Central Valley Regional Water Quality Control Board

24 June 2026

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NOTICE OF APPLICABILITY (NOA); MUNICIPAL WASTEWATER DISCHARGERS THAT MEET OBJECTIVES/CRITERIA AT THE POINT OF DISCHARGE TO SURFACE WATER ORDER R5-2023-0025 (MUNICIPAL GENERAL ORDER), NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CAG585001; UNIVERSITY OF CALIFORNIA REGENTS, UNIVERSITY OF CALIFORNIA, DAVIS WASTEWATER TREATMENT PLANT, SOLANO AND YOLO COUNTIES

Our office received a Report of Waste Discharge dated 31 March 2025 from the University of California Davis (UC Davis), for discharge of tertiary treated domestic wastewater to surface water from the UC Davis Wastewater Treatment Plant (Facility) to South Fork of Putah Creek and the Arboretum Waterway. The University of California Regents are the owner (Discharger) and UC Davis is the operator of the Facility. The Municipal General Order requires the submittal of an NOI to apply for regulatory coverage of a surface water discharge. However, the Discharger did submit a ROWD in accordance with its existing individual NPDES Permit. Based on the ROWD and subsequent information submitted by the Discharger, staff has determined that the NOI requirements have been fulfilled and the Facility is eligible for coverage under the Municipal General Order. This Facility's discharge is assigned Municipal General Order Enrollee Number R5-2023-0025-018 under NPDES Permit CAG585001. Please reference your Municipal General Order Enrollee Number, R5-2023-0025-018, in your correspondence and submitted documents.

Discharges to surface water from the Facility are currently regulated by an individual NPDES permit, Order R5-2021-0007 (NPDES CA0077895) issued by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) on 18 February 2021. This NOA, R5-2023-0025-018, authorizing coverage under the Municipal General Order, shall become effective on 1 October 2026, at which time the terms and conditions in Order R5-2021-0007 will cease to be effective except for enforcement purposes. 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 Clean Water Act and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements contained in the Municipal General Order and as specified in this NOA. This action in no way prevents the Central Valley Water Board from taking enforcement action for past violations of Order R5-2021-0007.

The enclosed Municipal General Order is available online (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2023-0025.pdf) and can be requested by email or phone from the NPDES Permitting Contacts webpage (https://www.waterboards.ca.gov/centralvalley/water_issues/waste_to_surface_water/contacts/). You are urged to familiarize yourself with the entire contents of the enclosed document.

The Monitoring and Reporting Program, Attachment E to the Municipal General Order, contains the general monitoring and reporting requirements. The Discharger specific monitoring and reporting requirements are included within this NOA R5-2023-0025-018 as Appendix D. Only the monitoring and reporting requirements specifically listed in Appendix D of this NOA R5-2023-0025-018 are applicable to this Facility. The discharge of treated domestic wastewater shall be in accordance with the requirements contained in the Municipal General Order, as specified in this NOA R5-2023-0025-018.

Table 1. Facility Information

Waste Discharge ID:	5A570800001
CIWQS Facility Place ID:	268926
Discharger	University of California Regents
Name of Facility:	University of California (UC), Davis Wastewater Treatment Plant
Facility Address:	561 Trotter Way
Facility City, State Zip:	Davis, California 95616
Facility County:	Solano and Yolo Counties
Facility Contact, Title and Phone Number:	Courtney Doss, PE, Engineering and Compliance Supervisor, (530) 574-7225
Authorized to Sign and Submit Reports:	Courtney Doss, PE, Engineering and Compliance Supervisor, (530) 574-7225 Brad Butterfield Wastewater Treatment Superintendent (530) 754-5977
Mailing Address:	Utilities Headquarters One Shields Avenue, Davis, CA 95616
Billing Address:	Same as Mailing Address
Type of Facility:	Publicly Owned Treatment Works
Major or Minor Facility:	Major
Threat to Water Quality/Complexity	1/A
Pretreatment Program:	Not Applicable
Recycling Requirements:	Not Applicable
Facility Permitted Flow:	3.6 Million Gallons per Day (MGD) Average Dry Weather Flow (ADWF)
Facility Design Flow:	3.6 MGD
Watershed:	Lower Sacramento
Receiving Water:	South Fork of Putah Creek, Groundwater
Receiving Water Type:	Inland Surface Water, Groundwater
Assessor Parcel Number, Acres	0110050040, 150.27 Acres

I. FACILITY INFORMATION

The Discharger provides sewerage service for UC Davis and serves a campus population of approximately 48,000. The design daily average flow capacity of the Facility is 3.6 MGD. From July 2022 through June 2025, the average flow at EFF-001 was 1.5 MGD. The Facility receives all wastewater generated on the UC Davis campus with the exception of sewage from a few buildings mainly located on remote areas of west and south campus that are served by on-site septic systems.

