CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CA0085235
TENTATIVE DRAFT ORDER R5-2024-XXXX

WASTE DISCHARGE REQUIREMENTS AND MASTER RECYCLING PERMIT FOR THE CITY OF CLOVIS, SEWAGE TREATMENT AND WATER REUSE FACILITY, FRESNO COUNTY

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

Table 1. Discharger Information

Discharger:	City of Clovis
Name of Facility:	Sewage Treatment and Water Reuse Facility
Facility Street Address:	9700 East Ashlan Avenue
Facility City, State, Zip:	Clovis, CA 93619
Facility County:	Fresno County

Table 2. Discharge Location

Discharge Point	Effluent Description	Discharge Point Latitude (North)	Discharge Point Longitude (West)	Receiving Water
001	Disinfected Tertiary-Treated Effluent	36.760833°	-119.627889°	Fancher Creek
002	Disinfected Tertiary-Treated Effluent	36.889327°	-119.664731°	Diversion Channel from Big Dry Creek Reservoir to Little Dry Creek
REC-001	Disinfected Tertiary-Treated Effluent	--	--	Groundwater underlying recycled water use sites

Table 3. Administrative Information

This Order was Adopted on:	**XX June 2024**
This Order shall become effective on:	**1 August 2024**
This Order shall expire on:	**31 July 2029**
The Discharger shall file a Report of Waste Discharge (ROWD) as an application for reissuance of WDRs in accordance with title 23, California Code of Regulations (CCR), and an application for reissuance of a NPDES permit no later than:	**31 July 2028**
The United States Environmental Protection Agency (U.S. EPA) and the California Regional Water Quality Control Board, Central Valley Region have classified this discharge as follows:	**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 **<DATE>**.

_____
PATRICK PULUPA, Executive Officer

WASTE DISCHARGE REQUIREMENTS – TABLE OF CONTENTS

TABLES

ATTACHMENTS

I. FACILITY INFORMATION

Information describing the City of Clovis, Sewage Treatment and Water Reuse 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. This Order also serves as a Master Recycling Permit pursuant to article 4, chapter 7, division 7 of the Water Code (commencing with section 13500).

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 18 July 2005, the Discharger certified a final Environmental Impact Report (EIR) in accordance with Section 15090 of the State CEQA Guidelines. At the time, the Central Valley Water Board considered the EIR and concurred that the project as altered and approved by the City of Clovis will not have a significant effect on water quality. A detailed discussion of this Order's consistency with CEQA is included in the Fact Sheet (Attachment F).

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

D. Provisions and Requirements Implementing State Law. The provisions/requirements in subsections **IV.C, V.B, and VI.C.8** are included to implement state law only. These provisions/requirements are not required or authorized under the federal CWA; consequently, violations of these provisions/requirements are not subject to the enforcement remedies that are available for NPDES violations.

E. Monitoring and Reporting. 40 C.F.R. section 122.48 requires that all NPDES permits specify requirements for recording and reporting monitoring results. Water Code sections 13267 and 13383 authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. This Order and the Monitoring and Reporting Program, provided in Attachment E, establish monitoring and reporting requirements to implement federal and State requirements. The burden, including costs, of these monitoring and reporting requirements bears a reasonable relationship to the need for these reports and the benefits to be obtained therefrom. The Discharger, as owner and operator of the Facility, is responsible for these requirements, which are necessary to determine compliance with this Order. The need for these requirements is further discussed in the Fact Sheet, Attachment F.

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

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

THEREFORE, IT IS HEREBY ORDERED that Order R5-2019-0021 is rescinded upon the effective date of this Order except for enforcement purposes, and, in order to meet the provisions contained in division 7 of the Water Code (commencing with section 13000) and regulations adopted thereunder, and the provisions of the CWA and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order. This action in no way prevents the Central Valley Water Board from taking enforcement action for violations of the previous Order.

III. DISCHARGE PROHIBITIONS

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

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

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

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

E. Average Monthly and Average Annual Discharge Flows

1. **Effective immediately and until compliance with Special Provision VI.C.6.b,** discharges to the steel storage tanks exceeding an average monthly flow of 3.1 million gallons per day (MGD) and an average annual flow of 2.8 MGD are prohibited.

2. **Effective upon compliance with Special Provision VI.C.6.b,** discharges to the steel storage tanks exceeding an average monthly flow of 6.2 MGD and an average annual flow of 5.6 MGD are prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Points 001 and 002

1. Final Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations at Discharge Point 001. Unless otherwise specified, compliance shall be measured at Monitoring Location EFF-A, 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 – Discharge Point 001

Parameters	Units	Average Monthly	Average Weekly	Maximum Daily
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD_5)	milligrams per liter (mg/L)	10	15	
Total Suspended Solids (TSS)	mg/L	10	15	
Ammonia Nitrogen, Total (as N)	mg/L	1.2	2.5	
Cyanide, Total	micrograms per liter (µg/L)	4.3		8.5
Nitrate Plus Nitrite (as N)	mg/L	10	16	

b. **pH.** pH shall comply with the following instantaneous minimum and maximum measured at Monitoring Location EFF-001, as described in the MRP, Attachment E:

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

ii. 8.2 SU as an instantaneous maximum.

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

d. **Chronic Whole Effluent Toxicity MDEL.** No *Selenastrum capricornutum* chronic aquatic toxicity test shall result in a "Fail" at the IWC for the sub-lethal endpoint measured in the test AND a percent effect for the sub-lethal endpoint greater than or equal to 50 percent.

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 at Monitoring Location UVS-001 as described in the MRP, Attachment E:

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

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

iii. 240 MPN/100 mL, at any time

2. Final Effluent Limitations – Discharge Point 002

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

a. The Discharger shall maintain compliance with the effluent limitations specified in Table 5:

Table 5. Effluent Limitations – Discharge Point 002

Parameters	Units	Average Monthly	Average Weekly	Maximum Daily
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD_5)	milligrams per liter (mg/L)	10	15	
Total Suspended Solids (TSS)	mg/L	10	15	
Ammonia Nitrogen, Total (as N)	mg/L	1.9	4.1	
Cyanide, Total	micrograms per liter (µg/L)	4.3		8.5
Nitrate Plus Nitrite (as N)	mg/L	10	16	

b. **pH.** pH shall comply with the following instantaneous minimum and maximum measured at Monitoring Location EFF-002, as described in the MRP, Attachment E:

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

ii. 8.1 SU as an instantaneous maximum.

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

d. **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 the 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 at Monitoring Location UVS-001 as described in the MRP, Attachment E:

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

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

iii. 240 MPN/100 mL, at any time

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

i. Average Monthly Effluent Limitation (AMEL)

$S_{AMEL} = CD_{M\text{-}AVG}/0.079 + CC_{M\text{-}AVG}/0.012 \leq 1.0$

$CD_{M\text{-}AVG}$ = average monthly diazinon effluent concentration in µg/L.

$CC_{M\text{-}AVG}$ = average monthly chlorpyrifos effluent concentration in µg/L

ii. Average Weekly Effluent Limitation (AWEL)

$S_{AWEL} = CD_{W\text{-}avg}/0.14 + CC_{W\text{-}avg}/0.021 \leq 1.0$

$CD_{W\text{-}AVG}$ = average weekly diazinon effluent concentration in µg/L.

$CC_{W\text{-}AVG}$ = average weekly chlorpyrifos effluent concentration in µg/L.

B. Land Discharge Specifications – NOT APPLICABLE

C. Recycling Specifications – Discharge Point REC-001

1. The production, distribution, and use of recycled water shall conform to an Engineering Report prepared pursuant to Title 22, section 60323 approved by the Division of Drinking Water.

2. The recycled water shall be at least disinfected tertiary 2.2 recycled water as defined in Title 22, section 60301.

3. 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, sections 60304(a), 60304(b), 60304(c), and 60304(d).

4. Tailwater runoff and spray of recycled water shall not be discharged outside of the use areas except in minor, incidental amounts that cannot reasonably be eliminated by implementation and good maintenance of best management practices.

5. 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. 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 waste constituents below 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, maintain compliance with the groundwater limitations of this Order, and prevent pollution.

6. 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.

7. Use Areas where public access is allowed shall be managed to avoid public contact with recycled water.

8. Irrigation with recycled water shall be managed to minimize erosion within the use areas.

9. The use areas shall be managed to prevent breeding of mosquitos or other vectors.

10. The use areas and recycled water impoundments shall be designed, maintained, and operated to comply with the following setback requirements:

Table 6. Recycled Water Setbacks

Setback Definition	Minimum Irrigation Setback (feet)
Edge of use area to manmade or natural surface water drainage course	25
Edge of use area to domestic water supply well	50 (except as allowed by Recycling Specification 11 below)
Toe of recycled water impoundment berm to domestic water supply well	100

11. Irrigation with disinfected tertiary recycled water shall not take place within 50 feet of any domestic water supply well unless all of the following conditions have been met and State Water Board, Division of Drinking Water (DDW) has approved a variance pursuant to Title 22, section 60310(a):

    a. A geological investigation demonstrates that an aquitard exists at the well between the uppermost aquifer being drawn from the ground and the surface.

    b. The well contains an annual seal that extends from the surface into the aquitard.

    c. The well is housed to prevent any recycled water spray from coming into contact with the wellhead facilities.

    d. The ground surface immediately around the wellhead is contoured to allow surface water to drain away from the well.

e. The owner of the well approves of the elimination of the buffer zone requirement.

12. Spray irrigation with recycled water is prohibited when wind speed (including gusts) exceeds 30 mph.

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

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

15. Use 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 DESPERDICIO RECLAMADA – NO TOME

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

16. All recycled water 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.

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

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

19. 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.

20. Except as allowed under CCR, title 17, section 7604, no physical connection shall be made or allowed to exist between any recycled water system and any separate system conveying portable water or auxiliary water source system.

21. 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.

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

23. The Discharger shall maintain compliance with the following effluent limitations at Discharge Point REC-001. Unless otherwise specified, compliance shall be measured at Monitoring Location EFF-A, as described in the MRP, Attachment E:

    a. The Discharger shall maintain compliance with the recycling specifications in Table 7:

Table 7. Recycled Water Discharge Specifications

Parameter	Units	Average Monthly	Average Weekly
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15
Total Suspended Solids	mg/L	10	15
Nitrate plus Nitrite (as N)	mg/L	10	16

    b. **pH.** pH shall comply with the following instantaneous minimum and maximum measured at Monitoring Location REC-001, as described in the MRP, Attachment E:

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

        ii. 8.5 SU as an instantaneous maximum.

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

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

        i. 2.2 MPN/100 mL, as a 7-day median

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

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

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

1. The discharge shall not cause the following in Fancher Creek and the Diversion Channel:

a. **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).

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

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

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

e. **Dissolved Oxygen**:

i. 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;

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

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

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

g. **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.

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

i. **Pesticides:**

i. Pesticides to be present, individually or in combination, in concentrations that adversely affect beneficial uses; nor

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

j. **Radioactivity**:

i. 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.

k. **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.

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

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

n. **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.

o. **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-001U and RSW-001D for Fancher Creek and Monitoring Locations RSW-003U and RSW-003D for the Diversion Channel.

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

q. **Turbidity.** Turbidity to:

i. Increase more than 1 NTU where natural turbidity is between 0 and 5 NTUs;

ii. Increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;

iii. Increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor

iv. Increase more than 10 percent where natural turbidity is greater than 100 NTUs.

2. The discharge shall not cause the following in Little Dry Creek:

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

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

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

d. **Dissolved Oxygen**:

i. The monthly median of the mean daily dissolved oxygen concentration to fall below 85 percent of saturation in the main water mass;

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

iii. The dissolved oxygen concentration to be reduced below 7.0 mg/L at any time.

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

f. **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.

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

h. **Pesticides:**

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

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

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

iv. Pesticide concentrations to exceed those allowable by applicable antidegradation policies (see State Water Board Resolution 68-16 and 40 C.F.R. section 131.12);

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

vi. Pesticides to be present in concentrations in excess of the maximum contaminant levels (MCL's) set forth in Title 22; nor

vii. Thiobencarb to be present in excess of 1.0 µg/L.

i. **Radioactivity**:

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

ii. Radionuclides to be present in excess of the MCL's specified in Table 64442 of section 64442 and Table 64443 of section 64443 of Title 22 of the CCR.

j. **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.

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

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

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

n. **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-002U and RSW-002D.

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

p. **Turbidity.** Turbidity to:

i. Exceed 2 Nephelometric Turbidity Units (NTU) where natural turbidity is less than 1 NTU;

ii. Increase more than 1 NTU where natural turbidity is between 1 and 5 NTUs;

iii. Increase more than 20 percent where natural turbidity is between 5 and 50 NTUs;

iv. Increase more than 10 NTU where natural turbidity is between 50 and 100 NTUs; nor

v. Increase more than 10 percent where natural turbidity is greater than 100 NTUs.

B. Groundwater Limitations

Release of waste constituents from any treatment, reclamation, or storage component associated with the WWTF 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 the provision in section VI.C.3.a of this Order.

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

VI. PROVISIONS

A. Standard Provisions

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

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

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

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

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

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

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

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

The causes for modification include:

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

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

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

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

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

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

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

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

ii. Controls any pollutant limited in the Order.

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

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

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

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

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

i. Safeguard to electric power failure:

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

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

iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Central Valley Water Board not approve the existing safeguards, the Discharger shall, within 90 days of having been advised in writing by the Central Valley Water

Board that the existing safeguards are inadequate, provide to the Central Valley Water Board and U.S. EPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Central Valley Water Board, become a condition of this Order.

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

The technical report shall:

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

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

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

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

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

l. The Discharger shall submit technical reports as directed by the Executive Officer. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

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

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

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

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

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

r. In the event the Discharger does not comply or will be unable to comply for any reason, with any prohibition, effluent limitation, or receiving water limitation of this Order, the Discharger shall notify the Central Valley Water Board by telephone (916) 464-3291 within 24 hours of having knowledge of such noncompliance, and shall confirm this notification in writing within five days, unless the Central Valley Water Board waives confirmation. The written notification shall state the nature, time, duration, and cause of noncompliance, and shall describe the measures being taken to remedy the current noncompliance and prevent recurrence including, where applicable, a schedule of implementation. Other noncompliance requires written notification as above at the time of the normal monitoring report.

B. Monitoring and Reporting Program (MRP) Requirements

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

C. Special Provisions

1. Reopener Provisions

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

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

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

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

c. **Water Effects Ratios (WER) and Metal Translators.** Site-specific WERs of 1.79 and 18 have been used for total recoverable zinc and total recoverable copper, respectively, for calculating criteria. A default WER of 1.0 has been used in this Order for calculating criteria for applicable inorganic constituents other than zinc and copper. If the Discharger performs studies to determine site-specific WERs and/or site-specific

dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

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

e. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 17 January 2020, certain Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley became effective. Other provisions subject to U.S. EPA approval became effective on 2 November 2020, when approved by U.S. EPA. The Discharger is located in a Priority 1 groundwater basin of the Nitrate Control Program and received a Notice to Comply with a deadline of 7 May 2021 to implement the requirements of the Nitrate Control Program. On 23 January 2024, the Discharger received a conditional approval for Path A (Individual Permitting Approach) of the Nitrate Control Program. The Discharger received a Notice to Comply with a deadline of 15 July 2021 to implement the requirements of the Salt Control Program. The Discharger is currently participating in Alternative Compliance Pathway and participating in the Prioritization and Optimization Study as part of Phase 1 of the Salt Control Program. As the Central Valley Water Board moves forward to implement those provisions of the Salt and Nitrate Control Programs that are now in effect, this Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS) web page: (https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

2. Special Studies, Technical Reports and Additional Monitoring requirements

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

i. **TRE:** The Discharger is required to initiate a TRE, as detailed in the Monitoring and Reporting Program (Attachment E, Section V.G), when any combination of two or more MDEL or MMEL violations occur within a single toxicity calendar month or within two successive toxicity

calendar months. In addition, if other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, intermittent recurring toxicity) or if there is no effluent available to complete a routine monitoring test or MMEL compliance test, the Executive Officer may require a TRE.

3. Best Management Practices and Pollution Prevention

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

The Discharger submitted a Notice of Intent to comply with the Salt Control Program and selected the Alternative Permitting Approach. Accordingly, the Discharger shall participate in the CV-SALTS Prioritization and Optimization (P&O) Study. Furthermore, an evaluation of the effectiveness of the SEMP shall be submitted with the ROWD. The evaluation shall include, at minimum, the calendar annual average concentrations of effluent electrical conductivity during the term of the Order. If the average electrical conductivity concentration for any calendar year exceeds a performance-based **trigger of 731 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. **Filtration System Operating Specifications.** To ensure the filtration system is operating properly to provide adequate disinfection of the wastewater, the turbidity of the filter effluent measured at Monitoring Location FIL-001 shall not exceed:

i. 0.2 NTU more than 5 percent of the time within a 24-hour period;

ii. 0.5 NTU at any time.

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

i. **UV Dose.** The minimum hourly average UV dose in the UV reactor shall be 80 millijoules per square centimeter (mJ/cm^2).

ii. **UV Transmittance.** The minimum hourly average UV transmittance (at 254 nanometers) in the wastewater measured at UVS-001 shall not fall below 54 percent.

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

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

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

vi. The Facility's UV system must be operated in accordance with an approved operation and maintenance plan that assures adequate disinfection. A copy of the approved plan must be maintained at the Facility and be readily available to operations personnel and regulatory agencies.

c. **Facility Operating Requirements.**

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

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

iii. Objectionable odors originating at the Facility shall not be perceivable beyond the limits of the waste treatment areas at an intensity that creates or threatens to create nuisance conditions.

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

a. **Pretreatment Requirements**

i. The Discharger shall continue to authorize the City of Fresno to implement the Control Authority pretreatment requirements contained in 40 C.F.R. Part 403 within the City of Clovis, including any subsequent regulatory revisions to 40 C.F.R. Part 403. Where 40 C.F.R. Part 403 or subsequent revision places mandatory actions upon the Discharger as Control Authority but does not specify a timetable for

completion of the actions, the Discharger shall complete the required actions within 6 months from the issuance date of this permit or the effective date of the 40 CFR Part 403 revisions, whichever comes later. For violations of pretreatment requirements, the Discharger shall be subject to enforcement actions, penalties, fines, and other remedies by U.S. EPA or other appropriate parties, as provided in the CWA. U.S. EPA may initiate enforcement action against a nondomestic user for noncompliance with applicable standards and requirements as provided in the CWA.

ii. The Discharger shall continue to authorize the City of Fresno to enforce the requirements promulgated under sections 307(b), 307(c), 307(d), and 402(b) of the CWA with timely, appropriate and effective enforcement actions. The Discharger shall cause all nondomestic users subject to federal categorical standards to achieve compliance no later than the date specified in those requirements or, in the case of a new nondomestic user, upon commencement of the discharge.

iii. The Discharger shall continue to authorize the City of Fresno to perform the pretreatment functions as required in 40 C.F.R. Part 403 including, but not limited to:

(a) Implement the necessary legal authorities as provided in 40 CFR Part 403.8(f)(1);

(b) Enforce the pretreatment requirements under 40 C.F.R. sections 403.5 and 403.6;

(c) Implement the programmatic functions as provided in 40 C.F.R. section 403.8(f)(2); and

(d) Provide the requisite funding and personnel to implement the pretreatment program as provided in 40 C.F.R. section 403.8(f)(3).

iv. **Pretreatment Reporting Requirements.** Pretreatment reporting requirements are included in the Monitoring and Reporting Program, section X.D.5 of Attachment E.

v. **Local Limits Evaluation.** In accordance with 40 C.F.R. section 122.44(j)(2)(ii) the Discharger shall provide a written technical evaluation of the need to revise the local limits under 40 C.F.R. section 403.5(c)(1), by the due date in the Technical Reports Table E-12 of this Order.

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

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

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

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

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

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

iii. The Discharger shall comply with section IX.A. Biosolids of the Monitoring and Reporting Program, Attachment E.

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

any proposed change in the onsite treatment, processing, or storage of sludge/biosolids.

6. Other Special Provisions

a. **Disinfection Requirements.** Production of recycled water shall be at least disinfected tertiary recycled water as defined in Title 22, section 60301. Recycled water shall be oxidized, coagulated, filtered, and adequately disinfected consistent with the DDW reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22).

Wastewater discharged to Discharge Points 001 (Fancher Creek) and 002 (Diversion Channel) shall be at least disinfected tertiary recycled water as defined in Title 22, section 60301, or equivalent. Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected consistent with the DDW reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22), or equivalent.

b. **Phase II Improvements.** The Discharger will be permitted to discharge up to 5.6 MGD (annual average) to Fancher Creek and/or the Diversion Channel upon compliance with the following requirements:

i. **Facility Improvements.** Prior to initiating average annual flows greater than 2.8 MGD, the Discharger shall have completed construction and start-up of its Phase II improvements, as identified in section II.E of the Fact Sheet and shall provide certification of completion by the design engineer.

ii. **Effluent and Receiving Water Limitation Compliance.** The Discharger shall demonstrate compliance with the effluent limitations and discharge specifications in section IV and receiving water limitations in section V.A of this Order. Prior to initiating average annual flows greater than 2.8 MGD, the Discharger shall provide evidence, certified by a California licensed professional engineer, that the Facility is operating properly.

iii. **Implementation of the San Joaquin River Agreement.** Prior to initiating average annual flows greater than 2.8 MGD, the Discharger shall demonstrate that the 2006 San Joaquin River Agreement (NRDC v. Rodgers); or some other subsequent agreement, has been implemented that increased the minimum 1Q10 and 7Q10 flows of the San Joaquin River to 100 cubic feet per second.

