Central Valley Region

11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

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

D. Reconsideration of Waste Discharge Requirements

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

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

Or by email at waterqualitypetitions@waterboards.ca.gov

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

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (559) 445-5116.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Valley Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Nicolette Dentoni at (559) 444-2505, or Nicolette.Dentoni@waterboards.ca.gov.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Aluminum, Total Recoverable	µg/L	260		590	1,600	590					No
Ammonia, Total (as N)	mg/L	9.7		4.48	5.63	4.48					Yes
Ammonia, unionized (as N)	mg/L	0.34		0.025	0.025						Yes
Boron	mg/L	0.38									No
Chloride	mg/L	79			860	230					No
Copper, Total Recoverable	µg/L	79		48	76	48					Yes
Cyanide, Total (as CN)	µg/L	8.6		5.2	22	5.2		400			Yes
Electrical Conductivity @ 25°C	µmhos /cm	955									No
Lead, Total Recoverable	µg/L	0.95		6.8	160	6.3					No
pH	Std units	7.4-7.9		6.5-8.3					6.5-8.3		No[2]
Zinc, Total Recoverable	µg/L	99		200	200	200		26,000			No

Attachment G Table Notes:

1. All inorganic concentrations are given as a total concentration.
2. Effluent limitations were included despite the finding of no reasonable potential. See Section IV.C.3.b of the Fact Sheet for detailed discussion.

Abbreviations used in this table:

MEC = Maximum Effluent Concentration

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

ATTACHMENT H – CALCULATION OF WQBELS

AQUATIC LIFE WQBELS CALCULATIONS

Parameter	Units	CMC Criteria	CCC Criteria	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, Unionized (as N)	mg/L	0.025		0.6	1	1	0.32	0.008			1.55	2.68	3.11	0.014	0.025	
Copper, Total Recoverable	µg/L	76	48	0.6	1	1	0.32	24	0.53	25	1.55	2.68	3.11	38		76
Cyanide, Total	µg/L	22	5.2	0.6	1	1	0.32	7.1	0.53	2.7	1.55	2.68	3.11	4.3		8.5

Attachment H-1 Table Notes:

1. AMEL calculated according to section 1.4 of the SIP using a 95th percentile occurrence probability.
2. AWEL calculated according to section 1.4 of the SIP using a 98th percentile occurrence probability.
3. MDEL calculated according to section 1.4 of the SIP using a 99th percentile occurrence probability.
4. Calculations for copper include a WER of 3.1.
5. Calculations for ammonia were based on an AWEL of 0.025 mg/L.

Abbreviations used in this table:

B = Maximum Receiving Water Concentration or lowest detection level, if non-detect
CMC = Criterion Maximum Concentration (CTR or NTR)
CCC = Criterion Continuous Concentration (CTR or NTR)
CV = Coefficient of Variation (established in accordance with section 1.4 of the SIP)

ECA Effluent Concentration Allowance
LTA Aquatic Life Calculations – Long-Term Average
MDEL = Maximum Daily Effluent Limitation
AMEL = Average Monthly Effluent Limitation
MDEL = Maximum Daily Effluent Limitation
AWEL = Average Weekly Effluent Limitation

ATTACHMENT I – RECYCLED WATER SIGNAGE