7. Compliance Schedules – NOT APPLICABLE

8. Master Recycling Permit Provisions

a. The Discharger shall be responsible for ensuring that recycled water meets the quality standards of this order and for the operation and maintenance of transport facilities and associated appurtenances. The Discharger shall hold the users responsible for the application and use of recycled water on their designated use areas, and associated operations and maintenance in accordance with all applicable requirements CCR, Title 22 and this Order.

b. The Discharger shall establish and enforce rules and regulations for recycled water users governing the design and construction of recycled water use facilities and the use of the recycled water.

c. The Discharger shall conduct periodic inspections of the users' facilities and operations to monitor and ensure compliance with conditions of the user agreement and this Order. The Discharger shall take whatever actions are necessary, including termination of delivery of recycled water to the user, to correct any user violations.

d. The Discharger, Central Valley Water Board, DDW, or an authorized representative of these parties, upon presentation of proper credentials, shall have the right to enter upon recycled water use sites during reasonable hours to verify that the user of recycled water is complying with the Master Recycling Permit provisions in this Order and the Discharger's rules and regulations.

e. The Discharger shall submit New Recycled Water Use Site Reports to the Central Valley Water Board and DDW in accordance with the requirements in the Technical Reports Table within the MRP, Attachment E. The New Recycled Water Use Site Report shall include the following:

i. The site location, including a map showing the specific boundaries, of the use site and the County Assessor Parcel Number(s) (if Parcel Number(s) are not appropriate to accurately describe the site location, the Discharger shall provide the Central Valley Water Board with enough information for the Central Valley Water Board to accurately determine the location of the proposed recycling activities);

ii. The name of the use site property owner and contact information;

iii. The name of the user and contact information;

iv. The specific use to be made of the recycled water, the use site acreage, the type of vegetation/crops to which the recycled water will be applied, and the anticipated volume of recycled water to be used;

v. Identification of the on-site supervisor who is responsible for operation of the recycled water system;

vi. Description of the recycled water management facilities and operations plan;

vii. Plans and specifications that include the following:

(a) Pipe locations of the recycled, potable, and auxiliary non-potable water systems;

(b) Type and location of the outlets and plumbing fixtures that will be accessible to the public;

(c) The methods and devices to be used to prevent backflow of recycled water in the public water system; and

(d) Plan notes relating to recycled water-specific installation and use requirements.

viii. Certification that the new use site conforms to the Discharger's rules and regulations;

ix. A copy of the signed user agreement; and

x. The results of the cross-connection control test performed in accordance with the American Water Works Association and DDW guidelines. The results shall include a certification that DDW was notified of the initial cross-connection control test and was provided an opportunity to be present.

f. A copy of the User Agreement and the Discharger's rules and regulations governing the distribution and use of recycled water shall be maintained at the user's facilities and be available at all times for inspection by Central Valley Water Board staff, the Discharger, and DDW staff.

g. If, in the opinion of the Executive Officer, recycling at a proposed new use site cannot be adequately regulated under the Master Recycling Permit, a ROWD may be requested and individual Water Recycling Requirements may be adopted.

VII. COMPLIANCE DETERMINATION

A. BOD_5 and TSS Effluent Limitations (Sections IV.A.1.a, IV.A.1.c, IV.A.2.a, IV.A.2.c, IV.C.23.a and IV.C.23.c). Compliance with the final effluent limitations for BOD_5 and TSS required in Waste Discharge Requirements sections IV.A.1.a and IV.A.2.a and recycling specifications for BOD_5 and TSS required in Waste Discharge Requirements section IV.C.23.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.A.2.c and recycling specifications for BOD_5

and TSS required in Waste Discharge Requirements section IV.C.23.c for percent removal shall be calculated using the arithmetic mean of BOD_5 and TSS in effluent samples collected over a monthly period as a percentage of the arithmetic mean of the values for influent samples collected at approximately the same times during the same period.

B. Average Monthly and Average Annual Flow Discharge Prohibition (Section III.E). The average monthly flow represents the daily average flow (in MGD) as determined over a calendar month. The average annual flow represents the daily average flow (in MGD) as determined over a calendar year.

C. Total Coliform Organisms Effluent Limitations (Section IV.A.1.f, IV.A.2.f, and IV.C.23.d). For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday, Friday, and Thursday) are used to calculate the 7-day median. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance.

D. Dissolved Oxygen Receiving Water Limitation (Section V.A.1.e.i-iii. and V.A.2.d.i-iii). The Facility provides a high level of treatment including tertiary filtration and nitrification, which results in minimal dissolved oxygen impacts in the receiving water. Weekly dissolved oxygen 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 upstream monitoring locations RSW-001U and RSW-002U and downstream monitoring locations RSW-001D and RSW-002D, will be used to determine compliance with part “iii” of the dissolved oxygen receiving water limitation to ensure the discharge does not cause the dissolved oxygen concentrations in the Fancher Creek or the Diversion Channel to be reduced below 5.0 mg/L at any time, or the dissolved oxygen concentrations in Little Dry Creek to be reduced below 7.0 mg/L at any time. However, should more frequent dissolved oxygen and temperature receiving water monitoring be conducted, Central Valley Water Board staff may evaluate compliance with parts “i” and “ii”.

E. Instantaneous Minimum and Maximum Effluent Limitations for pH (Sections IV.A.1.b and IV.A.2.b). The discharger shall use U.S. EPA standard analytical techniques for analyzing pH. If the analytical result is less than 6.5 or greater than 8.1 for Discharge Point 001 or less than 6.5 or greater than 8.2 for Discharge Point 002, a violation will be flagged and the Discharger will be considered out of compliance for that single sample.

F. 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, and Section IV.A.2.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 sub-lethal endpoint measured in the test and the percent effect for the sub-lethal 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, and Section IV.A.2.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.

G. Chlorpyrifos and Diazinon Effluent Limitations (Section IV.A.2.g). Compliance shall be determined by calculating the sum (S), as provided in this Order, with

analytical results that are reported as ND concentrations to be considered to be zero.

H. Priority Pollutant Effluent Limitations (Section IV.A.1.a, and Section IV.A.2.a). 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. Discharges 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.

I. Temperature Receiving Water Limitations (Section V.A.1.o and V.A.2.n). Compliance with the temperature receiving water limitations applicable to Fancher Creek will be determined based on the difference in the temperature measured at Monitoring Location RSW-001U compared to the downstream temperature measured at Monitoring Location RSW-001D for discharges at Discharge Point 001. Compliance with the temperature receiving water limitations applicable to Little Dry Creek will be determined based on the difference in the temperature measured at Monitoring Location RSW-002U compared to the downstream temperature measured at Monitoring Location RSW-002D for discharges at Discharge Point 002. Compliance with the temperature receiving water limitations applicable to the Diversion Channel will be determined based on the difference in the temperature measured at Monitoring Location RSW-003U compared to the downstream temperature measured at Monitoring Location RSW-003D for discharges at Discharge Point 002.

J. Turbidity Receiving Water Limitations (Section V.A.1.q.i-iv and V.A.2.p.i-v). Compliance with the turbidity receiving water limitations applicable to Fancher Creek will be determined based on the change in turbidity measured at Monitoring Location RSW-001U compared to the downstream turbidity measured at Monitoring Location RSW-001D for discharges at Discharge Point 001. Compliance with the turbidity receiving water limitations applicable to Little Dry Creek will be determined based on the change in turbidity measured at Monitoring Location RSW-002U compared to the downstream turbidity measured at Monitoring Location RSW-002D for discharges at Discharge Point 002. Compliance with the turbidity receiving water limitations applicable to the Diversion Channel will be determined based on the change in turbidity measured at Monitoring Location RSW-003U compared to the downstream turbidity measured at Monitoring Location RSW-003D for discharges at Discharge Point 002.

ATTACHMENT A – DEFINITIONS

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

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

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

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

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

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

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

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

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

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

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

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

Calendar Year
A period of time defined as twelve consecutive calendar months (e.g., from 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.

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

Toxicity Calendar Month
A period of time from a day of one month to the day before the corresponding day of the next month if the corresponding day exists, or if not to the last day of the next month (e.g., from January 1 to January 31, from June 15 to July 14, or from January 31 to February 27).

Toxicity Calendar Quarter
A period of time defined as three consecutive toxicity calendar months (e.g., from January 1 to March 31, from June 15 to October 14, or from September 10 to December 9).

Toxicity Calendar Year
A period of time defined as twelve consecutive toxicity calendar months (e.g., from January 1 to December 31, from June 15 to June 14 of the following year, or from September 10 to September 9 of the following year).

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

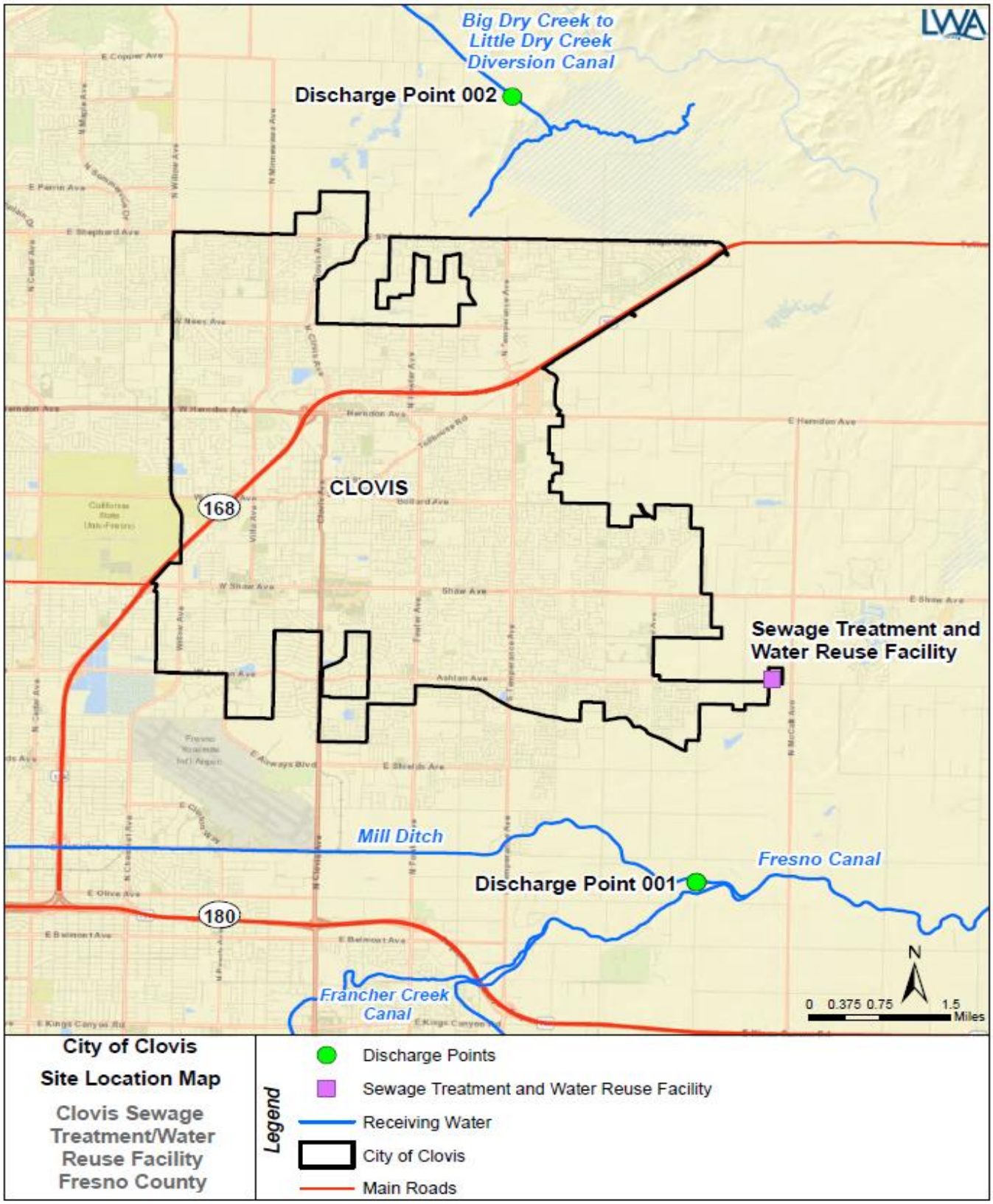
procedures are performed in three phases (characterization, identification, and confirmation) using aquatic organism toxicity tests.).

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.

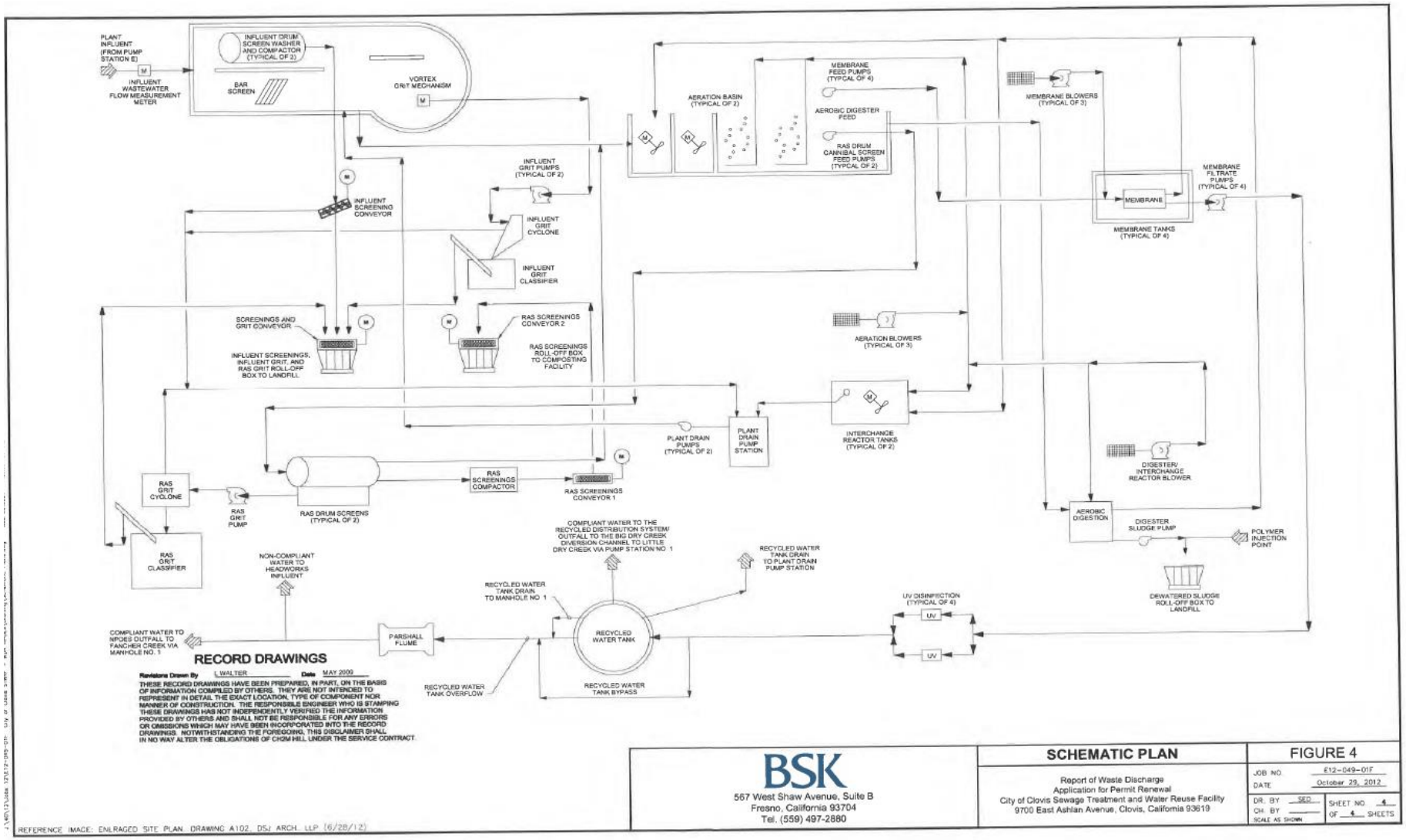
WET Median Monthly Effluent Limit (MMEL)
For the purposes of chronic and acute aquatic toxicity, an MMEL is an effluent limitation based on a maximum of three independent toxicity tests analyzed using the TST approach during a toxicity calendar month.

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

ATTACHMENT B – MAP



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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Tables

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

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

I. GENERAL MONITORING PROVISIONS

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

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

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

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

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

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

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

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

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

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

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

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

II. MONITORING LOCATIONS

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

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
	INF-001	A location where a representative sample of the influent into the Facility can be collected prior to any plant return flows and prior to entering into any treatment processes. Latitude: 36.79473778, Longitude: -119.61410684

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001, 002, REC-001	EFF-A	A location where a representative sample of disinfected tertiary-treated effluent can be collected prior to storage in the steel tank. Latitude: 36. 79544783, Longitude: -119.61395946
001	EFF-001	A location where a representative sample of the disinfected tertiary-treated effluent can be collected following the steel storage tank and prior to discharging to Fancher Creek. Latitude: 36.79553358, Longitude: -119.61352872
002	EFF-002	A location where a representative sample of the disinfected tertiary-treated effluent can be collected following the steel storage tank and prior to discharge to the Diversion Channel. Latitude: 36.79596796, Longitude: -119.61420281
REC-001	REC-001	A location where a representative sample of the disinfected tertiary-treated effluent can be collected following the steel storage tank and prior to discharge to the recycled water use sites. Latitude: 36.79591873, Longitude: -119.61420383
	RSW-001U	Fresno No. 3 Canal, approximately 100 feet upstream of Discharge Point 001 (Fresno No. 3 Canal splits to become Mill Ditch and Fancher Creek). Latitude: 36.76118028, Longitude: -119.62685493
	RSW-001D	Fancher Creek, approximately 100 feet downstream of Discharge Point 001. Latitude: 36.76080994, Longitude: -119.62771022
	RSW-002U	Little Dry Creek, approximately 7,250 feet upstream of the confluence of Little Dry Creek and the Diversion Channel, where there is bridge access over Little Dry Creek. Latitude: 36.93942031, Longitude: -119.69201964
	RSW-002D	Little Dry Creek, approximately 4,550 feet downstream of the confluence of Little Dry Creek and the Diversion Channel, east of Friant Road at a flow measurement weir within Little Dry Creek. Latitude: 36.93444042, Longitude: -119.7296603
	RSW-003U	With Central Valley Water Board staff concurrence, a location representative of the water quality immediately upstream of the Discharge Point 002 outfall to the Diversion Channel not influenced by the Facility's discharge. Latitude: 36.8873403, Longitude: -119.66112043
	RSW-003D	With Central Valley Water Board staff concurrence, a location within the Diversion Channel downstream of

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
		Discharge Point 002 most likely to capture any influence of the Facility's discharge. Latitude: 36.88945027, Longitude: -119.66481014
	FIL-001	A location where a representative sample of the effluent from the membrane filtration units can be collected immediately downstream of the filters and prior to the ultraviolet light (UV) disinfection system.
	UVS-001	A location where a representative sample of wastewater can be collected immediately downstream of the UV disinfection system.
	BIO-001	A location where a representative sample of dewatered biosolids to be shipped offsite for disposal and/or composting can be obtained.
	SPL-001	A location where a representative sample of the municipal water supply can be obtained for the area served by the Facility.

Table E-1 Note:

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

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

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

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
Biochemical Oxygen Demand, 5-day @ 20°Celsius (BOD_5)	mg/L	24-hour Composite	2/Week
Total Suspended Solids (TSS)	mg/L	24-hour Composite	2/Week
Electrical Conductivity @ 25°C	µmhos/cm	Grab or 24-hour Composite	1/Week

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

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

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

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

d. **Electrical Conductivity.** A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this MRP shall be maintained at the Facility.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-A

1. The Discharger shall monitor tertiary-treated effluent discharged to the steel storage tank at Monitoring Location EFF-A 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
Dissolved Oxygen	mg/L	Meter	Continuous
Chlorine, Total Residual	mg/L	Grab	1/Day
Electrical Conductivity @ 25°C	µmhos/cm	Grab or 24-hour Composite	1/Week
Biochemical Oxygen Demand (5-day @ 20°C) (BOD_5)	mg/L	24-hour Composite	2/Week
BOD_5	% removal	Calculate	1/Month
Total Suspended Solids (TSS)	mg/L	24-hour Composite	2/Week
TSS	% removal	Calculate	1/Month
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Week
Nitrate Nitrogen, Total (as N)	mg/L	Grab or 24-hour Composite	1/Month
Nitrite Nitrogen, Total (as N)	mg/L	Grab or 24-hour Composite	1/Month
Nitrate plus Nitrite, Total (as N)	mg/L	Calculate	1/Month

Total Kjeldahl Nitrogen (as N)	mg/L	Grab or 24-hour Composite	1/Month
Total Dissolved Solids	mg/L	Grab or 24-hour Composite	1/Quarter
Hardness, Total (as $CaCO_3$)	mg/L	Grab or 24-hour Composite	1/Quarter
Dissolved Organic Carbon	mg/L	Grab or 24-hour Composite	1/Quarter
Standard Minerals	mg/L	Grab or 24-hour Composite	1/Year
Chlorpyrifos	µg/L	Grab	1/Year
Diazinon	µg/L	Grab	1/Year
Cyanide, Total	µg/L	Grab	1/Month
Chronic WET	See Section V.B	See Section V.B	See Section V.B

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. **Total Residual Chlorine** must be monitored using an analytical method that is sufficiently sensitive to measure at the permitted level of 0.01 mg/L. Total residual chlorine monitoring is only required when chlorine or chlorine-containing products are used in the treatment process for maintenance purposes (monitoring is not required for the use of

chlorinated potable water for filter backwashing). When chlorine or chlorine-containing products are not used in the treatment process, the Discharger shall so state in the monthly SMR.

g. **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).

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

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

j. **Chlorpyrifos and Diazinon monitoring** is only required when discharging at Discharge Point 002. Chlorpyrifos and Diazinon shall be sampled using U.S. EPA Method 625M, Method 8141, or equivalent GC/MS method with a lower Reporting Limit than the San Joaquin River Basin Plan Water Quality Objectives of 0.015 µg/L and 0.1 µg/L for chlorpyrifos and diazinon, respectively.

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

B. Monitoring Locations EFF-001 and EFF-002

1. The Discharger shall monitor tertiary-treated effluent discharged to Fancher Creek and the Diversion Channel at Monitoring Locations EFF-001 and EFF-002, respectively, 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	°C	Meter	Continuous

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

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

b. **Handheld Field Meter.** A 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.

c. Monitoring shall occur at the outfall to Fancher Creek when discharging at Discharge Point 001 and at the outfall to the Diversion Channel when discharging at Discharge Point 002.

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. For purposes of this Order, the toxicity calendar month **begins on 1st of the month** (i.e., from January 1 to January 31, from February 1 to February 28, from March 1 to March 31, etc.).

2. **Toxicity Calendar Quarter.** A toxicity calendar quarter is defined as **three consecutive toxicity calendar months.** For purposes of this Order, the toxicity calendar quarters **begin on January 1, April 1, July 1, and October 1** (i.e., from January 1 to March 31, from April 1 to June 30, from July 1 to September 30, etc.).

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

B. Chronic Toxicity Testing.

The Discharger shall meet the following chronic toxicity testing requirements:

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

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

3. **Chronic Toxicity MMEL Compliance Testing.** If a routine chronic toxicity monitoring test results in a "fail" at the IWC, then a maximum of two chronic toxicity MMEL compliance tests shall be completed. The chronic toxicity MMEL compliance tests shall be initiated within the same toxicity calendar month that the routine monitoring chronic toxicity test was initiated that resulted in the "fail" at the IWC. 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:** In order to determine if a TRE is necessary an additional routine monitoring test is required when there is one violation of the chronic toxicity MDEL or MMEL, but not two violations in a single toxicity calendar month. 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 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 ***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).

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 is not completed, a new toxicity test to replace the toxicity test that was not completed shall be initiated as soon as possible. The new toxicity test shall replace the routine monitoring or MMEL compliance tests, as applicable, for the toxicity calendar month in which the toxicity test that was not completed was required to be initiated, even if the new toxicity test is initiated in a subsequent month. The new toxicity test for routine monitoring or MMEL compliance tests, as applicable, and any MMEL compliance tests required to be conducted due to the results of the new toxicity test shall be used to determine compliance with the effluent limitations for the toxicity calendar month in which the toxicity test that was not completed was required to be initiated. The new toxicity test and any MMEL compliance tests required to be conducted due to the results of the new toxicity test shall not be used to substitute for any other required toxicity tests.

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

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, and the dates of sample collection and initiation of each toxicity test.

2. The statistical analysis used in Section IV.B.1.c of the Statewide Toxicity Provisions.

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 testing to re-evaluate the most sensitive species within 15 years of the most recent species sensitivity screening or if the effluent used in the most recent sensitive species screening is no longer representative of the effluent (e.g., the design flow has increased to meet the needs of additional connections added to the collection system).

1. **Frequency of Testing for Species Sensitivity Screening.** Species sensitivity screening for chronic toxicity shall include, at a minimum, chronic WET testing four consecutive toxicity 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.

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 species sensitivity screening events result in no change in the most sensitive species, the Discharger may cease the subsequent species sensitive screening testing and the most sensitive species will remain unchanged.

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

   The most sensitive species shall be used for chronic toxicity testing for the remainder of the permit term. The Discharger may use the four most recent tests for use in determining the most sensitive species if the tests were conducted in a manner sufficient to make such determination. If the most sensitive species cannot be determined from the species sensitivity screening discussed above, the Discharger shall rotate the test species as the most sensitive species every toxicity calendar year as follows:

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

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

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

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

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

G. Toxicity Reduction Evaluations (TRE)

1. **TRE Implementation.** The Discharger is required to 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. 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 Executive Officer may require a TRE. A TRE may also be required when there is no effluent available to complete a routine monitoring test or MMEL compliance test.

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

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

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

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

   b. The Central Valley Water Board recognizes that toxicity may be episodic and identification of causes and reduction of sources of toxicity may not be

successful in all cases. The TRE may be ended at any stage if monitoring finds there is no longer toxicity.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECYCLING MONITORING REQUIREMENTS

A. Monitoring Location REC-001

1. The Discharger shall monitor tertiary-treated effluent discharged to the recycled water use sites at Monitoring Location REC-001 in accordance with Table E-5 and the testing requirements described in section VII.A.2 below:

Table E-5. Recycled Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
pH	standard units	Grab	1/Day

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

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

   b. **Handheld Field Meter.** A 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.

B. Recycled Water Users Summary Report

1. The Discharger shall submit a **quarterly** recycled water users summary report to the Executive Officer as specified in the Technical Reports Table containing the following information:

   a. Total volume of recycled water supplied to all recycled water users during the quarter;

   b. Total number of recycled water use sites; and

   c. Map showing the locations of the recycled water use sites.

A copy of each summary report shall also be sent to DDW.

2. The Discharger shall submit an **annual** recycled water users compliance report as specified in the Technical Reports Table containing the following information for each recycled water use site:

   a. Name of the recycled water use site;

   b. Owner of the recycled water use site;

   c. Address of the recycled water use site;

   d. Name of the on-site recycled water use site (if available);

   e. Phone number of the on-site recycled water use site supervisor;

   f. Number of acres that received recycled water;

   g. Type of vegetation/crops to which the recycled water was applied;

   h. Total volume of recycled water delivered to the recycled water use site during the calendar year;

   i. Nitrite plus nitrate loading rate (lbs/acre), on an annual basis. Loading rates shall be calculated using the applied volume of recycled water and the results of nitrite plus nitrate monitoring required in section IV.A.1 of this MRP. Application rates (lbs/acre/month) of supplemental nitrogen shall also be reported;

   j. A list of recycled water use site inspections conducted by the Discharger during the calendar year; and

   k. Violations of the Discharger's rules and regulations for recycled water users. The Discharger shall include a description of the non-compliance and its cause, including the period of non-compliance, and if the non-compliance has not been corrected; the anticipated time it is expected to continue; and the steps taken or planned to reduce, eliminate, and prevent recurrence of the non-compliance.

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations RSW-001U, RSW-001D, RSW-002U, and RSW-002D

1. The Discharger shall monitor Fancher Creek at Monitoring Locations RSW-001U and RSW-001D during periods of discharge to Discharge Point 001 and Little Dry Creek at Monitoring Locations RSW-002U and RSW-002D during periods of discharge to Discharge Point 002 in accordance with Table E-6 and the testing requirements described in section VIII.A.2 below:

Table E-6. Receiving Water Monitoring Requirements
Monitoring Locations RSW-001U, RSW-001D, RSW-002U, and RSW-002D

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Estimate	5/Week
pH	standard units	Grab	1/Week
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Week
Ammonia Nitrogen, Unionized (as N)	mg/L	Calculate	1/Week
Dissolved Oxygen	mg/L	Grab	1/Week
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month
Temperature	°C	Grab	1/Week
Turbidity	NTU	Grab	1/Month
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Quarter
Dissolved Organic Carbon	mg/L	Grab	1/Quarter

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

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

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

    c. Monitoring for **flow**, **hardness**, and **dissolved organic carbon** is required at Monitoring Locations RSW-001U and RSW-002U only.

3. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-001U and RSW-001D for Fancher Creek when discharging at Discharge Point 001, and Monitoring Locations RSW-002U and RSW-002D for Little Dry Creek when discharging at Discharge Point 002. Attention shall be given to the presence of:

    a. Floating or suspended matter;
    b. Discoloration;

c. Bottom deposits;
d. Aquatic life;
e. Visible films, sheens, or coatings;
f. Fungi, slimes, or objectionable growths; and
g. Potential nuisance conditions.

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

4. The Discharger shall submit an **annual (1/year)** report that specifies the volume (in acre-feet) of water released from the Fresno Canal into the Fancher Creek system between 1 January and 31 December. The report shall also include the volume (in acre-feet) of Facility effluent discharged via Discharge Point 001 between 1 January and 31 December. The annual report shall be combined with the Annual Operations Report required by Section X.D.2 of this Monitoring and Reporting Program.

B. Monitoring Locations RSW-003U and RSW-003D

1. The Discharger shall monitor the Diversion Channel at Monitoring Locations RSW-003U and RSW-003D in accordance with Table E-7 and the testing requirements described in section VIII.B.2 below as follows:

Table E-7. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	standard units	Grab	2/Year
Ammonia Nitrogen, Total (as N)	mg/L	Grab	2/Year
Ammonia Nitrogen, Unionized (as N)	mg/L	Calculate	2/Year
Dissolved Oxygen	mg/L	Grab	2/Year
Electrical Conductivity @ 25°C	µmhos/cm	Grab	2/Year
Temperature	°C	Grab	2/Year
Turbidity	NTU	Grab	2/Year
Hardness, Total (as $CaCO_3$)	mg/L	Grab	2/Year
Dissolved Organic Carbon	mg/L	Grab	2/Year

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

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

requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 CFR part 136 allowed sample type.

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

c. Monitoring for **hardness** and **dissolved organic carbon** is required at Monitoring Location RSW-003U only.

3. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-003U and RSW-003D for the Diversion Channel when discharging at Discharge Point 002. Attention shall be given to the presence of:

a. Floating or suspended matter;
b. Discoloration;
c. Bottom deposits;
d. Aquatic life;
e. Visible films, sheens, or coatings;
f. Fungi, slimes, or objectionable growths; and
g. Potential nuisance conditions.

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

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. **Monitoring Location BIO-001**

a. A composite sample of sludge shall be collected annually at Monitoring Location BIO-001 in accordance with EPA's POTW Sludge Sampling and Analysis Guidance Document, August 1989, and tested for priority pollutants (excluding asbestos).

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

B. Municipal Water Supply

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

Table E-8. Municipal Water Supply Monitoring Requirements

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

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

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

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

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

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

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

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

Parameter	Units	Sample Type	Monitoring Location	Minimum Sampling Frequency
Flow	MGD	Meter	UVS-001	Continuous
Turbidity	NTU	Meter	FIL-001	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

Parameter	Units	Sample Type	Monitoring Location	Minimum Sampling Frequency
Total Coliform Organisms	MPN/100mL	Grab	UVS-001	5/Week

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

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

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

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

   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. **Total Coliform Organisms.** Samples shall be collected daily when discharging to the recycled water use sites at Discharge Point REC-001.

D. Effluent and Receiving Water Characterization

1. **Monitoring Frequency**

   The Discharger does not discharge to receiving waters on a continuous basis. Characterization monitoring is required whether the Discharger is discharging to Discharge Points 001/002 or not.

   a. **Effluent Sampling.** Samples shall be collected from the effluent (Monitoring Location EFF-A) **quarterly between 1 July 2025 and 30 June 2026**.

   b. **Receiving Water Sampling.** Samples shall be collected from the upstream receiving water Monitoring Locations RSW-001U and RSW-002U **quarterly**

between 1 July 2025 and 30 June 2026. Samples shall be collected from the upstream receiving water Monitoring Location RSW-003U **once from 1 July 2025 to 31 December 2025 and once from 1 January 2026 to 30 June 2026**. If there is no measurable flow at RSW-003U during either of the specified sampling ranges, the Discharger shall conduct the required upstream receiving water monitoring at RSW-003U the next time water is released from Big Dry Creek Reservoir to the Diversion Channel.

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

3. **Analytical Methods Report Certification.** Prior to beginning the Effluent and Receiving Water Characterization monitoring, the Discharger shall provide a certification acknowledging the scheduled start date of the Effluent and Receiving Water Characterization monitoring and confirming that samples will be collected and analyzed as described in the previously submitted Analytical Methods Report. If there are changes to the previously submitted Analytical Methods Report, the Discharger shall outline those changes. A one-page certification form will be provided by Central Valley Water Board staff with the permit's Notice of Adoption that the Discharger can use to satisfy this requirement. The certification form shall be submitted electronically via CIWQS submittal by the due date in the Technical Reports Table E-12.

4. The Discharger shall conduct effluent and receiving water characterization monitoring in accordance with Table E-10 and the testing requirements described in section IX.D.5 below.

Table E-10. 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

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

SEMI-VOLATILE ORGANICS

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
60	Benzo(a)Anthracene	56-55-3	µg/L	Grab
85	1,2-Diphenylhydrazine	122-66-7	µg/L	Grab
45	2-Chlorophenol	95-57-8	µg/L	Grab
46	2,4-Dichlorophenol	120-83-2	µg/L	Grab
47	2,4-Dimethylphenol	105-67-9	µg/L	Grab
49	2,4-Dinitrophenol	51-28-5	µg/L	Grab
82	2,4-Dinitrotoluene	121-14-2	µg/L	Grab
55	2,4,6-Trichlorophenol	88-06-2	µg/L	Grab
83	2,6-Dinitrotoluene	606-20-2	µg/L	Grab
50	2-Nitrophenol	88-75-5	µg/L	Grab
71	2-Chloronaphthalene	91-58-7	µg/L	Grab

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
78	3,3-Dichlorobenzidine	91-94-1	µg/L	Grab
62	Benzo(b)Fluoranthene	205-99-2	µg/L	Grab
52	4-Chloro-3-methylphenol	59-50-7	µg/L	Grab
48	2-Methyl-4,6-Dinitrophenol	534-52-1	µg/L	Grab
51	4-Nitrophenol	100-02-7	µg/L	Grab
69	4-Bromophenyl Phenyl Ether	101-55-3	µg/L	Grab
72	4-Chlorophenyl Phenyl Ether	7005-72-3	µg/L	Grab
56	Acenaphthene	83-32-9	µg/L	Grab
57	Acenaphthylene	208-96-8	µg/L	Grab
58	Anthracene	120-12-7	µg/L	Grab
59	Benzidine	92-87-5	µg/L	Grab
61	Benzo(a)Pyrene	50-32-8	µg/L	Grab
63	Benzo(ghi)Perylene	191-24-2	µg/L	Grab
64	Benzo(k)Fluoranthene	207-08-9	µg/L	Grab
65	Bis (2-Chloroethoxy) Methane	111-91-1	µg/L	Grab
66	Bis (2-Chloroethyl) Ether	111-44-4	µg/L	Grab
67	Bis (2-Chloroisopropyl) Ether	108-60-1	µg/L	Grab
68	Bis(2-Ethylhexyl) Phthalate	117-81-7	µg/L	Grab
70	Butylbenzyl Phthalate	85-68-7	µg/L	Grab
73	Chrysene	218-01-9	µg/L	Grab
81	Di-n-butyl Phthalate	84-74-2	µg/L	Grab
84	Di-n-Octyl Phthalate	117-84-0	µg/L	Grab
74	Dibenzo(a,h)anthracene	53-70-3	µg/L	Grab
79	Diethyl Phthalate	84-66-2	µg/L	Grab
80	Dimethyl Phthalate	131-11-3	µg/L	Grab
86	Fluoranthene	206-44-0	µg/L	Grab
87	Fluorene	86-73-7	µg/L	Grab
88	Hexachlorobenzene	118-74-1	µg/L	Grab
90	Hexachlorocyclopentadiene	77-47-4	µg/L	Grab
91	Hexachloroethane	67-72-1	µg/L	Grab
92	Indeno(1,2,3-cd) Pyrene	193-39-5	µg/L	Grab
93	Isophorone	78-59-1	µg/L	Grab
98	N-Nitrosodiphenylamine	86-30-6	µg/L	Grab
96	N-Nitrosodimethylamine	62-75-9	µg/L	Grab
97	N-Nitrosodi-n-Propylamine	621-64-7	µg/L	Grab
95	Nitrobenzene	98-95-3	µg/L	Grab
53	Pentachlorophenol (PCP)	87-86-5	µg/L	Grab
99	Phenanthrene	85-01-8	µg/L	Grab
54	Phenol	108-95-2	µg/L	Grab
100	Pyrene	129-00-0	µg/L	Grab

INORGANICS

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

NON-METALS/MINERALS

CTR Number	Non-Metal/Mineral Parameters	CAS Number	Units	Effluent Sample Type
NL	Boron	7440-42-8	µg/L	24-hour Composite
NL	Chloride	16887-00-6	mg/L	24-hour Composite
14	Cyanide, Total	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

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

CONVENTIONAL PARAMETERS

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

NON-CONVENTIONAL PARAMETERS

CTR Number	Nonconventional Parameters	CAS Number	Units	Effluent Sample Type
NL	Foaming Agents (MBAS)	MBAS	mg/L	Grab
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	Grab

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

OTHER CONSTITUENTS OF CONCERN

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

5. **Table E-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.** 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 Tables E-3, E6, and E7, with the exception of hardness which shall be sampled concurrently with the hardness-dependent metals (cadmium, chromium III, copper, lead, nickel, silver, and zinc).

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

   f. **Sample Type.** All receiving water samples shall be taken as grab samples. Effluent samples shall be taken as described in Table E-10.

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

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

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

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

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

the San Joaquin River Basin Plan Water Quality Objectives of 0.015 µg/L and 0.1 µg/L for chlorpyrifos and diazinon, respectively.

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

B. Self-Monitoring Reports (SMRs)

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

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

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

Table E-11. 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

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

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

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

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

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

      For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if

such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (± a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

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

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

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

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

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

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

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

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

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

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

a. **Calendar Annual Average Limitations.** For constituents with effluent limitations specified as “calendar annual average” (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.C 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-A) and the receiving waters (Monitoring Locations RSW-001U and RSW-001D, RSW-002U and RSW-002D, or RSW-003U and RSW-003D, as applicable).

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.q.i-iv and V.A.p.i-v. 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-001U and RSW-001D, RSW-002U and RSW-002D, or RSW-003U and RSW-003D, as applicable.

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-12. 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-12:

   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-12, 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-12:

   a. Report of Waste Discharge (Form 200);

   b. NPDES Form 2A;

   c. NPDES Form 2S;

   d. **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

   e. **Local Limits Evaluation.** In accordance with 40 C.F.R. section 122.44(j)(2)(ii) the Discharger shall provide a written technical evaluation of the need to revise the local limits under 40 C.F.R. section 403.5(c)(1).

5. **Annual Pretreatment Reporting Requirements.** The Discharger shall submit annually a report to the Central Valley Water Board, with copies to U.S. EPA Region 9 and the State Water Board, describing the Discharger's pretreatment activities over the previous 12 months (1 January through 31 December). In the event that the Discharger is not in compliance with any conditions or

requirements of this Order, including noncompliance with pretreatment audit/compliance inspection requirements, then the Discharger shall also include the reasons for noncompliance and state how and when the Discharger shall comply with such conditions and requirements.

An annual report shall be submitted by the due date shown in the Technical Reports Table E-12 and include at least the following items:

a. A summary of analytical results from representative sampling of the POTW's influent and effluent for those pollutants U.S. EPA has identified under section 307(a) of the CWA which are known or suspected to be discharged by nondomestic users. This will consist of an annual full priority pollutant scan. The sample types for each priority pollutant constituent shall be consistent with the sample types specified in Table E-10 (Effluent and Receiving Water Characterization Monitoring). The Discharger is not required to sample and analyze for asbestos. The Discharger shall submit the results of the annual priority pollutant scan electronically to the Central Valley Water Board using the State Water Board's CIWQS Program Website.

   Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling and analysis. The sludge analyzed shall be a **composite sample of a minimum of 12 discrete samples taken at equal time intervals over the 24-hour period**. Wastewater and sludge sampling and analysis shall be performed at least annually. The Discharger shall also provide any influent, effluent or sludge monitoring data for nonpriority pollutants which may be causing or contributing to Interference, Pass-Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 C.F.R. part 136 and amendments thereto;

b. A discussion of Upset, Interference, or Pass-Through incidents, if any, at the treatment plant, which the Discharger knows, or suspects were caused by nondomestic users of the POTW. The discussion shall include the reasons why the incidents occurred, the corrective actions taken and, if known, the name and address of, the nondomestic user(s) responsible. The discussion shall also include a review of the applicable pollutant limitations to determine whether any additional limitations, or changes to existing requirements, may be necessary to prevent Pass-Through, Interference, or noncompliance with sludge disposal requirements;

c. The cumulative number of nondomestic users that the Discharger has notified regarding Baseline Monitoring Reports and the cumulative number of nondomestic user responses;

d. An updated list of the Discharger's significant industrial users (SIUs) including their names and addresses, or a list of deletions, additions and SIU name changes keyed to a previously submitted list. The Discharger shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall indicate which SIUs, or specific pollutants from each industry, are subject to local limitations. Local limitations that are more stringent than the federal categorical standards shall also be identified;

e. The Discharger shall characterize the compliance status through the year of record of each SIU by employing the following descriptions:

   i. complied with baseline monitoring report requirements (where applicable);

   ii. consistently achieved compliance;

   iii. inconsistently achieved compliance;

   iv. significantly violated applicable pretreatment requirements as defined by 40 C.F.R. section 403.8(f)(2)(vii);

   v. complied with schedule to achieve compliance (include the date final compliance is required);

   vi. did not achieve compliance and not on a compliance schedule; and

   vii. compliance status unknown.

f. A summary of the inspection and sampling activities conducted by the Discharger during the past year to gather information and data regarding the SIUs. The summary shall include:

   i. The names and addresses of the SIUs subjected to surveillance and an explanation of whether they were inspected, sampled, or both and the frequency of these activities at each user; and

   ii. The conclusions or results from the inspection or sampling of each industrial user.

g. The Discharger shall characterize the compliance status of each SIU by providing a list or table which includes the following information:

   i. Name of SIU;

   ii. Category, if subject to federal categorical standards;

   iii. The type of wastewater treatment or control processes in place;

iv. The number of samples taken by the POTW during the year;

v. The number of samples taken by the SIU during the year;

vi. For a SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;

vii. A list of the standards violated during the year. Identify whether the violations were for categorical standards or local limits;

viii. Whether the facility is in significant noncompliance (SNC) as defined at 40 C.F.R. section 403.8(f)(2)(viii) at any time during the year;

ix. A summary of enforcement or other actions taken during the year to return the SIU to compliance. Describe the type of action (e.g., warning letters or notices of violation, administrative orders, civil actions, and criminal actions), final compliance date, and the amount of fines and penalties collected, if any. Describe any proposed actions for bringing the SIU into compliance;

x. Restriction of flow to the POTW; and

xi. Disconnection from discharge to the POTW.

h. A brief description of any programs the POTW implements to reduce pollutants from nondomestic users that are not classified as SIUs;

i. A brief description of any significant changes in operating the pretreatment program which differ from the previous year including, but not limited to, changes concerning: the program's administrative structure, local limits, monitoring program or monitoring frequencies, legal-authority, enforcement policy, funding levels, or staffing levels;

j. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases; and

k. A summary of activities to involve and inform the public of the program including a copy of the newspaper notice, if any, required under 40 C.F.R. section 403.8(f)(2)(viii).

Pretreatment Program reports shall be submitted electronically to the Central Valley Water Board via CIWQS submittal and the:

State Water Resources Control Board
NPDES Wastewater@waterboards.ca.gov
and the
U.S. EPA Region 9 Pretreatment Coordinator
R9Pretreatment@epa.gov

6. **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-12 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-12. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
Intentionally left blank	**Standard Reporting Requirements**	**Intentionally left blank**	**Intentionally left blank**
1	Report of Waste Discharge	31 July 2028	ROWD
2	Analytical Methods Report	1 October 2024	MRP X.D.1
3	Analytical Methods Report Certification	1 April 2025	MRP IX.D.3.
4	Annual Operations Report	1 February 2025	MRP X.D.2
5	Annual Operations Report	1 February 2026	MRP X.D.2
6	Annual Operations Report	1 February 2027	MRP X.D.2
7	Annual Operations Report	1 February 2028	MRP X.D.2
8	Annual Operations Report	1 February 2029	MRP X.D.2
9	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2025	MRP X.D.3
10	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2026	MRP X.D.3
11	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2027	MRP X.D.3
12	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2028	MRP X.D.3
13	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2029	MRP X.D.3
Intentionally left blank	**Other Reports**	**Intentionally left blank**	**Intentionally left blank**
14	Toxicity Reduction Evaluation (TRE) Workplan	<DATE>	WDR VI.C.2.a.i
15	Salinity Evaluation and Minimization Plan Evaluation	31 July 2028 with ROWD	WDR VI.C.3.a
16	Annual Pretreatment Report	28 February 2025	MRP X.D.5
17	Annual Pretreatment Report	28 February 2026	MRP X.D.5
18	Annual Pretreatment Report	28 February 2027	MRP X.D.5
19	Annual Pretreatment Report	28 February 2028	MRP X.D.5
20	Annual Pretreatment Report	28 February 2029	MRP X.D.5

Report #	Technical Report	Due Date	CIWQS Report Name
21	Pretreatment Program Local Limits Evaluation	31 July 2028 with ROWD	WDR VI.C.5.a.v
22	Quarterly Recycled Water User Summary Reports	Every Quarter Beginning 1 October 2024	MRP VII.B.1
23	Annual Recycled Water Users Compliance Report	30 January 2025	MRP VII.B.2
24	Annual Recycled Water Users Compliance Report	30 January 2026	MRP VII.B.2
25	Annual Recycled Water Users Compliance Report	30 January 2027	MRP VII.B.2
26	Annual Recycled Water Users Compliance Report	30 January 2028	MRP VII.B.2
27	Annual Recycled Water Users Compliance Report	30 January 2029	MRP VII.B.2
28	New Recycled Water Use Site Report	At least 30 days prior to conveying recycled water to a new use site	WDR VI.C.8.e

ATTACHMENT F – FACT SHEET

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Tables

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:	5C10NP00012
CIWQS Facility Place ID:	214899
Discharger:	City of Clovis
Name of Facility:	Sewage Treatment and Water Reuse Facility
Facility Address:	9700 East Ashlan Avenue
Facility City, State Zip:	Clovis, CA 93619
Facility County:	Fresno County
Facility Contact, Title and Phone Number:	Paul Armendariz, Assistant Public Utilities Director, (559) 324-2649
Authorized Person to Sign and Submit Reports:	Paul Armendariz, Assistant Public Utilities Director, (559) 324-2649
Mailing Address:	155 North Sunnyside Avenue, Clovis CA 93611
Billing Address:	SAME
Type of Facility:	Publicly Owned Treatment Works
Major or Minor Facility:	Major
Threat to Water Quality:	2
Complexity:	B
Pretreatment Program:	Yes
Recycling Requirements:	Producer and User
Facility Permitted Flow:	Existing Phase I Plant: 2.8 million gallons per day (MGD), average annual flow 3.1 MGD, average monthly flow Phase II Expanded Plant:

	5.6 MGD, average annual flow 6.2 MGD, average monthly flow
Facility Design Flow:	Existing Phase I Plant: 2.8 million gallons per day (MGD), average annual flow 3.1 MGD, average monthly flow Phase II Expanded Plant: 5.6 MGD, average annual flow 6.2 MGD, average monthly flow
Watershed:	Fresno Hydrologic Area (551.30) and Berenda Creek Hydrologic Area (545.30)
Receiving Water:	Fancher Creek, Diversion Channel from Big Dry Creek Reservoir to Little Dry Creek, and Groundwater in Detailed Analysis Unit (DAU) #233 and #234 of the Kings Basin
Receiving Water Type:	Inland Surface Water and Groundwater

A. The City of Clovis (hereinafter Discharger) is the owner of the City of Clovis Sewage Treatment and Water Reuse Facility (hereinafter Facility), a Publicly-Owned Treatment Works (POTW). The Discharger contracts Jacobs Engineering Group, Inc. to operate the Facility.

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 Fancher Creek at Discharge Point 001; the Diversion Channel from Big Dry Creek Reservoir to Little Dry Creek (hereinafter Diversion Channel) at Discharge Point 002; and reuse sites at Discharge Point REC-001. Fancher Creek is a water of the United States within the Fresno Hydrologic Area. The Diversion Channel and Little Dry Creek downstream of Discharge Point 002 are waters of the United States and hydrologically connected to the San Joaquin River within the Berenda Creek Hydrologic Area. The Discharger was previously regulated by Order R5-2019-0021 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0085235 adopted 4 April 2019 with an expiration date of 31 May 2024. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

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

D. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its waste discharge requirements (WDRs) and NPDES permit on 31 May 2023. The application was deemed complete once supplemental information was submitted by the Discharger on 22 November 2023.

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

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the City of Clovis and serves a portion of the City's population. The design daily annual average flow capacity of the Facility is 2.8 MGD, with plans to expand the capacity to 5.6 MGD in approximately 2032.

A. Description of Wastewater and Biosolids Treatment and Controls

Operations at the Facility commenced in July 2009. The Facility treats domestic wastewater generated by three main service areas within the City of Clovis – the Northwest, Northeast, and Southwest service areas. Raw wastewater from the Fowler wastewater trunk line is diverted at Pump Station B and pumped to Pump Station E. Additional wastewater is gravity-fed to Pump Station E, which pumps the combined flow to the Facility.

The treatment system at the Facility consists of primary, secondary, and tertiary units. Primary treatment consists of 2-millimeter (mm) drum screens with a bypass channel/bar with screens and a vortex grit removal mechanism. Wastewater flows from the primary treatment units into two main bioreactor trains used for secondary treatment. Each bioreactor train consists of two anoxic zones followed by one aerobic zone with two aeration grids. Flow from the aerobic zone is pumped to the membrane filtration units, which provide tertiary treatment. The tertiary-treated effluent is disinfected using an ultraviolet light (UV) disinfection system. Currently, disinfected tertiary-treated wastewater is stored in one 3.08 million gallon (MG) bolted-steel tank. A second 3.08 MG bolted-steel tank will be added with the completion of Phase II, as described in section II.E of this Fact Sheet. The tertiary-treated effluent is either used as recycled water for landscape irrigation throughout the Clovis area or discharged to one of two surface water locations (Fancher Creek at Discharge Point 001 or the Diversion Channel at Discharge Point 002).

Solids are passed through a solids reduction process utilizing interchange tanks. The return activated sludge (RAS) is held in the interchange tanks for approximately 10 days, under specific environmental conditions, to break down the solids.

Following the interchange tanks, the reduced solids are purged into the digester, which holds the solids for 10 to 15 days. After detainment in the digester, the solids are sent to dewatering equipment, which includes a centrifuge. The dewatered biosolids are hauled off-site to the Clovis Municipal Solid Waste Landfill. As a backup option, the biosolids could be hauled to a Class B Solids land application facility or a composting facility. The Facility produces approximately 385 dry metric tons of biosolids, annually. Transportation and disposal/reuse of the biosolids are regulated by U.S. EPA under 40 C.F.R. part 503.

B. Discharge Points and Receiving Waters

1. The Facility is in section 18, Township 13S, Range 22E, MDB&M, as shown in Attachment B, a part of this Order.

2. Treated municipal wastewater is discharged at Discharge Point 001 to Fancher Creek, a water of the United States at a point latitude 36° 45’ 39” N and longitude 119° 37’ 40.4” W.

3. Fancher Creek at Discharge Point 001 is a modified natural creek (i.e., canal) used and managed by the Fresno Irrigation District (FID) to deliver irrigation water to approximately 32,600 acres of irrigated agriculture. Water is diverted from the Kings River to Fancher Creek via the Fresno No. 3 Canal. The Fresno No. 3 Canal splits into Mill Ditch and Fancher Creek immediately upstream of Discharge Point 001. The irrigation season typically starts in March and ends in September/October. From 1996 to 2012, FID delivered an average of 123,943 acre-feet per year (AF/year) (range 85,431 – 232,201 AF/year) from Fresno No. 3 Canal into Fancher Creek. During the non-irrigation season, Fancher Creek flow is limited to storm water and excess Kings River water that is routed through the Fancher Creek system for groundwater recharge. At times, flow in Fancher Creek is immeasurably small or nonexistent. Therefore, discharges from the Facility to Discharge Point 001 are, at times, expected to provide the majority of the flow in Fancher Creek during the winter months.

4. Treated municipal wastewater is discharged at Discharge Point 002 to the Diversion Channel, a water of the United States and hydrologically connected to Little Dry Creek and the San Joaquin River, at a point latitude 36° 53’ 21.7” N and longitude 119° 39’ 52.9” W.

5. The Diversion Channel is a man-made, unlined channel constructed to convey flow from Big Dry Creek Reservoir to Little Dry Creek that is operated and maintained by the Fresno Metropolitan Flood Control District. The approximately 4.5-mile Diversion Channel predominantly traverses rural residential areas and areas of non-irrigated native vegetation. Records show that flows are not necessarily diverted through the Diversion Channel every year and when flows are diverted through the Diversion Channel, the diversion typically occurs during the winter and spring months. Discharges at Discharge Point 002 will often provide the majority of the flow in the Diversion Channel, with little or no dilution

from natural flow. The Diversion Channel remains dry the majority of the time. The Discharger proposes to discharge to the Diversion Channel only when it is unable to discharge to Fancher Creek (e.g., when Fancher Creek is closed for maintenance). The Discharger first began utilizing Discharge Point 002 to the Diversion Channel beginning October 2022.

The Diversion Channel flows into Little Dry Creek, which is an ephemeral watercourse that eventually flows into the San Joaquin River. The 2.0 – 2.5-mile stretch of Little Dry Creek between its confluence with the Diversion Channel and its confluence with the San Joaquin River lies within a rural, undeveloped area that is surrounded by native vegetation. Little Dry Creek is not managed to provide irrigation supply, as the flow duration and magnitude are not predictable. Much of the land surrounding Little Dry Creek is used for cattle grazing, with cattle having access to the riparian areas.

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

Effluent limitations contained in Order R5-2019-0021 for discharges from Discharge Point 001 (Monitoring Locations EFF-A and EFF-001) and representative monitoring data from the term of Order R5-2019-0021 are as follows:

Table F-2 Historic Effluent Limitations – Discharge Point 001

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
BOD_5	mg/L	AMEL 10 AWEL 15	1.29	3	
BOD_5	% Removal	AMEL 90 minimum	98.9 (see Note 1)		
TSS	mg/L	AMEL 10 AWEL 15	1	1	
TSS	% Removal	AMEL 90	99.6 (see Note 1)		
pH	standard units	Instantaneous Max 8.2 Instantaneous Min 6.5	6.7 – 7.9 (see Note 2)		
Copper, Total Recoverable	µg/L	AMEL 2.8 MDEL 4.8	7.9		7.9
Cyanide, Total	µg/L	AMEL 4.3 MDEL 8.5	9		9
Zinc, Total Recoverable	µg/L	AMEL 23 MDEL 46	74		74
Ammonia Nitrogen, Total (as N)	mg/L	AMEL 1.6 AWEL 3.5	15	32	

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
Ammonia Nitrogen, Total (as N)	lbs/day	AMEL 37 AWEL 82	61	379	
Nitrate Plus Nitrite (as N)	mg/L	AMEL 10 AWEL 16	6	13	
Electrical Conductivity @ 25°C	µmhos/cm	12-month rolling average of source water plus 500 or 1,000 whichever is less	606		
Total Coliform Organisms	MPN/100 mL	7-day median 2.2 23 no more than 1/month Instantaneous max 240	1	1	1,011
Acute WET	% survival	For any one test 70 3 test median 90			100 (see Note 1)
Chronic WET (see Note 3)	TUc	3 test median <16 TUc and 25% effect at 6.25% effluent			>16 TUc, 27% effect

Table F-2 Notes:

1. Discharge summary numbers are minimums.
2. pH range is summarized in monthly discharge number.
3. Chronic WET limitations summarized are interim limitations effective until 1 June 2024. Discharge summary is median result.

Effluent limitations contained in Order R5-2019-0021 for discharges from Discharge Point 002 (Monitoring Locations EFF-A and EFF-002) and representative monitoring data from the term of Order R5-2019-0021 are as follows:

Table F-3 Historic Effluent Limitations – Discharge Point 002

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
BOD_5	mg/L	AMEL 10 AWEL 15	1.29	3	
BOD_5	% Removal	AMEL 90 minimum	98.9 (see Note 1)		
TSS	mg/L	AMEL 10 AWEL 15	1	1	
TSS	% Removal	AMEL 90	99.6 (see Note 1)		

Parameter	Units	Historic Effluent Limitations	Highest Average Monthly Discharge	Highest Average Weekly Discharge	Highest Daily Discharge
pH	standard units	Instantaneous Max 8.1 Instantaneous Min 6.5	6.7-7.6 (see Note 2)		
Copper, Total Recoverable	µg/L	AMEL 2.8 MDEL 4.8	7.9		7.9
Cyanide, Total	µg/L	AMEL 4.3 MDEL 8.5	42		42
Zinc, Total Recoverable	µg/L	AMEL 23 MDEL 46	74		74
Ammonia Nitrogen, Total (as N)	mg/L	AMEL 1.3 AWEL 2.8	15	32	
Ammonia Nitrogen, Total (as N)	lbs/day	AMEL 37 AWEL 82	61	379	
Nitrate Plus Nitrite (as N)	mg/L	AMEL 10 AWEL 16	6	13	
Electrical Conductivity @ 25°C	µmhos/cm	12-month rolling average of source water plus 500 or 1,000 whichever is less	606		
Total Coliform Organisms	MPN/ 100 mL	7-day median 2.2 23 no more than 1/month Instantaneous max 240	1	1	1,011
Acute WET	% survival	For any one test 70 3 test median 90			100 (see Note 1)
Chronic WET (see Note 3)	TUc	3 test median <16 TUc and 25% effect at 6.25% effluent			>16 TUc, 27% effect

Table F-3 Notes:

1. Discharge summary numbers are minimums.
2. pH range is summarized in monthly discharge number.
3. Chronic WET limitations summarized are interim limitations effective until 1 June 2024. Discharge summary is median result.

D. Compliance Summary

The Discharger exceeded effluent limitations/specifications for ammonia (16 times), cyanide (two times), total coliform organisms (one time), turbidity (five times), and chronic toxicity (one time) throughout the term of Order R5-2019-0021, according to exceedances logged in CIWQS.

E. Planned Changes

The Discharger intends to build the Facility in a series of phases. The Facility is currently in Phase I and this permit addresses effluent limitations and discharge prohibitions associated with Phases I and II, at the Discharger's request. Phase II of the Facility expansion project includes installation of a second 3.08 MG bolted-steel tank, increasing the design average annual discharge flow from 2.8 MGD to 5.6 MGD and the design average monthly discharge flow from 3.1 MGD to 6.2 MGD. Effluent limitations and discharge prohibitions for the Phase II Facility are only applicable following compliance with the special provisions in section VI.C.6.b of the Order. Phase II is not expected to begin until 2032.

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. This Order also serves as a Master Recycling Permit pursuant to article 4, chapter 7, division 7 of the Water Code (commencing with section 13500).

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of CEQA, Public Resources Code sections 21100-21177.

The Discharger certified a final environmental impact report (EIR) for the Facility in accordance with CEQA (Public Resources Code section 21000, et seq.) on 18 July 2005. Evaluation of the potential impacts on water quality from the Facility confirmed the project as proposed included features that will avoid significant impacts on water quality, except for the potential for discharging additional pollutants entrained in storm water runoff, the potential accidental release of hazardous substances to storm drains, and unavoidable exceedance of unspecified criteria established by the NTR and CTR. In regards to storm water runoff and the accidental release of hazardous substances, the Discharger altered the project to include storm water best management practices (BMPs) and preparation of a spill prevention plan as mitigation measures. However, the Discharger determined an exceedance of CTR criteria unavoidable with no feasible mitigation. In accordance with Title 14, CCR, Section 15093, the City adopted a statement of overriding considerations on 18 July 2005 citing specific social, environmental, and economic benefits that outweigh the significant and unavoidable water quality impact.

The alteration of the project will mitigate or avoid the adverse environmental impact on water quality from storm water runoff and hazardous substances. Evaluation of the discharge from the Facility against CTR criteria (see Fact Sheet, Section IV.C.3) indicates reasonable potential for exceedances of CTR criteria for cyanide. Effluent limitations and additional monitoring are included in this Order for cyanide, and a Time Schedule Order accompanies this Order to mitigate potential exceedances of CTR criteria for cyanide.

As the responsible agency for water quality in the Central Valley under CEQA, Central Valley Water Board independent review determined the project as altered and approved by the Discharger will not have a significant effect on water quality. This Order imposes enforceable requirements, including monitoring of effluent quality and receiving waters, to ensure this is the case.

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

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

    a. **Basin Plan.** The Central Valley Water Board adopted Water Quality Control Plans for the Sacramento River and San Joaquin River Basins, Fifth Edition, February 2019 and for the Tulare Lake Basin, Third Edition, May 2018 (hereinafter Basin Plans) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plans. Requirements in this Order implement the Basin Plans.

    The Tulare Lake Basin Plan at section 2 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Tulare Lake Basin Plan in Table 2-1, section 2, does not specifically identify beneficial uses for Fancher Creek, but does identify present and potential uses for Valley Floor Waters. Fancher Creek is a Valley Floor Water and thus has designated beneficial uses as listed in Table F-4 below.

    The Tulare Lake Basin plan in Table 2-1, section 2, does not specifically identify beneficial uses for the Diversion Channel. The Diversion Channel is a constructed conveyance that is periodically used to divert water from Big Dry Creek Reservoir to Little Dry Creek. As a source of the water being diverted, it is reasonable to apply beneficial uses for the Diversion Channel consistent with those identified for Big Dry Creek in the Tulare Lake Basin Plan. Thus, designated beneficial uses listed for Big Dry Creek, as a Valley Floor Water, in the Tulare Lake Basin Plan have been applied to the Diversion Channel, as listed in Table F-4, below.

    The Diversion Channel feeds into Little Dry Creek. The San Joaquin Basin Plan at section 2.1 states that the beneficial uses of any specifically

identified water body generally apply to its tributary streams. The San Joaquin Basin Plan in Table 2-1, section 2, does not specifically identify beneficial uses for Little Dry Creek, but does identify present and potential beneficial uses for the San Joaquin River from Friant Dam to the Mendota Pool, to which Little Dry Creek is tributary. Consequently, discharges to the Diversion Channel at Discharge Point 002 must also be protective of the beneficial uses applicable to Little Dry Creek, which are listed in Table F-4, below.

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. Resolution 88-63 also states, "*Any body of water which has current specific designation previously assigned to it by a Regional Board in Water quality Control Plans may retain that designation at the regional Board's discretion."* The Tulare Lake Basin Plan does not specifically assign municipal and domestic supply as a beneficial use to Valley Floor Waters. Therefore, this Order does not apply the municipal and domestic water supply beneficial use to discharges to Fancher Creek or the Diversion Channel.

The Tulare Lake Basin Plan identifies beneficial uses for groundwater underlying Discharge Points 001, 002, and REC-001. Groundwater underlying Discharge Point 001 and sections of Discharge Point REC-001 is in DAU #233 of the Kings Basin. Groundwater underlying Discharge Point 002 and sections of Discharge Point REC-001 is in DAU #234 of the Kings Basin. The beneficial uses of groundwater for these DAU's are listed in Table F-4, below:

Table F-4 Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Fancher Creek (Valley Floor Water)	Existing: Agricultural supply, including irrigation and stock watering (AGR); industrial service supply (IND); industrial process supply (PRO); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); wildlife habitat (WILD), preservation or rare, threatened or endangered species (RARE). Ground water recharge (GWR)
002	Diversion Channel from Big Dry Creek Reservoir to Little Dry Creek (Valley Floor Water)	Existing: AGR; IND; PRO; REC-1; REC-2; WARM; WILD; RARE; GWR

Discharge Point	Receiving Water Name	Beneficial Use(s)
002	Little Dry Creek	Existing: Municipal and domestic water supply (MUN); AGR; PRO; REC-1; REC-2; WARM; cold freshwater habitat (COLD); migration of aquatic organisms, warm and cold (MIGR); warm spawning, reproduction, and/or early development (SPWN); WILD Potential: Cold spawning, reproduction and/or early development (SPWN)
001 and REC-001	Groundwater (DAU #233)	MUN; AGR; IND; PRO; REC-1; REC-2
002 and REC-001	Groundwater (DAU #234)	MUN; AGR; IND-

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 toxicity, 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. **Water Reuse Policy and Master Recycling Permits.** The Tulare Lake Basin Plan states that "*Dischargers will be required to reclaim and reuse wastewater whenever reclamation is feasible.*" (Tulare Lake Basin Plan at section 4.1.11) It also states, "*Discharges to surface water and evaporation of reclaimable wastewater will not be acceptable permanent disposal methods where opportunity exists to replace an existing use or proposed use of freshwater with reclaimed water; a timetable for reclamation or reuse may be set by the Regional Water Board.*" (Tulare Lake Basin Plan at section 4.1.11.6)

   The State Water Board adopted Resolution 2009-0011, *Policy for Water Quality Control for Recycled Water* (Recycled Water Policy) in February 2009, and later amended it in January 2013 and December 2018. Section 3 of the Recycled Water Policy states, "*Agencies producing recycled water that is available for reuse and not being put to beneficial use shall make that recycled water available to water purveyors for reuse on reasonable terms and conditions. Such*

terms and conditions may include payment by the water purveyor of a fair and reasonable share of the cost of the recycled water supply and facilities." On 23 April 2009, the Central Valley Water Board adopted a similar resolution, Resolution R5-2009-0028, *Resolution in Support of Regionalization, Reclamation, Recycling, and Conservation of Wastewater Treatment Plants* (Regionalization Resolution). Recycling of effluent by the Discharger is consistent with the intent of the Recycled Water Policy and Regionalization Resolution.

The Discharger shall treat wastewater to disinfected tertiary treatment standards and shall reclaim and reuse wastewater to the maximum extent feasible as opportunities for use of recycled water become available. With this Order, the Central Valley Water Board is adopting a Master Recycling Permit that will allow the Discharger to produce, distribute, and use recycled water throughout the City of Clovis, as recycled water opportunities become available.

Pursuant to Water Code section 13523.1, the Central Valley Water Board, after consulting with and receiving the recommendations of the State Water Board Division of Drinking Water (DDW) and any party who has requested in writing to be consulted, and with the consent of the Discharger, may issue a Master Recycling Permit to the Discharger as the recycled water supplier in lieu of issuing individual WDR's or water recycling requirements to every recycled water user. As required by Water Code section 13523.1, a Master Recycling Permit must include, and this Order does include the following:

a. WDR's adopted pursuant to article 4, division 7 of the Water Code (commencing with section 13260);

b. Requirements that the Discharger comply with the uniform statewide criteria established by DDW pursuant to section 13521 and other applicable permit conditions for the use of recycled water;

c. Requirements for the Discharger to establish and enforce rules and regulations for recycled water users in accordance with statewide recycling criteria;

d. Requirements for the submittal of quarterly recycled water use summary reports;

e. Requirements for the recycled water agency to conduct periodic inspections of the recycled water use sites; and

f. Other requirements determined to be appropriate by the Central Valley Water Board.

3. **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.

4. **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.

5. **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.

6. **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.

7. **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.

8. **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.

9. **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.

10. **Storm Water Requirements.** U.S. EPA promulgated federal regulations for storm water on 16 November 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the storm water program and are obligated to comply with the federal regulations. The State Water Resources Control Board Water Quality Order 2014-0057-DWQ, General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES General Permit No. CAS000001), does not require facilities to obtain coverage if discharges of storm water are regulated under another individual or general NPDES permit adopted by the State Water

Board or Regional Water Board (Finding I.B.20). All storm water at the Facility is captured in an onsite basin where it percolates and evaporates. Therefore, coverage under the General Storm Water Permit is not required.

11. **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 WQ 2022-0103-DWQ (General Order) on 6 December 2023. The General Order requires public agencies that own or operate sanitary sewer systems with greater than 1 mile of pipes or sewer lines to enroll for coverage under the General Order. The General Order requires agencies to develop sanitary sewer management plans (SSMPs) and report all sanitary sewer overflows (SSOs), among other requirements and prohibitions.

    The Discharger is subject to the requirements of, and must comply with, State Water Board Order WQ 2022-0103-DWQ, Statewide General Waste Discharge Requirements for Sanitary Sewer Systems and any subsequent order.

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

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

1. Under section 303(d) of the 1972 CWA, states, territories, and authorized tribes are required to develop lists of water quality limited segments. The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 11 May 2022 U.S. EPA gave final approval to California's 2020 – 2022 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 Plans also state, "Additional treatment beyond minimum federal standards will be imposed on dischargers to WQLSs" and that dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment. Fancher Creek, the Diversion Channel, and Little Dry Creek are not listed as impaired water bodies on the 2020-2022 303(d) list. However, the listing for San Joaquin River (from Friant Dam to Mendota Pool), to which the Diversion Channel and Little Dry Creek are hydraulically connected, includes invasive species, pH.

2. **Total Maximum Daily Loads (TMDLs).** Table F-5, below, identifies the 303(d) listings and any applicable TMDLs.

Table F-5 303 (d) List for San Joaquin River (Friant Dam to Mendota Pool)

Pollutant	Potential Sources	TMDL Status
Invasive Species	Source Unknown	Expected Completion 2027
pH	Source Unknown	Expected Completion 2027
Water Temperature	Source Unknown	Expected Completion 2034
Chlorpyrifos	Source Unknown	Adopted and Effective (20 December 2006)
Diazinon	Source Unknown	Adopted and Effective (20 December 2006)

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

E. Other Plans, Polices and Regulations

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

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

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

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

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

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

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge or application of waste other than that described in this Order).** This prohibition is based on Water Code section 13260 that requires filing of a ROWD before discharges can occur. The

Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.

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

3. **Prohibition III.C (No controllable condition shall create a nuisance**). This prohibition is based on Water Code section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plans prohibit 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 (Average Monthly and Average Annual Discharge Flow)**. This prohibition is based on the design average monthly and average annual flow treatment capacity ratings for the Facility and ensures the Facility is operated within its treatment capacity. This prohibition also accounts for the permitted increase in the design average monthly and average annual flow treatment capacity ratings following completion of Facility upgrades to provide the treatment capacity for an average monthly discharge flow of 6.2 MGD and an average annual discharge flow of 5.6 MGD following compliance with Special Provision IV.C.6.b of the Order.

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 BOD_5, TSS, and pH.

2. Applicable Technology-Based Effluent Limitations

a. **BOD_5 and TSS.** Federal regulations at 40 C.F.R. part 133, establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD5 and TSS. A daily maximum effluent limitation for BOD5 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 requires Water Quality Based Effluent Limitations (WQBELs) that are equal to or more stringent than the secondary technology-based treatment described in 40 CFR part 133 (See section IV.C.3.c.iv of the Fact Sheet for a discussion on Pathogens which includes WQBELs for BOD_5 and TSS and percent removal of BOD_5 and TSS.)

b. **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 Points 001 and 002

Table F-6 Summary of Technology-based Effluent Limitations

Parameter	Units	Effluent Limitations
BOD_5	mg/L	AMEL 30 AWEL 45
BOD_5	% Removal	AMEL 85
pH	standard units	Instantaneous Max 9.0 Instantaneous Min 6.0
TSS	mg/L	AMEL 30 AWEL 45
TSS	% Removal	AMEL 85

Table F-6 Notes:

1. Note that more stringent WQBELs for BOD_5, pH, TSS, and BOD_5/TSS percent removal are applicable and are established as final effluent limitations in this Order (see section IV.C.3.b.iv,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. This Order contains requirements, expressed as a technology equivalence requirement, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements or other provisions, is discussed in section IV.C.3 of this Fact Sheet.

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

The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated beneficial uses of the

receiving water as specified in the Basin Plan and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

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

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plans designate beneficial uses, establish water quality objectives, and contain implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plans implement 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. As discussed in Section III.C of this Fact Sheet, the municipal and domestic supply beneficial use is not applicable at Discharge Point 001 to Fancher Creek or at Diversion Channel, however discharges to Discharge Point 002 must be protective of the municipal and domestic supply beneficial use of Little Dry Creek.

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

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

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

b. **Effluent and Ambient Background Data.** The reasonable potential analysis (RPA), as described in section IV.C.3 of this Fact Sheet, was based on data from 1 June 2019 through 31 October 2023, which includes effluent and ambient background data submitted in SMRs and the ROWD.

c. **Assimilative Capacity/Mixing Zone.** Current flow data indicate that, at times, Fancher Creek is dominated by effluent from the Facility downstream of Discharge Point 001. The ephemeral nature of Fancher Creek, the Diversion Channel, and Little Dry Creek means that the designated beneficial uses must be protected, but that no credit for receiving water dilution is available at Discharge Points 001 or 002. Although the discharge, at times, maintains the aquatic habitat within the receiving waters, constituents may not be discharged that may cause harm to aquatic life.

   The Discharger has not submitted mixing zone/dilution studies requesting dilution credits. Thus, consistent with the assumptions used for Order R5-2019-0021, the worst-case dilution for Fancher Creek, the Diversion Channel, and Little Dry Creek is assumed to be zero to provide protection of the beneficial uses of these receiving waters. The impact of assuming zero assimilative capacity within the receiving waters is that effluent limitations are applied end-of-pipe, with no allowance for dilution within the receiving waters.

d. **Conversion Factors.** The CTR contains aquatic life criteria for arsenic, cadmium, chromium III, copper, lead, nickel, silver, and zinc, which are presented in dissolved concentrations. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. The default U.S. EPA conversion factors contained in Appendix 3 of the SIP were used to convert the applicable dissolved criteria to total recoverable criteria.

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

   The ambient hardness for Fancher Creek ranges from 7.2 mg/L to 190 mg/L based on collected ambient data from June 2019 through January 2023. Given the high variability in ambient hardness values, there is no

single hardness value that describes the ambient receiving water for all possible scenarios (e.g., minimum, maximum). Because of this variability, staff has determined that based on the ambient hardness concentrations measured in the receiving water, the Central Valley Water Board has discretion to select ambient hardness values within the range of 7.2 mg/L (minimum) up to 190 mg/L (maximum).

The Central Valley Water Board finds that the use of the ambient hardness values and associated acute and chronic criteria for Discharge Point 001 shown in Table F-7 to conduct the reasonable potential analysis (RPA) and calculate WQBELs, protect beneficial uses under all ambient receiving water conditions and comply with the SIP, CTR, and Basin Plan.

Table F-7. Summary of Criteria for CTR Hardness-dependent Metals – Discharge Point 001

CTR Metals	Ambient Hardness (mg/L)	Acute Criteria (µg/L, total)	Chronic Criteria (µg/L, total)
Copper	32	4.8	3.5
Chromium III	32	680	81
Cadmium	25 (acute) 32 (chronic)	0.95	1.0
Lead	25	14	0.5
Nickel	32	180	20
Silver	21	0.28	
Zinc	32	46	46

Table F-7 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-7 represent actual observed receiving water hardness measurements.
3. **Copper and Zinc.** This Order allows a site-specific WER for copper and zinc to calculate the criteria (see fact sheet Section IV.C.3.b.i and iv). The site-specific WERs for copper and zinc were not used to calculate the values in Table F-7.

The ambient hardness for the Diversion Channel and Little Dry Creek ranges from 32 mg/L to 220 mg/L based on collected ambient data from June 2019 through January 2023. Given the high variability in ambient hardness values, there is no single hardness value that describes the ambient receiving water for all possible scenarios (e.g., minimum, maximum). Because of this variability, staff has determined that based on the ambient hardness concentrations measured in the receiving water, the Central Valley Water Board has discretion to select ambient hardness values within the range of 32 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 for Discharge Point 002 shown in Table F-8 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-8. Summary of Criteria for CTR Hardness-dependent Metals – Discharge Point 002

CTR Metals	Ambient Hardness (mg/L)	Acute Criteria (µg/L, total)	Chronic Criteria (µg/L, total)
Copper	32	4.8	3.5
Chromium III	32	680	81
Cadmium	32	1.3	1.0
Lead	32	19	0.75
Nickel	32	180	20
Silver	32	0.57	
Zinc	32	46	46

Table F-8 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-8 represent actual observed receiving water hardness measurements.
3. **Copper and Zinc.** This Order allows a site-specific WER for copper and zinc to calculate the criteria (see fact sheet Section IV.C.3.b.i and iv). The site-specific WERs for copper and zinc were not used to calculate the values in Table F-8.

3. Determining the Need for WQBELs

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

nearly 200 constituents, including the 126 U.S. EPA priority toxic pollutants. This section includes details of the RPAs for constituents of concern for the Facility. The entire RPA is included in the administrative record and a summary of the constituents of concern is provided in Attachment G.

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

a. **Constituents with Total Maximum Daily Load (TMDL).**
40 C.F.R. section 122.44(d)(1)(vii) provides: "When developing water quality-based effluent limits under [section 122.44(d)(1)], the permitting authority shall ensure that: (A) The level of water quality to be achieved by limits on point sources established under this paragraph is derived from, and complies with all applicable water quality standards; and (B) Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with the assumptions and requirements of any available WLA for the discharge prepared by the State and approved by U.S. EPA pursuant to [Total Maximum Daily Loads regulations]." U.S. EPA construes 40 C.F.R. section 122.44(d)(1)(vii)(B) to mean that "when WLAs are available, they must be used to translate water quality standards into NPDES permit limits." 54 Fed. Reg. 23868, 23879 (June 2, 1989).

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

i. **Diazinon and Chlorpyrifos.**

(a) **WQO.** The Central Valley Water Board completed a TMDL for diazinon and chlorpyrifos for the Sacramento River and San Joaquin River Basins and amended the Basin Plan to include diazinon and chlorpyrifos waste load allocations and water quality objectives. The Basin Plan Amendment for the Sacramento River and San Joaquin River Basins for Control of Diazinon and Chlorpyrifos Discharges was adopted by the Central Valley Water Board on 3 May 2007 and became effective on 20 December 2006.

The amendment modified Basin Plan Chapter 3 (Water Quality Objectives) to establish site-specific numeric objectives for diazinon and chlorpyrifos for waters with COLD and/or WARM beneficial uses below major dams and identified the requirements to meet the additive formula already in Basin Plan Chapter 4 (Implementation) for the additive toxicity of diazinon and chlorpyrifos.

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

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

Where:

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

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

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

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

Available samples collected within the applicable averaging period for the water quality objective will be used to determine compliance with the allocations and loading capacity. For purposes of calculating the sum (S) above, analytical results

that are reported as 'non-detectable' concentrations are considered to be zero.

The WLAs apply to waterbodies that are downstream of the major dams in Table 3-5 of the Basin Plan, which includes Friant Dam on the San Joaquin River. The Facility discharges at Discharge Point 002 to the Diversion Channel, which feeds into Little Dry Creek, which is tributary to the San Joaquin River downstream of Friant Dam.

(b) **WQBELs.** WQBELs for diazinon and chlorpyrifos are required per the TMDL at Discharge Point 002. This Order includes effluent limits calculated based on the WLAs contained in the TMDL, as follows:

Average Monthly Effluent Limitation (AMEL)

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

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

Average Weekly Effluent Limitation (AWEL)

$$S(AWEL) = Cd\ (W\text{-}avg)/0.14 + Cc\ (W\text{-}avg)/0.021 \leq 1.0$$

Where:
Cd(W-avg) = average weekly diazinon effluent concentration in µg/L
Cc(W-avg) = average weekly chlorpyrifos effluent concentration in µg/L

(c) **Plant Performance and Attainability.** Chlorpyrifos and diazinon have not previously been sampled for at the Facility. However, since these pesticides have been banned for public use, they are not expected to be present in the influent to the Facility. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

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

results of effluent monitoring demonstrate reasonable potential, this Order may be reopened and modified by adding an appropriate effluent limitation.

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

i. **Copper**

(a) **WQO.** The CTR includes hardness dependent criteria for the protection of freshwater aquatic life for copper. These criteria for copper are presented in dissolved concentrations, as 1-hour acute criteria and 4-day chronic criteria. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default U.S. EPA translators were used for the receiving water and effluent.

The Discharger submitted the Water Effects Ratio (WER) Study for Copper Compliance for the Facility on 27 November 2019 and was approved on 10 March 2021. The Discharger conducted the study per U.S. EPA's Streamlined Water-Effect Ratio Procedure for Dischargers of Copper (EPA-822-R-01-005). Based on the results of the study, the Central Valley Water Board concluded that a dissolved and total recoverable WER of 18.0 is applicable to the Facility's discharge.

As described in section IV.C.2.e of this Fact Sheet, and with the incorporation of the WER, the applicable acute and chronic criteria for copper in the effluent are 86 µg/L and 63 µg/L, respectively, as total recoverable.

(b) **RPA Results.** Section IV.C.2. of this Fact Sheet includes procedures for conducting the RPA for hardness-dependent CTR metals, such as copper. The CTR includes hardness-dependent criteria for copper for the receiving water. The MEC for total recoverable copper was 7.9 µg/L and the maximum observed upstream receiving water concentrations were 16 µg/L in Fancher Creek and 4.6 µg/L at the Diversion Channel. The Discharger reported 51 effluent copper monitoring results, 27 upstream receiving water copper monitoring results in Fancher Creek, and five upstream receiving water copper monitoring results in the Diversion Channel. The MEC of 7.9 µg/L is well below WER adjusted water quality objectives for copper. The maximum upstream receiving water concentrations of 16 µg/L and 4.6 µg/L do not exceed the WER adjusted water quality objectives of 18 µg/L in Fancher Creek and 121 µg/L in the

Diversion Channel. Therefore, copper in the discharge does not have reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for the protection of freshwater aquatic life, and the effluent limitations for copper have not been retained in this Order. Removal of these effluent limitations is in accordance with federal anti-backsliding regulations (see section IV.D.3 of the Fact Sheet).

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, as 1-hour acute criteria and 4-day chronic criteria. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default U.S. EPA translators were used for the receiving water and effluent.

As described in section IV.C.2.e of this Fact Sheet, the applicable acute and chronic criteria for lead in the effluent are 19 µg/L and 0.75 µg/L, respectively, as total recoverable.

(b) **RPA Results.** Section IV.C.2. of this Fact Sheet includes procedures for conducting the RPA for hardness-dependent CTR metals, such as lead. The CTR includes hardness-dependent criteria for lead for the receiving water. The MEC for total recoverable lead was 0.068 µg/L (Detected, Not Quantified) and the maximum observed upstream receiving water concentrations were 2.8 µg/L in Fancher Creek and 2.5 µg/L at the Diversion Channel. The Discharger reported four effluent lead monitoring results, 28 upstream receiving water lead monitoring results in Fancher Creek, and six upstream receiving water lead monitoring results in the Diversion Channel. The MEC of 0.068 µg/L is well below water quality objectives for lead. The maximum upstream receiving water concentrations of 2.8 µg/L and 2.5 µg/L do exceed the water quality objectives of 0.12 µg/L in Fancher Creek and 2.0 µg/L in the Diversion Channel. The SIP indicates if the background concentration is greater than the criteria for the background and the pollutant is detected in the effluent, an effluent limitation is required. However, the MEC of 0.068 µg/L was not qualified, thus, the result is considered insufficient for use in determining reasonable potential. All other lead monitoring results were non-detects, indicating lead was not detected in the effluent. Therefore, lead does not have reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for the protection of freshwater aquatic life.

iii. **Salinity**

(a) **WQO.** The Basin Plan contains a chemical constituent objective that incorporates state MCLs, contains a narrative objective, and contains numeric water quality objectives for certain specified water bodies for electrical conductivity, total dissolved solids, sulfate, and chloride. The U.S. EPA Ambient Water Quality Criteria for Chloride recommends acute and chronic criteria for the protection of aquatic life. There are no U.S. EPA water quality criteria for the protection of aquatic life for electrical conductivity, total dissolved solids, and sulfate. Additionally, there are no U.S. EPA numeric water quality criteria for the protection of agricultural, livestock, and industrial uses. Numeric values for the protection of these uses are typically based on site specific conditions and evaluations to determine the appropriate constituent threshold necessary to interpret the narrative chemical constituent Basin Plan objective. The Central Valley Water Board must determine the applicable numeric limit to implement the narrative objective for the protection of agricultural supply. Table F-9, below, contains various recommended levels for EC or TDS, sulfate, 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 585 TDS 343	EC 889 TDS 480
Sulfate (mg/L)	250	500	600	N/A	21	27
Chloride (mg/L)	250	500	600	860 1-hour / 230 4-day	68	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 in the Basin Plans. However, the Basin Plans do not require improvement over naturally occurring background

concentrations. In cases where the natural background concentration of a particular constituent exceeds an applicable water quality objective, the natural background concentration will be considered to comply with the objective.

2. **Secondary MCLs.** Secondary MCLs are for protection of public welfare and are stated as a recommended level, upper level, and a short-term maximum level.
3. **Chloride.** The Secondary MCL for chloride is 250 mg/L, as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.
4. **Electrical Conductivity or Total Dissolved Solids.** The Secondary MCL for EC is 900 µmhos/cm as a recommended level, 1600 µmhos/cm as an upper level, and 2200 µmhos/cm as a short-term maximum, or when expressed as TDS is 500 mg/L as a recommended level, 1000 mg/L as an upper level, and 1500 mg/L as a short-term maximum.
5. **Sulfate.** The Secondary MCL for sulfate is 250 mg/L as a recommended level, 500 mg/L as an upper level, and 600 mg/L as a short-term maximum.

(b) **RPA Results.**

(1) **Chloride.** Chloride concentrations in the effluent ranged from 49 mg/L to 79 mg/L, with a maximum annual average of 68 mg/L. These levels do not exceed the Secondary MCL. Background concentrations in Fancher Creek ranged from non-detect to 2.4 mg/L, with an average of 1.4 mg/L, for three samples collected by the Discharger from July 2020 through January 2023. The maximum chloride observed within the Diversion Channel and Little Dry Creek was 33 mg/L based on four samples collected at Monitoring Locations RSW-002U and RSW-003U between March 2021 and January 2023.

(2) **Electrical Conductivity or Total Dissolved Solids.** A review of the Discharger's monitoring reports shows a maximum observed effluent annual average effluent EC of 585 µmhos/cm, ranging from 397 µmhos/cm to 889 µmhos/cm. These levels do not exceed the Secondary MCL. The maximum electrical conductivity observed within Fancher Creek was 78 µmhos/cm based on 72 samples collected at Monitoring Location RSW-001U between June 2019 and September 2022. The maximum electrical conductivity observed within the Diversion Channel and Little Dry Creek was 470 µmhos/cm based on nine samples collected at Monitoring Locations RSW-002U and RSW-003U between March 2021 and January 2023.

Total dissolved solids concentrations in the effluent ranged from 212 mg/L to 480 mg/L, with a maximum observed effluent annual average of 343 mg/L, based on 52 samples

collected between June 2019 and January 2023. These levels do not exceed the Secondary MCL recommended level. The maximum TDS observed within Fancher Creek was 72 mg/L based on three samples collected at Monitoring Location RSW-001U between July 2020 and January 2023. The maximum TDS observed within the Diversion Channel and Little Dry Creek was 290 mg/L based on four samples collected at Monitoring Locations RSW-002U and RSW-003U between March 2021 and January 2023.

(3) **Sulfate.** Sulfate concentrations in the effluent ranged from 17 mg/L to 27 mg/L, with a maximum observed effluent annual average of 21 mg/L. These levels do not exceed the Secondary MCL. The maximum sulfate observed within Fancher Creek was 8.8 mg/L based on three samples collected at Monitoring Location RSW-001U between July 2020 and January 2023. The maximum sulfate observed within the Diversion Channel and Little Dry Creek was 33 mg/L based on four samples collected at Monitoring Locations RSW-002U and RSW-003U between March 2021 and January 2023.

(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 Plans 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 Plans require 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. This performance-based trigger is based on the maximum annual average effluent EC of 585 µmhos/cm with a safety factor of 25 percent, resulting in an EC trigger of 731 µmhos/cm.

iv. **Zinc**

(a) **WQO.** The CTR includes hardness dependent criteria for the protection of freshwater aquatic life for zinc. These criteria for zinc are presented in dissolved concentrations, as 1-hour acute criteria and 4-day chronic criteria. U.S. EPA recommends conversion factors to translate dissolved concentrations to total concentrations. Default U.S. EPA translators were used for the receiving water and effluent.

The Discharger submitted the Water Effects Ratio (WER) Study for compliance of zinc for the Facility on 27 November 2019 and was approved on 10 March 2021. The Discharger conducted the study per the Interim Guidance on Determination and Use of Water-Effect Ratios for Metals (“Interim Guidance,” EPA-823-B-94-001, February 1994). Based on the results of the study, the Central Valley Water Board concluded that a dissolved and total recoverable WER of 1.79 is applicable to the Facility’s discharge.

As described in section IV.C.2.e of this Fact Sheet, and with the incorporation of the WER, the applicable acute and chronic criteria for zinc in the effluent is 82 µg/L, respectively, as total recoverable.

(b) **RPA Results.** Section IV.C.2. of this Fact Sheet includes procedures for conducting the RPA for hardness-dependent CTR metals, such as zinc. The CTR includes hardness-dependent criteria for zinc in the receiving water. The MEC for total recoverable zinc was 74 µg/L and the maximum observed upstream receiving water concentrations were 7.2 µg/L in Fancher Creek and 6.4 µg/L at the Diversion Channel. The Discharger reported 49 effluent zinc monitoring results, three upstream receiving water zinc monitoring results in Fancher Creek, and three upstream receiving water zinc monitoring

results in the Diversion Channel. The MEC of 74 µg/L is well below WER adjusted water quality objectives for zinc. The maximum upstream receiving water concentrations of 7.2 µg/L in Fancher Creek and 6.4 µg/L in the Diversion channel do not exceed the WER adjusted water quality objectives of 23 µg/L (Fancher Creek) and 154 µg/L (Diversion Channel). Therefore, zinc in the discharge does not have reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for the protection of freshwater aquatic life, and the effluent limitations for zinc have not been retained in this Order. Removal of these effluent limitations is in accordance with federal anti-backsliding regulations (see section IV.D.3 of the Fact Sheet).

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

i. **Ammonia**

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

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

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

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

Site-specific Criteria for Fancher Creek and Little Dry 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. In this case, for Fancher Creek and Little Dry Creek freshwater mussels have been assumed to be present. In addition, the recalculated criteria include equations that provide enhanced protection for important salmonid species in the genus Oncorhynchus, that can be implemented for receiving waters where salmonid species are present. Because the San Joaquin River, to which Little Dry Creek is tributary, has a potential beneficial use of cold freshwater habitat and the presence of salmonids and early fish life stages in the San Joaquin River is well-documented, the recommended criteria for waters where salmonids and early life stages are present were used for discharges at Discharge Point 002. Because Fancher Creek does not have a beneficial use of cold freshwater habitat and any fish diverted into the Fresno Irrigation District canal system would be incidental, the recommended criteria for waters where salmonids and early life stages are not present were used for discharges at Discharge Point 001.

The maximum permitted effluent pH is 8.2 for discharges at Discharge Point 001 and 8.1 for discharges at Discharge Point 002, based on the Discharger's request for a more stringent maximum effluent pH limit to allow for less stringent ammonia effluent limitations. Paired effluent pH and temperature data, collected during the period from June 2019 through June 2023,

were used to calculate acute criteria. In cases where the paired pH exceeded the maximum permitted pH, the maximum permitted pH was used instead to calculate the acute criteria for that pair. The resulting acute criteria applicable to discharges at Discharge Points 001 and 002 are 4.02 mg/L and 6.7 mg/L, respectively. For Discharge Point 001, the acute criteria was based on paired data from 7 September 2021, and for Discharge Point 002, the acute criteria was based on paired data from 7 October 2022.

At Discharge Point 001 chronic criterion was calculated for each day when paired pH and temperature data were measured using downstream receiving water data for pH and temperature. At Discharge Point 002 chronic criterion was calculated for each day when paired pH and temperature data were measured using effluent data for pH and temperature. Rolling 30-day average criteria were calculated using the criteria calculated for each day and the minimum observed 30-day average criterion was established as the applicable 30-day average chronic criterion, or 30-day CCC. For discharges at Discharge Point 001, the most stringent 30-day CCC was 2.4 mg/L (as N) based on downstream receiving water pH and temperature data collected from June 2019 through January 2023. The 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 2.4 mg/L (as N) at Discharge Point 001, the 4-day average concentration that should not be exceeded is 6.0 mg/L (as N). For discharges at Discharge Point 002, the most stringent 30-day CCC was 5.1 mg/L (as N) based on effluent pH and temperature data collected from June 2019 through January 2023. Based on the 30-day CCC of 5.1 mg/L (as N) at Discharge Point 002, the 4-day average concentration that should not be exceeded is 12.7 mg/L (as N).

The Tulare Lake Basin Plan includes an objective that states *"*[w]*aters shall not contain un-ionized ammonia in amounts that which adversely affect beneficial uses. In no case shall the discharge of wastes cause concentrations of un-ionized ammonia (NH_3) to exceed 0.025 mg/L (as N) in the 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. Nitrification is a biological process that converts ammonia to nitrite and nitrite to nitrate. Denitrification is a process that converts nitrate to nitrite or nitric

oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. The Discharger currently uses nitrification and partial denitrification to remove ammonia from the waste stream. Inadequate or incomplete treatment may result in the discharge of ammonia to the receiving stream, which creates the basis for the discharge to have a reasonable potential to cause or contribute to an instream excursion above the site-specific acute and chronic criteria for ammonia provided by the January 2020 Criteria Recalculation Report. Therefore, the Central Valley Water Board finds the discharge has reasonable potential for ammonia and WQBELs are required.

(c) **WQBELs.** The Central Valley Water Board calculates WQBELs in accordance with SIP procedures for non-CTR constituents, and ammonia is a non-CTR constituent. The SIP procedure assumes a 4-day averaging period for calculating the long-term average discharge condition (LTA). However, U.S. EPA recommends modifying the procedure for calculating permit limits for ammonia using a 30-day averaging period for the calculation of the LTA corresponding to the 30-day CCC. Therefore, while the LTAs corresponding to the acute and 4-day chronic criteria were calculated according to SIP procedures, the LTA corresponding to the 30-day CCC was calculated assuming a 30-day averaging period. For discharges at Discharge Point 001, this Order contains a final AMEL and AWEL for ammonia of 1.2 mg/L and 2.5 mg/L, respectively, based on the NAWQC. For discharges at Discharge Point 002, this Order contains a final AMEL and AWEL for ammonia of 1.9 mg/L and 4.1 mg/L, respectively, based on the NAWQC.

This Order does not contain WQBEL's for un-ionized ammonia because the proposed WQBEL's for total ammonia are more protective of the beneficial uses, given the temperature and pH typically experienced in the receiving waters at Discharge Points 001 and 002.

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

ii. **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 42 µg/L based on samples collected at Monitoring Location EFF-A between December 2020 and November 2023. Cyanide was not detected within Fancher Creek based on three samples

collected at Monitoring Location RSW-001U between July 2020 and January 2023. The maximum cyanide concentration observed within the Diversion Channel and Little Dry Creek was 4.1 µg/L based on five samples collected at Monitoring Locations RSW-002U and RSW-003U between March 2021 and May 2023. Therefore, cyanide in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the CTR criteria for the protection of freshwater aquatic life at both Discharge Points 001 and 002.

(c) **WQBELs.** This Order contains a final AMEL of 4.3 µg/L and an MDEL of 8.5 µg/L, which are applicable to discharges at both Discharge Points 001 and 002, 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 42 µg/L is greater than the applicable WQBEL's.

Previous Order R5-2019-0021 included final effluent limitations for cyanide identical to the limitations in this Order. On 4 April 2019, the Central Valley Water Board also adopted Time Schedule Order (TSO) R5-2019-0022, which provided until 31 May 2024 for the Discharger to come into compliance with, among other constituents, the final effluent limitations for total cyanide. During the term of TSO R5-2019-0022, the Discharger implemented actions that appear to have reduced detections of cyanide above the water quality criteria. However, cyanide still was occasionally detected above the water quality criteria.

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

iii. **Nitrate and Nitrite**

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

U.S. EPA has developed a primary MCL and an MCL goal of 1 mg/L for nitrite (as nitrogen). For nitrate, U.S. EPA has

developed Drinking Water Standards (10 mg/L as Primary MCL) and NAWQC for protection of human health (10 mg/L for non-cancer health effects).

As discussed in section III.C.1.a of this Fact Sheet, the MUN beneficial use does not apply to Fancher Creek. However, the Tulare Lake Basin Plan designates groundwater recharge as a designated use of Fancher Creek, which is an unlined channel that is, at times, an effluent-dominated water body. Incidental groundwater recharge likely occurs along the creek, which is lined on both sides with domestic wells for miles downstream of Discharge Point 001. Therefore, the Central Valley Water Board has concluded that application of the Primary MCL for nitrate and nitrite is appropriate for discharges to Fancher Creek at Discharge Point 001 to protect underlying groundwater. The Primary MCL's for nitrate and nitrite are also applicable water quality objectives for discharges at Discharge Point 002, as the San Joaquin Basin Plan designates MUN as a beneficial use of Little Dry Creek.

(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 Plans' narrative toxicity objective. Inadequate or incomplete treatment may result in the discharge of nitrate and/or nitrite to receiving waters in concentrations that may exceed the Primary MCL and would violate the Basin Plans' narrative chemical constituents' objective. Therefore, the Central Valley Water Board finds the discharge has a reasonable potential to cause or contribute to an instream excursion above the Primary MCL and WQBELs are required for nitrate plus nitrite.

The concentration of nitrogen in raw domestic wastewater is sufficiently high that the resultant treated wastewater has a reasonable potential to exceed or threaten to exceed the Primary MCL for nitrite plus nitrate unless the wastewater is treated for nitrogen removal, and therefore an effluent limit for nitrite plus nitrate is required at Discharge Points 001 and 002. Denitrification is a process that converts nitrate to nitrite or nitric oxide and then to nitrous oxide or nitrogen gas, which is then released to the atmosphere. The Discharger currently uses nitrification/denitrification to remove ammonia, nitrite, and nitrate from the waste stream. Inadequate or incomplete denitrification may result in the discharge of nitrate and nitrite to the receiving water. Discharges of nitrate and nitrite at Discharge Points 001 and 002 in concentrations that exceed the applicable Primary MCL's would violate the Basin Plans' narrative chemical

constituents objective and is not consistent with state and federal antidegradation policies. Although the Discharger denitrifies the discharge, inadequate or incomplete denitrification creates the potential for nitrate and nitrite to be discharged and provides the basis for the discharge to have a reasonable potential to cause or contribute to an in-stream excursion above the Primary MCL at Discharge Points 001 and 002. Therefore, the Central Valley Water Board finds the discharge has reasonable potential for nitrite plus nitrate and WQBEL's are required at Discharge Points 001 and 002.

(c) **WQBELs.** This Order contains an AMEL and AWEL for nitrite plus nitrate of 10 mg/L and 16 mg/L, respectively, for discharges at Discharge Points 001 and 002 based on the Basin Plans' narrative chemical constituents objective and state and federal antidegradation policies. The receiving water at Discharge Point 001 is a high quality water, and the Discharger has not submitted anti-degradation analysis demonstrating that any change in water quality associated with a discharge exceeding the Primary MCL is consistent with maximum benefit to the people of the State. These effluent limitations are included in this Order to assure the treatment process adequately nitrifies and denitrifies the waste stream to protect MUN beneficial use.

(d) **Plant Performance and Attainability.** Analysis of the effluent data for nitrite plus nitrate collected over the term of Order R5-2019-0021 shows that the maximum monthly average concentration of 6 mg/L and the maximum weekly average concentration of 12.7 mg/L are below the applicable WQBEL's. The Central Valley Water Board concludes, therefore, that immediate compliance with these effluent limitations is feasible.

iv. **Pathogens**

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

Title 22 is not directly applicable to surface waters; however, the Central Valley Water Board finds the stringent disinfection criteria are appropriate since the undiluted effluent may be used for the irrigation of food crops and/or for body-contact water recreation. Coliform organisms are intended as an indicator of

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

(b) **RPA Results.** Raw domestic wastewater inherently contains human pathogens that threaten human health and life, and constitute a threatened pollution and nuisance under CWC section 13050 if discharged untreated to the receiving water. The beneficial uses of Fancher Creek and the Diversion Channel include water contact recreation, groundwater recharge, and agricultural irrigation supply, and there is, at times, less than 20:1 dilution. Additionally, the beneficial uses of Little Dry Creek include MUN, water contact recreation, and agricultural irrigation supply and there is, at times, less than 20:1 dilution. To protect these beneficial uses, the Central Valley Water Board finds that the wastewater must be disinfected and adequately treated to prevent disease. Although the Discharger provides disinfection, inadequate or incomplete disinfection creates the potential for pathogens to be discharged. Therefore, the Central Valley Water Board finds the discharge has reasonable potential for pathogens and WQBELs are required.

(c) **WQBELs.** Special Provisions VI.C.6.a of this Order requires, “Wastewater shall be oxidized, coagulated, filtered, and adequately disinfected pursuant to the State Water Board, DDW reclamation criteria, CCR, Title 22, division 4, chapter 3, (Title 22), or equivalent.” In accordance with the requirements of Title 22, this Order includes effluent limitations for total coliform organisms of 2.2 MPN/100 mL as a 7-day median; 23 MPN/100 mL, not to be exceeded more than once in a 30-day period; and 240 MPN/100 mL as an instantaneous maximum.

The Discharger’s tertiary treatment process, or equivalent, which utilizes a membrane filtration system, is capable of reliably treating wastewater to a turbidity level of 0.2 nephelometric turbidity units (NTU) 95 percent of the time within a 24 hour period and 0.5 NTU at all times. Failure of the filtration system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity. Turbidity has a major advantage for monitoring filter performance. Coliform testing, by comparison, is not conducted continuously and requires several hours, to days, to identify high coliform concentrations. Therefore, in addition to total coliform organisms effluent limitations, this Order includes operational specifications for turbidity of 0.2 NTU not to be exceeded more than 5 percent of the time within a 24-hour period and 0.5 NTU at any time.

Final WQBELs for BOD_5 and TSS are also required based on the technical capability of the tertiary process. The tertiary treatment standards for BOD5 and TSS are indicators of the effectiveness of the tertiary treatment process. The principal design parameter for wastewater treatment plants is the daily BOD5 and TSS loading rates and the corresponding removal rate of the system. The application of tertiary treatment processes results in the ability to achieve lower levels for BOD5 and TSS than the technology-based secondary standards.

Therefore, this Order requires AMELs and AWELs for BOD_5 and TSS of 10 mg/L and 15 mg/L, respectively, which is technically based on the capability of a tertiary system. This

Order also requires at least 90 percent removal of BOD_5 and TSS, as a monthly average, compared to influent concentrations.

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

(d) **Plant Performance and Attainability.** The Facility provides tertiary treatment and utilizes a UV disinfection system that is designed to achieve Title 22 criteria. Therefore, the Central Valley Water Board concludes that immediate compliance with these effluent limitations is feasible for tertiary treated discharges from the Facility.

v. **pH**

(a) **WQO.** The Tulare Lake Basin Plan includes a water quality objective for surface waters that states, *"The pH of water shall not be depressed below 6.5, raised above 8.3, or changed at any time more than 0.3 units from normal ambient pH."* The San Joaquin Basin Plan includes a water quality objective for surface waters (except for Goose Lake) that the "…*pH shall not be depressed below 6.5 nor raised above 8.5."*

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

(c) **WQBELs.** An effluent limitation for pH of 6.5 as an instantaneous minimum is included in this Order for discharges at Discharge Points 001 and 002 based on the protection of the Basin Plans' objectives for pH. Order R5-2019-0021 included more stringent instantaneous maximum pH limitations of 8.2 and 8.1 at Discharge Points 001 and 002, respectively, based on a request by the Discharger to allow for less stringent ammonia effluent limitations, which are calculated based on pH and temperature. This Order retains the instantaneous maximum effluent pH limitations from Order R5-2019-0021 of 8.2 and 8.1 at Discharge Points 001 and 002, respectively.

(d) **Plant Performance and Attainability.** The Facility has the proper controls in place to comply with the effluent limitations if properly operated and maintained. Therefore, the Central Valley Water Board concludes that immediate compliance with the effluent limitations at Discharge Points 001 and 002 is feasible.

4. WQBEL Calculations

a. This Order includes WQBELs for ammonia, BOD_5, cyanide, electrical conductivity, nitrite plus nitrate, pH, total coliform organisms, chlorpyrifos, diazinon, and TSS. The general methodology for calculating WQBELs based on the different criteria/objectives is described in subsections IV.C.4.b through e, below. See Attachment H for the WQBEL calculations.

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

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

where:

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

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

c. **Primary and Secondary MCLs.** For non-priority pollutants with primary MCLs to protect human health (e.g., nitrate plus nitrite), the AMEL is set

equal to the primary MCL and the AWEL is calculated using the AWEL/AMEL multiplier, where the AWEL multiplier is based on a 98th percentile occurrence probability and the AMEL multiplier is from Table 2 of the SIP.

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

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

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

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

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

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

where:

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

Summary of Water Quality-Based Effluent Limitations
Discharge Point 001 and 002

Table F-10 Summary of Water Quality-Based Effluent Limitations – Discharge Point 001

Parameter	Units	Average Monthly Effluent Limitations	Average Weekly Effluent Limitations	Maximum Daily Effluent Limitations
Ammonia Nitrogen, Total (as N)	mg/L	1.2	2.5	--
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	--
Cyanide, Total	µg/L	4.3	--	8.5
Nitrite Plus Nitrate (as N)	mg/L	10	16	--
pH	standard units	--	--	6.5 – 8.2
Total Suspended Solids	mg/L	10	15	--

Table F-10 Notes:

1. **Percent Removal.** The average monthly percent removal of BOD_5 and TSS shall not be less than 90 percent.
2. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following with compliance measured at Monitoring Location UVS-001 as described in the MRP, Attachment E:
   i. 2.2 most probable number per 100 milliliters (MPN/100 mL), as a 7-day median
   ii. 23 MPN/100 mL, more than once in any 30-day period
   iii. 240 MPN/100 mL, at any time
3. **pH – Effluent Limitations.** Applied as a range from instantaneous minimum to instantaneous maximum.

Table F-11 Summary of Water Quality-Based Effluent Limitations – Discharge Point 002

Parameter	Units	Average Monthly Effluent Limitations	Average Weekly Effluent Limitations	Maximum Daily Effluent Limitations
Ammonia Nitrogen, Total (as N)	mg/L	1.9	4.1	--
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	--
Cyanide, Total	µg/L	4.3	--	8.5
Diazinon and Chlorpyrifos	µg/L	See table note 4	--	--
Nitrite Plus Nitrate (as N)	mg/L	10	16	--
pH	standard units	--	--	6.5 – 8.1
Total Suspended Solids	mg/L	10	15	--

Table F-11 Notes:

1. **Percent Removal.** The average monthly percent removal of BOD_5 and TSS shall not be less than 90 percent.
2. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed the following with compliance measured at Monitoring Location UVS-001 as described in the MRP, Attachment E:

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

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

   iii. 240 MPN/100 mL, at any time
3. **pH – Effluent Limitations.** Applied as a range from instantaneous minimum to instantaneous maximum.
4. **Diazinon and Chlorpyrifos.** Effluent diazinon and chlorpyrifos concentrations shall not exceed the sum of one (1.0) as identified below:

   i. Average Monthly Effluent Limitation (AMEL)

   $S_{AMEL} = CD_{M\text{-}AVG}/0.079 + CC_{M\text{-}AVG}/0.012 \leq 1.0$

   $CD_{M\text{-}AVG}$ = average monthly diazinon effluent concentration in µg/L.

   $CC_{M\text{-}AVG}$ = average monthly chlorpyrifos effluent concentration in µg/L

   ii. Average Weekly Effluent Limitation (AWEL)

   $S_{AWEL} = CD_{W\text{-}avg}/0.14 + CC_{W\text{-}avg}/0.021 \leq 1.0$

   $CD_{W\text{-}AVG}$ = average weekly diazinon effluent concentration in µg/L.

   $CC_{W\text{-}AVG}$ = average weekly chlorpyrifos effluent concentration in µg/L.

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 16 September 2019 through 19 July 2023.

Table F-12 Acute Whole Effluent Toxicity Testing Results – Test of Significant Toxicity

Date	Fathead Minnow (*Pimephales promelas*)	
	Pass/Fail	Percent Survival
9/16/2019	Pass	100
4/13/2020	Pass	100
1/25/2021	Pass	100
7/19/2023	Pass	100

i. **RPA**. No dilution has been granted for acute whole effluent toxicity. Therefore, acute toxicity testing has been conducted at an instream waste concentration (IWC) of 100 percent effluent. A test result that fails the Test of Significant Toxicity (TST) demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Statewide Toxicity Provisions aquatic toxicity numeric objectives and Basin Plans' narrative toxicity objective. Based on acute toxicity testing conducted between September 2019 and July 2023, there were no fails of the TST, therefore, the discharge does not have reasonable potential to cause or contribute to an instream exceedance of the Statewide Toxicity Provisions aquatic toxicity numeric objectives.

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.

Table F-13 below is chronic WET *Ceriodaphnia dubia* testing performed by the Discharger between September 2019 and December 2021. Table F-14 below is the Discharger's most sensitive species evaluation that was submitted with the ROWD.

Table F-13 Chronic Whole Effluent Toxicity Testing Results
Test of Significant Toxicity

Date	Location	Water Flea (*Ceriodaphnia dubia)* Reproduction		
		Pass/ Fail	Percent Effect @100 percent effluent	Percent Effect @6.25 percent effluent
9/16/19	EFF-A	Pass	10.3	18.5
11/18/19	EFF-A	Fail	41	12.4
12/11/19	EFF-A	Fail	28.5	27.5
12/17/19	EFF-A	Fail	45	36.8
1/13/20	UVS-001	Pass	-26.7	9.5
1/13/20	EFF-A	Fail	27.8	72.8
2/17/20	UVS-001	Pass	5.3	11.1
2/17/20	EFF-A	Pass	8.9	20.7
4/13/20	UVS-001	Pass	-4.8	4
4/13/20	EFF-A	Pass	2	3
8/10/20	EFF-A	Fail	24.9	54.7
10/12/20	EFF-A	Fail	90.8	35.7
10/26/20	EFF-A	Pass	-5.24	37.8
11/9/20	EFF-A	Fail	31.6	22.8
1/25/21	UVS-001	Fail	24.8	2
1/25/21	EFF-A	Fail	30.6	21.9
4/19/21	UVS-001	Pass	16.2	15.7
4/19/21	EFF-A	Pass	14.4	12.8
7/26/21	UVS-001	Fail	19.7	15.3
7/26/21	EFF-A	Pass	18.1	16.8
11/15/21	UVS-001	Fail	53.5	21.8
11/15/21	EFF-A	Fail	55.3	23.9
12/6/21	UVS-001	Fail	25.5	5.3

Date	Location	Water Flea (*Ceriodaphnia dubia)* Reproduction		
		Pass/ Fail	Percent Effect @100 percent effluent	Percent Effect @6.25 percent effluent
12/6/21	EFF-A	Pass	18.4	6.7
12/15/21	UVS-001	Pass	7.6	-17.2
12/15/21	EFF-A	Pass	18.5	8.2
1/3/22	UVS-001	Fail	57.8	36.7
1/3/22	EFF-A	Fail	40.4	40.7
2/2/22	UVS-001	Pass	14.1	7.2
2/2/22	EFF-A	Pass	12.6	13.8
2/7/22	UVS-001	Pass	-6.9	21.7
2/7/22	EFF-A	Pass	-13.1	22.9
5/11/22	UVS-001	Pass	-0.3	10.67
5/11/22	EFF-A	Pass	-9.4	0.57
8/10/22	UVS-001	Fail	32.1	-8.3
8/10/22	EFF-A	Fail	39.1	16.93
9/5/22	UVS-001	Fail	67.6	2.3
9/5/22	EFF-A	Fail	31.8	22.57
9/12/22	UVS-001	Fail	99.4	16.77
9/12/22	EFF-A	Fail	76.6	16.94
11/28/22	UVS-001	Pass	3.3	-2.26
11/28/22	EFF-A	Pass	-13.9	-2.45
1/11/23	UVS-001	Pass	7.12	-3.26
1/11/23	EFF-A	Pass	1.03	-0.46

Table F-14 Most Sensitive Species Screening Results
Test of Significant Toxicity at the IWC (100 Percent Effluent)

Date	Test Species	Test Endpoint	Percent Effect at 100% Effluent	TST
March 2023	*Selenastrum capricornutum*	Growth	67.2%	Fail
March 2023	*Ceriodaphnia dubia* (UVS-001)	Survival	10.0%	Pass
March 2023	*Ceriodaphnia dubia* (UVS-001)	Reproduction	22.0%	Fail
March 2023	*Ceriodaphnia dubia* (EFF-A)	Survival	0.0%	Pass
March 2023	*Ceriodaphnia*	Reproduction	-8.2%	Pass

Date	Test Species	Test Endpoint	Percent Effect at 100% Effluent	TST
	dubia (EFF-A)			
March 2023	*Pimephales promelas*	Survival	0.0%	Pass
March 2023	*Pimephales promelas*	Growth	-5.3%	Pass
April 2023	*Selenastrum capricornutum*	Growth	-16.3%	Pass
April 2023	*Ceriodaphnia dubia* (UVS-001)	Survival	0.0%	Pass
April 2023	*Ceriodaphnia dubia* (UVS-001)	Reproduction	-11.4%	Pass
April 2023	*Ceriodaphnia dubia* (EFF-A)	Survival	-11.1%	Pass
April 2023	*Ceriodaphnia dubia* (EFF-A)	Reproduction	6.0%	Pass
April 2023	*Pimephales promelas*	Survival	0.0%	Pass
April 2023	*Pimephales promelas*	Growth	-0.2%	Pass
July 2023	*Selenastrum capricornutum*	Growth	14.4%	Pass
July 2023	*Ceriodaphnia dubia* (UVS-001)	Survival	0.0%	Pass
July 2023	*Ceriodaphnia dubia* (UVS-001)	Reproduction	-7.8%	Pass
July 2023	*Ceriodaphnia dubia* (EFF-A)	Survival	-11.1%	Pass
July 2023	*Ceriodaphnia dubia* (EFF-A)	Reproduction	7.4%	Pass
July 2023	*Pimephales promelas*	Survival	-2.6%	Pass
July 2023	*Pimephales promelas*	Growth	-12.9%	Pass
October 2023	*Selenastrum capricornutum*	Growth	-28.4%	Pass

Date	Test Species	Test Endpoint	Percent Effect at 100% Effluent	TST
October 2023	*Ceriodaphnia dubia* (UVS-001)	Survival	0.0%	Pass
October 2023	*Ceriodaphnia dubia* (UVS-001)	Reproduction	12.2%	Pass
October 2023	*Ceriodaphnia dubia* (EFF-A)	Survival	-12.5%	Pass
October 2023	*Ceriodaphnia dubia* (EFF-A)	Reproduction	7.6%	Pass
October 2023	*Pimephales promelas*	Survival	-2.6%	Pass
October 2023	*Pimephales promelas*	Growth	-20.8%	Pass

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 10 percent or greater at the IWC demonstrates the discharge has a reasonable potential to cause or contribute to an exceedance of the Statewide Toxicity Provisions aquatic toxicity numeric objectives. Based on chronic toxicity testing conducted between September 2019 and October 2023 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 in Section IV.A of this Order 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 cyanide, average weekly effluent limitations have been replaced with maximum daily effluent limitations in accordance with section 1.4 of the SIP. Furthermore, for pH and total coliform, weekly average effluent limitations have been replaced or supplemented with effluent limitations utilizing shorter averaging periods. The rationale for using shorter averaging periods for these constituents is discussed in section IV.C.3 of this Fact Sheet.

3. Satisfaction of Anti-Backsliding Requirements

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

The effluent limitations in this Order are at least as stringent as the effluent limitations in the previous Order, with the exception of effluent limitations for acute whole effluent toxicity, ammonia (Discharge Point 002), removal of mass-based effluent limitations for ammonia, copper, electrical conductivity, and zinc. The effluent limitations for these pollutants are less stringent than those in Order R5-2019-0021. This relaxation of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

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

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

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

   Fancher Creek, the Diversion Channel, and Little Dry Creek are considered an attainment water for acute whole effluent toxicity,

ammonia, copper, electrical conductivity, and zinc because the receiving water is not listed as impaired on the 303(d) list for this constituent. The exceptions in section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list. As discussed in section IV.D.4, below, relaxation or removal of the effluent limits complies with federal and state antidegradation requirements. Thus, relaxation of effluent limitations for ammonia at Discharge Point 002; removal of the effluent limitations for acute whole effluent toxicity, copper, electrical conductivity, and zinc; and removal of mass-based effluent limitations for ammonia from Order R5-2019-0021 meet the exception in CWA section 303(d)(4)(B).

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

As described further in section IV.C.3 of this Fact Sheet, updated information that was not available at the time Order R5-2019-0021 was issued indicates that acute toxicity, copper, electrical conductivity, and zinc do not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water and justifies relaxation of ammonia effluent limitations at Discharge Point 002. The updated information that supports the removal and relaxation of effluent limitations for these constituents includes the following:

i. **Acute whole effluent toxicity.** This Order removes the effluent limitation for acute whole effluent toxicity per standard approach under the new Statewide Toxicity Provisions, because chronic toxicity testing is generally protective of both acute and chronic toxicity and whole effluent toxicity data from September 2019 through July 2023 shows no reasonable potential for acute toxicity. This Order does include effluent limitations for chronic whole effluent toxicity, consistent with the Statewide Toxicity Provisions.

ii. **Ammonia.** WQBELs for ammonia were calculated based on monitoring data collected between June 2019 and January 2023, which is representative of current treatment plant performance. Therefore, Central Valley Water Board staff considers this effluent data to be the most representative and reliable dataset to use to determine current Facility performance and development of WQBELs.

The AMEL and AWEL for ammonia in this Order resulted in different values than in previous Order R5-2019-0021. The reason for the

change in AMEL and AWEL is due to a change in the variability of the effluent data for ammonia, use of the 2013 U.S. EPA National Ambient Water Quality Criteria, and updated pH and temperature monitoring data collected between June 2019 and January 2023. The WQBELs, however, are equally protective of the beneficial uses. The level of treatment needed to maintain compliance with the effluent limits remains the same. Consequently, the effluent limits are more stringent at Monitoring Location EFF-001 and are less stringent at Monitoring Location EFF-002 than the previous permit.

iii. **Copper.** Effluent monitoring data collected between December 2019 and January 2023, coupled with the Water Effects Ratio study conducted by the Discharger, indicates that copper in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the aquatic life criteria.

iv. **Electrical Conductivity (EC).** Effluent monitoring data collected between December 2019 and January 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 will be replaced with a performance-based salinity trigger to ensure salinity levels do not increase.

v. **Zinc.** Effluent monitoring data collected between December 2019 and January 2023, coupled with the Water Effects Ratio study conducted by the Discharger, indicate that zinc in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the aquatic life criteria.

Thus, removal or relaxation of the effluent limitations for acute whole effluent toxicity, ammonia, copper, electrical conductivity, and zinc from Order R5-2019-0021 is in accordance with CWA section 402(o)(2)(B)(i), which allows for less stringent effluent limitations based on information that was not available at the time of permit issuance.

4. Antidegradation Policies

This Order does not authorize lowering water quality as compared to the level of discharge authorized in the previous order, which is the baseline by which to measure whether degradation will occur. This Order does not allow for an increase in flow or mass of pollutants to the receiving waters. The Order requires compliance with applicable federal technology-based standards and

with WQBELs where the discharge could have the reasonable potential to cause or contribute to an exceedance of water quality standards. Accordingly, the permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy.

As discussed in section II.E of this Fact Sheet, the Facility was planned in a series of phases. The Facility, currently under Phase I, discharges up to 3.1 MGD as a monthly average and 2.8 MGD as an annual average. Phase II of the Facility will discharge up to 6.2 MGD as a monthly average and 5.6 MGD as an annual average. Previous Orders R5-2008-0036, R5-2014-0005, and R5-2019-0021 provided antidegradation findings and authorized an increase in the permitted flow to 6.2 MGD, as a monthly average, and 5.6 MGD as an annual average. This Order does not provide for an increase in flow or mass of pollutants to the receiving waters beyond levels authorized in Order R5-2019-0021.

Based on the above findings, a complete antidegradation analysis is not necessary in this Order. Any change in water quality that is expected to occur as a result of the issuance of this Order will be consistent with the maximum benefit to the people of the state and will not unreasonably affect present and anticipated beneficial uses. Furthermore, compliance with these requirements in this Order will result in the use of best practicable treatment or control of the discharge.

This Order removes effluent limitations for acute whole effluent toxicity, copper, electrical conductivity and zinc based on updated monitoring data demonstrating that the effluent does not cause or contribute to an exceedance of the applicable water quality criteria or objectives in the receiving waters. This Order relaxes effluent limitations for ammonia at Discharge Point 002 based on updated information (i.e., coefficient of variation, 2013 Ammonia Criteria, and temperature/pH data), which can result in small changes to the effluent limits. The removal and relaxation of WQBELs for these parameters will not result in an increase in pollutant concentration or loading, a decrease in the level of treatment or control, or a reduction of water quality. Therefore, the Central Valley Water Board finds that the removal and relaxation of the effluent limitations does not result in an increase in pollutants or any additional degradation of the receiving waters. Thus, the removal and relaxation of effluent limitations is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy.

This Order removes the mass-based effluent limitations for ammonia based on 40 CFR parts 122.45 (d) and (f). The removal of the mass-based effluent limitations for ammonia will not result in a decrease in the level of treatment or control or a reduction in water quality. Furthermore, both concentration-based AMELs and AWELs remain for ammonia as well as a flow prohibition that limits the amount of flow that can be discharged to the receiving waters. 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 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 ammonia does not result in an allowed increase in pollutants or any additional degradation of the receiving waters. Thus, the removal of the mass-based effluent limits for ammonia is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

5. Stringency of Requirements for Individual Pollutants

This Order contains both technology-based effluent limitations and WQBELs for individual pollutants. The technology-based effluent limitations consist of restrictions on BOD_5, pH, and TSS. Restrictions on these are discussed in IV.B.2 of this Fact Sheet. This Order's technology-based pollutant restrictions implement the minimum, applicable federal technology-based requirements. For BOD_5, pH, and TSS, both technology-based effluent limitations and water quality-based effluent limitations are applicable. The more stringent of these effluent limitations are implemented by this Order. These limitations are not more stringent than required by the CWA.

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

Summary of Final Effluent Limitations
Discharge Point Points 001 and 002

Table F-15 Summary of Final Effluent Limitations – Discharge Point 001

Parameter	Units	Effluent Limitations	Basis[1]
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	AMEL 10 AWEL 15	TTC
Biochemical Oxygen Demand (5-day @ 20°C)	% Removal	90	TTC
Total Suspended Solids	mg/L	AMEL 10 AWEL 15	TTC
Total Suspended Solids	% Removal	90	TTC
pH	Standard units	Instantaneous Max 8.2 Instantaneous Min 6.5	BP
Ammonia Nitrogen, Total (as N)	mg/L	AMEL 1.2 AWEL 2.5	NAWQC
Nitrate Plus Nitrite (as N)	mg/L	AMEL 10 AWEL 16	MCL
Total Coliform Organisms	MPN/100 mL	7-day median 2.2 30-day period 23 Instantaneous Max 240	Title 22
Cyanide, Total	µg/L	AMEL 4.3 MDEL 8.5	CTR
Chronic Toxicity	% Effect and TST	MDEL: No Fail and no %effect >=50 for sub-lethal endpoint. MMEL: no more than 1 Fail	BP

Table F-15 Notes:

1. **TTC** – Based on tertiary treatment capability. These effluent limitations reflect the capability of a properly operated tertiary treatment plant.
   BP – Based on water quality objectives contained in the Basin Plan.
   CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
   NAWQC – Based on U.S. EPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
   MCL – Based on the Primary Maximum Contaminant Level.
   Title 22 – Based on State Water Board Division of Drinking Water Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).

Table F-16 Summary of Final Effluent Limitations – Discharge Point 002

Parameter	Units	Effluent Limitations	Basis[1]
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	AMEL 10 AWEL 15	TTC
Biochemical Oxygen Demand (5-day @ 20°C)	% Removal	90	TTC
Total Suspended Solids	mg/L	AMEL 10 AWEL 15	TTC
Total Suspended Solids	% Removal	90	TTC
pH	Standard units	Instantaneous Max 8.1 Instantaneous Min 6.5	BP
Ammonia Nitrogen, Total (as N)	mg/L	AMEL 1.9 AWEL 4.1	NAWQC
Chlorpyrifos	µg/L	See Table Note 2	TMDL
Diazinon	µg/L	See Table Note 2	TMDL
Nitrate Plus Nitrite (as N)	mg/L	AMEL 10 AWEL 16	MCL
Total Coliform Organisms	MPN/100 mL	7-day median 2.2 30-day period 23 Instantaneous Max 240	Title 22
Cyanide, Total	µg/L	AMEL 4.3 MDEL 8.5	CTR
Chronic Toxicity	% Effect and TST	MDEL: No Fail and no %effect >=50 for sub-lethal endpoint. MMEL: no more than 1 Fail	BP

Table F-16 Notes:

1. **TTC** – Based on tertiary treatment capability. These effluent limitations reflect the capability of a properly operated tertiary treatment plant..
   BP – Based on water quality objectives contained in the Basin Plan.
   CTR – Based on water quality criteria contained in the California Toxics Rule and applied as specified in the SIP.
   NAWQC – Based on U.S. EPA's National Ambient Water Quality Criteria for the protection of freshwater aquatic life.
   TMDL – Based on the TMDL for chlorpyrifos and diazinon in the lower San Joaquin River.
   MCL – Based on the Primary Maximum Contaminant Level.
   Title 22 – Based on State Water Board Division of Drinking Water Reclamation Criteria, CCR, Division 4, Chapter 3 (Title 22).
2. **Diazinon and Chlorpyrifos**. Effluent diazinon and chlorpyrifos concentrations shall not exceed the sum of one (1.0) as identified below:

   i. Average Monthly Effluent Limitation (AMEL)

SAMEL = CDM-AVG/0.079 + CCM-AVG/0.012 ≤ 1.0

CDM-AVG = average monthly diazinon effluent concentration in µg/L.

CCM-AVG = average monthly chlorpyrifos effluent concentration in µg/L

ii. Average Weekly Effluent Limitation (AWEL)

SAWEL = CDW-avg/0.14 + CCW-avg/0.021 ≤ 1.0

CDW-AVG = average weekly diazinon effluent concentration in µg/L.

CCW-AVG = average weekly chlorpyrifos effluent concentration in µg/L.

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Recycling Specifications

The Discharger distributes and uses recycled water produced at the Facility throughout the City of Clovis as recycled water opportunities become available. This Order includes recycled water specifications as well as a Master Recycling Permit, which are necessary to ensure that the use of recycled water does not unreasonably affect present and anticipated uses of groundwater and surface water.

Title 22 of the CCR requires the use disinfected tertiary recycled water for spray irrigation of food crops, parks, playgrounds, unrestricted access golf courses, and other areas of similar public access. As the recycled water produced at the Facility will be used to irrigate unrestricted access to public space, disinfected tertiary treatment is required pursuant to CCR, Title 22. This Order contains water recycling specifications pursuant to CCR, Title 22.

Section 60323(a) of Title 22 states that no person shall produce or supply recycled water for direct reuse from a proposed reclamation plant unless an engineering report is submitted for review and approval by DDW. The Discharger submitted two Title 22 engineering reports, City of Clovis ST/WRF Engineering Report for the Production, Distribution, and Use of Recycled Water, and City-wide Engineering Report for the Production, Distribution, and Use of Recycled Water, to DDW for review and approval. DDW conditionally approved the engineering reports on 28 November 2007. The recycling specifications also include various requirements for the recycled water use areas to protect public health. Included in the recycling specifications are criteria contained in CCR, Title 22, section 60310 and DDW's "Guidelines for the Use of Reclaimed Water" incorporated by reference in the Tulare Lake Basin Plan.

1. **BOD_5, TSS, and BOD_5 and TSS Percent Removal.** The recycling specifications for BOD_5, TSS, and BOD_5 and TSS percent removal are based on limitations that are achievable by a tertiary treatment system, consistent with requirements established for other tertiary treatment systems, and consistent with the "BPTC" provision of State Water Board Resolution 68-16. The recycled

water specifications for BOD_5, TSS, and BOD_5 and TSS percent removal have been retained from Order R5-2019-0021.

2. **Total Coliform Organisms and Turbidity**. DDW promulgated water recycling criteria in CCR, Title 22, division 4, chapter 3 to ensure reuse of wastewater does not pose an unacceptable health risk in various use situations. Title 22 requires that for sprinkler irrigation of food crops, parks, playgrounds, schoolyards, and other areas of similar public access, recycled water must be adequately disinfected, oxidized, coagulated (under certain circumstances), clarified, and filtered, and that the effluent total coliform levels not exceed 2.2 MPN/100 mL as a 7-day median, not exceed 23 MPN/100 mL in more than one sample in any 30-day period, and never exceed 240 MPN/100 mL (disinfected tertiary treatment). This Order retains the recycled water specifications for total coliform organisms from Order R5-2019-0021, which are consistent with Title 22 recycled water criteria.

   Section 60301.320 of Title 22 contains filtration requirements for membrane systems. These requirements specify the turbidity of the effluent, after it has passed through microfiltration, shall not exceed 0.2 NTU more than 5 percent of the time within a 24-hour period and 0.5 NTU at any time. This Order incorporates filtration requirements consistent with Title 22 recycled water criteria.

3. **Nitrate and Nitrite.** DDW has adopted Primary MCL's for the protection of human health for nitrite and nitrate that are equal to 1.0 mg/L and 10 mg/L (measured as nitrogen), respectively. DDW has also adopted a Primary MCL of 10 mg/L for the sum of nitrate and nitrite, measured as nitrogen.

   U.S. EPA has developed a Primary MCL and an MCL goal of 1.0 mg/L for nitrite (measured as nitrogen). For nitrate, U.S. EPA has developed Drinking Water Standards (10 mg/L as Primary MCL) and NAWQC for protection of human health (10 mg/L for non-cancer health effects).

   This Order retains the recycled water specifications for total nitrogen from Order R5-2019-0021 with an AMEL and AWEL for nitrite plus nitrate of 10 mg/L and 16 mg/L, respectively, based on the Primary MCL.

4. **pH.** It is expected that a portion of the recycled water applied to the recycled water use areas will percolate to the groundwater. The Tulare Lake Basin Plan includes a water quality objective for groundwater that "[g]round waters shall not contain taste or odor-producing substances in concentrations that cause nuisance or adversely affect beneficial uses." U.S. EPA has a Secondary MCL for drinking water pH of 6.5 to 8.5 units. A pH limitation range of 6.5 to 8.5 helps to ensure that the Discharger's wastewater treatment activities do not cause the groundwater taste and odor objective to be violated. Potential corrosion and deposits caused by a pH outside of the 6.5 to 8.5 range could adversely affect the beneficial use of industrial service supply and may disrupt the ability of

bacteria to effectively break down certain wastewater constituents. In addition, low pH values cause metals to dissolve, allowing them to percolate into groundwater in concentrations that may affect beneficial uses.

5. **Salinity.** Order R5-2019-0021 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 731 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 Plans. The Basin Plans 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 Plans 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 Plans 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 Order includes effluent limitations and discharge requirements equivalent to the DDW Title 22 disinfected tertiary reclamation criteria that are more stringent than the Statewide Bacteria Objectives. Therefore, the Statewide Bacteria Objectives have not been implemented in this Order.

B. Groundwater

1. The beneficial uses of the groundwater underlying potential recycled water use areas are MUN, industrial service supply, industrial process supply, agricultural supply, contact and non-contact water recreation, and wildlife habitat.

2. Tulare Lake 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 Tulare Lake 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 MCL's in Title 22 of the CCR. The bacteria objective prohibits coliform organisms at or above 2.2 MPN/100 mL. The Tulare Lake 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 MUN, 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. **Mercury.** This provision allows the Central Valley Water Board to reopen this Order in the event mercury is found to be causing toxicity based on acute or chronic toxicity test results, or if a TMDL program is adopted. In addition, this Order may be reopened if the Central Valley Water Board determines that a mercury offset program is feasible for dischargers subject to NPDES permits.

b. **Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS).** On 17 January 2020, certain Basin Plan Amendments to incorporate new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley became effective. Other provisions subject to U.S. EPA approval became effective on 2 November 2020, when approved by U.S. EPA. The Discharger is located in a Priority 1 groundwater basin of the Nitrate Control Program and received a Notice to Comply with a deadline of 7 May 2021 to implement the requirements of the Nitrate Control Program. On 23 January 2024, the Discharger received a conditional approval for Path A (Individual Permitting Approach) of the Nitrate Control Program. The Discharger received a Notice to Comply with a deadline of 15 July 2021 to implement the requirements of the Salt Control Program. The Discharger is currently participating in the Alternative Compliance Pathway and participating in the Prioritization and Optimization Study as part of Phase 1 of the Salt Control Program.

As the Central Valley Water Board moves forward to implement those provisions of the Salt and Nitrate Control Programs that are now in effect, this Order may be amended or modified to incorporate new or modified requirements necessary for implementation of the Basin Plan Amendments. More information regarding these Amendments can be found on the Central Valley Salinity Alternatives for Long-Term

Sustainability (CV-SALTS) web page:
(https://www.waterboards.ca.gov/centralvalley/water_issues/salinity/)

c. **Water Effects Ratio (WER) and Metal Translators.** A default WER of 1.0 has been used in this Order for calculating criteria for applicable inorganic constituents. A WER of 18 has been used in this Order for calculating CTR criteria of copper, and a WER of 1.79 was used to calculate the CTR criteria for zinc. In addition, default dissolved-to-total metal translators have been used to convert water quality objectives from dissolved to total. If the Discharger performs additional studies to determine site-specific WERs and/or site-specific dissolved-to-total metal translators, this Order may be reopened to modify the effluent limitations for the applicable inorganic constituents.

d. **Ultraviolet Light (UV) Disinfection Operating Specifications.** UV system operating specifications are required to ensure that the UV system is operated to achieve the required pathogen removal. UV disinfection system specifications and monitoring and reporting requirements are required to ensure that adequate UV dosage is applied to the wastewater to inactivate pathogens (e.g., viruses) in the wastewater. UV dosage is dependent on several factors such as UV transmittance, UV power setting, wastewater turbidity, and wastewater flow through the UV disinfection system. With the exception of percent transmittance (see section VI.B.4 below), the UV specifications in this Order are based on the National Water Research Institute (NWRI) and American Water Works Association Research Foundation (AWWRF) “Ultraviolet Disinfection Guidelines for Drinking Water and Water Reuse” first published in December 2000 and revised as a Third Edition dated August 2012 (NWRI Guidelines). If the Discharger conducts a site-specific UV engineering study that identifies site-specific UV operating specifications that will achieve the virus inactivation required by Title 22 for disinfected tertiary recycled water, this Order may be reopened to modify the UV specifications, in accordance with Reopener Provision VI.C.1.e.

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

f. **Groundwater Recharge.** The Discharger is considering the development of a Groundwater Recharge Project, through which the Facility’s effluent would be applied to identified basins for groundwater recharge. If the Discharger submits a complete antidegradation analysis and a revised ROWD characterizing the Groundwater Recharge Project, this Order may

be amended or modified to authorize the application of the Facility's effluent for groundwater recharge.

g. **Drinking Water Policy**. On 26 July 2013, the Central Valley Water Board adopted Resolution R5-2013-0098, amending the Basin Plan and establishing a Drinking Water Policy. The State Water Board approved the Drinking Water Policy on 3 December 2013. This Order may be reopened to incorporate monitoring of drinking water constituents to implement the Drinking Water Policy.

2. Special Studies and Additional Monitoring Requirements

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

3. Best Management Practices and Pollution Prevention

a. Salinity Evaluation and Minimization Plan (SEMP). The Basin Plans include 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 15 July 2021 indicating its intent to meet the Alternative Salinity Permitting Approach. Under the Alternative Permitting Approach, the Basin Plan requires dischargers to 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 in meeting the requirements of the Alternative Salinity Permitting Approach. This Order also requires continued implementation of the Discharger's SEMP and includes a performance-based salinity trigger to ensure salinity levels do not increase. In accordance with the Basin Plans, 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. **Filtration System Operating Specifications.** Turbidity is included as an operational specification as an indicator of the effectiveness of the filtration system for providing adequate disinfection. The tertiary treatment process utilized at this Facility is capable of reliably meeting a turbidity limitation of 0.5 NTU at all times. Failure of the treatment system such that virus removal is impaired would normally result in increased particles in the effluent, which result in higher effluent turbidity and could impact UV dosage. Turbidity has a major advantage for monitoring filter performance, allowing immediate detection of filter failure and rapid corrective action. The operational specification requires that turbidity prior to disinfection shall not exceed 0.2 NTU more than 5 percent of the time and a daily maximum of 0.5 NTU.

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

The NWRI Guidelines include UV operating specifications for compliance with Title 22. For water recycling in accordance with Title 22, the UV system shall be an approved system included in the Alternative Treatment Technology Report for Recycled Water, April 2023 (or a later version, as applicable) published by the DDW. The UV system shall also conform to all requirements and operating specifications of the NWRI Guidelines. A memorandum dated 1 November 2004 issued by DDW to Regional Water Board executive offices recommended that provisions be included in permits for water recycling treatment plants employing UV disinfection requiring dischargers to establish fixed cleaning frequency of lamp sleeves, as well as include provisions that specify minimum delivered UV dose that must be maintained (per the NWRI Guidelines).

The Discharger submitted two Title 22 engineering reports that demonstrate the UV disinfection system is compliant with Title 22-. DDW conditionally approved the engineering reports on 28 November 2007. The engineering reports demonstrate that a minimum hourly average UV dose of 80 mJ/cm^2 and a UV transmittance of 54 percent will achieve the virus inactivation required by Title 22 for Disinfected Tertiary Recycled Water.

Therefore, in lieu of the UV dose and transmittance requirements of the NWRI Guidelines, this Order includes an operating specification for a minimum hour average UV dosage of 80 mJ/cm^2 and a UV transmittance of 54 percent, in accordance with the Discharger's Title 22 engineering reports.

c. **Facility Operating Requirements.** Consistent with Order R5-2019-0021, this Order includes operating requirements to prevent inundation or washout due to floods with a 100-year return frequency, preclude public contact with wastewater, and prevent objectionable odors originating at the Facility from creating or threatening to create nuisance conditions.

5. Special Provisions for POTWs

a. **Pretreatment Requirements.**

i. 40 C.F.R. section 403.8(a) requires POTW's with a total design flow greater than 5 MGD and receiving pollutants that pass through or interfere with the operation of the POTW to establish a POTW Pretreatment Program. The Facility currently has a design flow of less than 5 MGD; however, as identified in the ROWD, the Facility receives discharges from one non-categorical significant industrial user. Therefore, the Discharger is required to implement a pretreatment program.

ii. The federal CWA section 307(b), and federal regulations, 40 C.F.R. part 403, require publicly owned treatment works to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants, which will interfere with treatment plant operations or sludge disposal and prevent pass through of pollutants that exceed water quality objectives, standards or permit limitations. Pretreatment requirements are imposed pursuant to 40 C.F.R. part 403.

iii. The Discharger shall continue to authorize the City of Fresno to implement and enforce its approved pretreatment program, which is an enforceable condition of this Order. If the Discharger fails to perform the pretreatment functions, the Central Valley Water Board, the State Water Board or U.S. EPA may take enforcement actions against the Discharger as authorized by the CWA.

b. **Sludge/Biosolids Treatment or Discharge Specifications.** Sludge in this Order means the solid, semisolid, and liquid residues removed during primary, secondary, or advanced wastewater treatment processes. Solid waste refers to grit and screening material generated during preliminary treatment. Residual sludge means sludge that will not be subject to further treatment at the wastewater treatment plant. Biosolids refer to sludge that has been treated and tested and shown to be capable of being beneficially

and legally used pursuant to federal and state regulations as a soil amendment for agricultural, silvicultural, horticultural, and land reclamation activities as specified under 40 C.F.R. part 503. This Order does not regulate offsite use or disposal of biosolids, which are regulated instead under 40 C.F.R. part 503; administered by U.S. EPA. The Sludge/Biosolids Treatment or Discharge Specifications in this Order implement the California Water Code to ensure sludge/biosolids are properly handled onsite to prevent nuisance, protect public health, and protect groundwater quality.

6. Other Special Provisions

a. **Disinfection Requirements.** Consistent with previous Order R5-2019-0021, this Order requires wastewater to be oxidized, coagulated, filtered, and adequately disinfected consistent with DDW reclamation criteria, CCR, Title 22, division 4, chapter 3 (Title 22) (or equivalent for surface water discharges). The disinfection requirements are discussed in detail above in Section IV.C.3, Determining the Need for WQBELs (see Pathogens).

b. **Phase II Facility Expansion.** The Discharger intends to build the Facility in a series of phases. The Facility is currently in Phase I. The Phase II expansion project would increase the Facility's treatment capacity to an average monthly flow of 6.2 MGD and an average annual flow of 5.6 MGD in order to accommodate for planned growth and the associated increase in wastewater flows within the Facility's service area. The Discharger must comply with the provisions in section VI.C.6.b of this Order before the permitted effluent flow may be increased.

7. Compliance Schedules – Not Applicable

8. Master Recycling Permit Provisions

The Master Recycling Permit provisions are included in this Order to ensure compliance with Water Code section 13523.1 (see section III.C.2 of this Fact Sheet).

VII. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

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

The following provides additional rationale for the monitoring and reporting requirements contained in the MRP for this facility.

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

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

A. Influent Monitoring

1. Influent monitoring is required to collect data on the characteristics of the wastewater and to assess compliance with effluent limitations (e.g., BOD_5 and TSS reduction requirements). The monitoring frequencies and sample types have been retained from Order R5-2019-0021, except as noted in Table F-17, below.

B. Effluent Monitoring

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

2. Effluent monitoring frequencies and sample types have been retained from Order R5-2019-0021, except as noted in Table F-17, 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 State 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 No. R5-2019-0021, except as noted in Table F-17, below:

2. Groundwater – Not Applicable

Table F-17 Summary of Monitoring Changes

Parameter, Units	Type of Monitoring	Prior Sample Frequency	Revised Sample Frequency	Reason for Change
Hardness	Effluent	1/Month	1/Quarter	Copper and zinc effluent limits were removed; thus, hardness data is not needed as frequently.
Copper, Total Recoverable	Effluent	1/Month	--	Copper no longer exhibits reasonable potential.
Diazinon and Chlorpyrifos	Effluent	--	1/Year	Basin Plan Objective/TMDL
Zinc, Total Recoverable	Effluent	1/Month	--	Zinc no longer exhibits reasonable potential.
Dissolved Organic Carbon	Effluent & RSW	--	1/Quarter	Needed for aluminum criteria calculations
Electrical Conductivity	Influent & Effluent	3/Week	1/Week	Adequate dataset; thus, monitoring is not needed as frequently.
Electrical Conductivity	RSW	1/Week	1/Month	Adequate dataset; thus, monitoring is not needed as frequently.
Turbidity	RSW	1/Week	1/Month	Adequate dataset; thus, monitoring is not needed as frequently.
Total Dissolved Solids	Effluent	1/Month	1/Quarter	Adequate dataset; thus, monitoring is not needed as frequently.
Nitrate Nitrogen, Total	Effluent	1/Week	1/Month	Adequate dataset; thus, monitoring is not needed as frequently.
Nitrite Nitrogen, Total	Effluent	1/Week	1/Month	Adequate dataset; thus, monitoring is not needed as frequently.
Nitrate plus Nitrite	Effluent	1/Week	1/Month	Adequate dataset; thus, monitoring is not needed as frequently.
Total Kjeldahl Nitrogen	Effluent	1/Week	1/Month	Adequate dataset; thus, monitoring is not needed as frequently.

D. Whole Effluent Toxicity Testing Requirements

Aquatic toxicity testing is necessary to evaluate the aggregate toxic effect of a mixture of toxicants in the effluent on the receiving water. Acute toxicity testing is conducted over a short time period and measures mortality, while chronic toxicity testing is conducted over a short or longer period and may measure mortality, reproduction, and growth. For this permit, aquatic toxicity testing is to be performed following methods identified in the Code of Federal Regulations, title 40, part 136, or other U.S. EPA-approved methods, or included in the following U.S. EPA method manuals: Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition (EPA-821-R-02-013).

Quarterly chronic whole effluent toxicity testing is required to demonstrate compliance with the toxicity receiving water limitation and chronic toxicity effluent limitations/targets.

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

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

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

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

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

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

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

3. **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 toxicity 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 species sensitivity screening, if the first two subsequent species sensitivity screening events result in no change in the most sensitive species, the Discharger may cease the subsequent species sensitive screening testing and the most sensitive species will remain unchanged.

The 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 the *Selenastrum capricornutum*, with a percent effect of 67.2 percent. Consequently, *Selenastrum capricornutum* has been established as the most sensitive species for chronic WET testing.

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

E. Other Monitoring Requirements

1. Biosolids Monitoring

Biosolids monitoring is required to ensure compliance with the pretreatment requirements contained in 40 C.F.R. part 403 and implemented in section VI.C.5.b. of this Order. Biosolids monitoring is required per U.S. EPA guidance to evaluate the effectiveness of the pretreatment program. Biosolids monitoring for compliance with 40 C.F.R. part 503 regulations is not included in this Order

since it is a program administered by U.S. EPA's part 503 Biosolids Program (https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws)

2. **Water Supply Monitoring**

   Water supply monitoring is required to evaluate the source of constituents in the wastewater. Consistent with Order R5-2019-0021, this Order requires annual water supply monitoring for electrical conductivity, standard minerals, and total dissolved solids at Monitoring Location SPL-001.

3. **Filtration System Monitoring**

   Filtration system monitoring and reporting are required to determine compliance with the operation specifications for turbidity in Special Provision VI.C.4.a. Consistent with Order R5-2019-0021, this Order requires continuous turbidity monitoring at a compliance point following the tertiary filters and prior to the UV disinfection system (Monitoring Location FIL-001) in order to ensure the operational specifications for turbidity are being met prior to the disinfection process.

4. **UV Disinfection System Monitoring**

   UV system monitoring and reporting are required to ensure that the UV system is operated to adequately inactivate pathogens in the wastewater. UV disinfection system monitoring is imposed to achieve Title 22 (or equivalency for surface water discharges) requirements established by the DDW, and the NWRI Guidelines.

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

   In accordance with section 1.3 of the SIP, periodic monitoring is required for priority pollutants for which criteria or objectives apply and for which no effluent limitations have been established. This Order requires effluent and receiving water (Fancher Creek and Little Dry Creek) monitoring for priority pollutants and other constituents of concern quarterly for one year beginning the third quarter of 2025, at Monitoring Location EFF-A, RSW-001U, and RSW-002U. For sampling location RSW-003U, samples shall be collected once from 1 July 2025 to 31 December 2025 and once from 1 January 2026 to 30 June 2026. This monitoring frequency has been retained from Order R5-2019-0021. The data obtained from the effluent and receiving water characterization monitoring is needed to conduct an RPA for the next permit renewal. See section IX.D of the MRP (Attachment E) for more detailed requirements related to performing priority pollutant monitoring.

6. **Discharge Monitoring Report-Quality Assurance (DMR-QA) Study Program**

   Under the authority of section 308 of the CWA (33 U.S.C. section 1318), U.S. EPA requires all dischargers under the NPDES Program to participate in the

annual DMR-QA Study Program. The DMR-QA Study evaluates the analytical ability of laboratories that routinely perform or support self-monitoring analyses required by NPDES permits. There are two options to satisfy the requirements of the DMR-QA Study Program: (1) The Discharger can obtain and analyze a DMR-QA sample as part of the DMR-QA Study; or (2) Per the waiver issued by U.S.EPA to the State Water Board, the Discharger can submit the results of the most recent Water Pollution Performance Evaluation Study from their own laboratories or their contract laboratories. A Water Pollution Performance Evaluation Study is similar to the DMR-QA Study. Thus, it also evaluates a laboratory's ability to analyze wastewater samples to produce quality data that ensure the integrity of the NPDES Program. The Discharger shall submit annually the results of the DMR-QA Study or the results of the most recent Water Pollution Performance Evaluation Study to the State Water Board. The State Water Board's Quality Assurance Program Officer will send the DMR-QA Study results or the results of the most recent Water Pollution Performance Evaluation Study to U.S. EPA's DMR-QA Coordinator and Quality Assurance Manager.

VIII. PUBLIC PARTICIPATION

The Central Valley Water Board has considered the issuance of WDRs that will serve as an NPDES permit for City of Clovis Sewage Treatment and Water Reuse Facility. As a step in the WDR adoption process, the Central Valley Water Board staff has developed tentative WDRs and has encouraged public participation in the WDR adoption process.

A. Notification of Interested Persons

The Central Valley Water Board notified the Discharger and interested agencies and persons of its intent to prescribe WDRs for the discharge and provided an opportunity to submit written comments and recommendations. Notification was provided through the following: direct mailing to agencies and known interested parties; posting of a Notice of Public Hearing at the Facility entrance, nearest city hall or county courthouse, nearest post office, and the Central Valley Regional Water Board's web site.

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 **13 May 2024**.

C. Public Hearing

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

Date: **21 June 2024**
Time: **9:00 a.m.**
Location: Regional Water Quality Control Board, Central Valley Region
11020 Sun Center Dr., Suite #200
Rancho Cordova, CA 95670

With remote meeting option.

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

D. Reconsideration of Waste Discharge Requirements

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

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

Or by email at waterqualitypetitions@waterboards.ca.gov

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

E. Information and Copying

The Report of Waste Discharge, other supporting documents, and comments received are on file and may be inspected at the address above at any time between

8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Central Valley Water Board by calling (559) 445-5116.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Central Valley Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Nicolette Dentoni at (559) 444-2505, or nicolette.dentoni@waterboards.ca.gov.

ATTACHMENT G – SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Table G-1. Summary of Reasonable Potential Analysis – Discharge Point 001

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Ammonia Nitrogen, Total (as N)	mg/L	33	8.2	2.4	4.0 (Note 2)	2.4 (Note 3)	--	--	--	--	Yes
Chloride	mg/L	79	1.4	230	860 (Note 2)	230 (Note 4)	--	--	--	250	No
Copper, Total Recoverable	µg/L	7.9	16	63	86	63	1,300	--	--	1,000	No
Cyanide, Total Recoverable	µg/L	42	ND	5.2	22	5.2	700	222,000	--	--	Yes
Electrical Conductivity @ 25°C	µmhos/ cm	Annual Avg. 585 (Note 5)	120 (Note 5)	900	--	--	--	--	--	900	No
Nitrite plus Nitrate (as N)	mg/L	20	ND	10	--	--	--	--	--	10	Yes
Sulfate	mg/L	27	8.8	250	--	--	--	--	--	250	No
Total Dissolved Solids	mg/L	480	72	500	--	--	--	--	--	500	No
Zinc, Total Recoverable	µg/L	74	7.2	82	82	82	--	--	--	5,000	No

Table G-2. Summary of Reasonable Potential Analysis – Discharge Point 002

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	Reasonable Potential
Ammonia Nitrogen, Total (as N)	mg/L	33	0.3	5.1	6.7 (Note 2)	5.1 (Note 3)	--	--	--	--	Yes
Chloride	mg/L	79	33	230	860 (Note 2)	230 (Note 4)	--	--	--	250	No
Copper, Total Recoverable	µg/L	7.9	4.6	63	86	63	1,300	--	--	1,000	No
Cyanide, Total Recoverable	µg/L	42	4.1	5.2	22	5.2	700	222,000	--	--	Yes
Electrical Conductivity @ 25°C	µmhos/ cm	Annual Avg. 585 (Note 5)	470 (Note 5)	900	--	--	--	--	--	900	No
Nitrite plus Nitrate (as N)	mg/L	20	ND	10	--	--	--	--	--	10	Yes
Sulfate	mg/L	27	71	250	--	--	--	--	--	250	No
Total Dissolved Solids	mg/L	480	290	500	--	--	--	--	--	500	No
Zinc, Total Recoverable	µg/L	74	6.4	82	82	82	--	--	--	5,000	No

Tables G-1 and G-2 Notes:

1. All inorganic concentrations are given as a total concentration.
2. U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour average.
3. U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 30-day average.
4. U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 4-day average.
5. Represents the maximum observed annual average concentration for comparison with the MCL.

Abbreviations used in tables G-1 and G-2:

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
ND =	Non-detect

ATTACHMENT H-1 – CALCULATION OF WQBELS

HUMAN HEALTH WQBELS CALCULATIONS

Parameter	Units	Criteria	Mean Background Concentration	Effluent CV	Dilution Factor	AWEL/AMEL Multiplier	AMEL Multiplier	AMEL	MDEL	AWEL
Nitrate Nitrogen, Total (as N)	mg/L	10	0.09 (RSW-001U) 1.1 (RSW-002U and 003U)	0.46	--	1.6	--	10	--	16

Attachment H-1 Table Notes:

1. CV was established according to section 1.4 of the SIP.

Abbreviations used in this table:

CV = Coefficient of Variation
MDEL = Maximum Daily Effluent Limitation
AMEL = Average Monthly Effluent Limitation
MDEL = Maximum Daily Effluent Limitation
AWEL = Average Weekly Effluent Limitation

ATTACHMENT H-2 – CALCULATION OF WQBELS

AQUATIC LIFE WQBELS CALCULATIONS

Parameter	Units	CMC Criteria	CCC Criteria	B	Effluent CV	ECA Multiplier$_{acute}$	LTA$_{acute}$	ECA Multiplier$_{chronic}$	LTA$_{chronic}$	AMEL Multiplier$_{95}$	AWEL Multiplier	MDEL Multiplier$_{99}$	AMEL	AWEL	MDEL
Ammonia Nitrogen, Total (as N)	mg/L	4.0 6.7	2.4 5.1	8.2 0.3	5.1	0.08	0.31 0.51	0.22	0.52 1.11	3.77	8.01	-	1.2 1.9	2.5 4.1	--
Cyanide, Total	µg/L	22	5.2	0.002 4.1	0.6	0.32	7.1	0.53	2.7	1.55	--	3.1	4.3	--	8.5

Attachment H-2 Table Notes:

1. AMEL calculated according to section 1.4 of the SIP using a 95th percentile occurrence probability.
2. AWEL calculated according to section 1.4 of the SIP using a 98th percentile occurrence probability.
3. MDEL calculated according to section 1.4 of the SIP using a 99th percentile occurrence probability.
4. Columns with two numbers represent Discharge Point 001 (Top) and Discharge Point 002 (Bottom).

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
AWEL = Average Weekly Effluent Limitation

ATTACHMENT I – RECYCLED WATER SIGNAGE