The Facility also receives wastes from two groundwater remediation sites on campus; the Campus Class III Landfill (closed) and the Laboratory for Energy-Related Health Research (LEHR)/Old Campus Landfill facility.

Campus Class III Landfill (Closed):

Groundwater is extracted as a corrective action measure due to a historical release of volatile organic compounds (VOCs) including carbon tetrachloride, chloroform, cis-1,2- dichloroethene, and vinyl chloride from the site. There are currently five active extraction wells, all of which discharge to the sanitary sewer system for treatment at the UC Davis WWTP. A combined 130-140 gallons per minute (gpm) of groundwater is extracted and discharged to the sanitary sewer system on a continuous basis (24 hours per day, 365 days per year). The levels of VOCs remaining in the groundwater are mostly trace or low level. In 2024, a combined 2.4 pounds of VOCs were removed from the groundwater and discharged to the sanitary sewer system.

LEHR/Old Campus Landfill (Closed):

Groundwater is extracted as a corrective action measure due to a historical release of contaminants from the old landfill site. The primary contaminants are chloroform, hexavalent chromium, nitrate, 1,2,3-trichloropropane, 1,2-dichloropropane, and 1,4-dioxane. The groundwater extraction system discharges to the sanitary sewer system for treatment at the UC Davis WWTP. A combined 60-90 gpm of groundwater is extracted and discharged to the sanitary sewer system on a continuous basis (24 hours per day, 365 days per year).

A. Description of Wastewater and Biosolids Treatment and Controls

1. **Treatment System.** The tertiary treatment system consists of the following:

   - Manual and mechanical bar screens;
   - Oxidation ditch activated sludge process with simultaneous nitrification and denitrification;
   - Secondary clarifiers;
   - Filtration through either gravity sand filters or cloth-media filters; and
   - Ultraviolet light (UV) disinfection system.

   Effluent is discharged at Discharge Point 001 to the South Fork of Putah Creek or Discharge Point 002 to the Arboretum Waterway.

   a. **Discharge Point 001 – South Fork of Putah Creek.** Treated municipal wastewater is discharged at Discharge Point 001 to the South Fork of Putah Creek, a water of the United States and tributary to the Sacramento River, at a point latitude 38° 31’ 2.7” N and longitude 121° 45’ 26.7” W.

b. **Discharge Point 002 – Arboretum Waterway.** Treated municipal wastewater is discharged to the Arboretum Waterway, a water of the state and a tributary to the South Fork of Putah Creek, via Discharge Point 002 to, at a point latitude 38° 31' 56.3" N and longitude 121° 45' 23.2" W. The Arboretum Waterway is a water of the state however, consistent with the 1995 Army Corps of Engineers determination, the Arboretum Waterway is not considered a water of the United States. The Arboretum Waterway exists within a channel that was originally a part of the North Fork of Putah Creek, confined at both ends and used for storm water management purposes. For storm water management purposes, water in the Arboretum Waterway is pumped to a discharge point on the South Fork of Putah Creek, upstream of Discharge Point 001. The Facility discharges to Discharge Point 002 to maintain water quality at the Arboretum Waterway.

2. **Biosolids.** Sludge and scum from the secondary clarifiers are pumped to Sludge Stabilization Basin 1 which is clay-lined. Each summer, stabilized sludge from Sludge Stabilization Basin 1 is pumped into the three asphalt-lined Sludge Drying Beds for dewatering. Dewatered biosolids are transported and disposed of at the Yolo County Central Landfill, a Class III non-hazardous municipal landfill. Biosolids may be disposed of using alternative methods within the 5-year term of the permit, as allowed under 40 CFR part 503.

3. **Pond and Groundwater Well Information.**

   a. ***Geologic Information***. The Discharger's February 2025 technical report titled "*Initial Assessment Nitrate Report for the University of California, Davis Wastewater Treatment Plant*" (February 2025 Nitrate Assessment), prepared by Robertson-Bryan, Inc (RBI) provided geologic information for the Sludge Stabilization Basins and the Sludge Drying beds as well as groundwater information which is included in this section. Geologic bore logs and hydrogeologic characterization of shallow soils show that it is dominated by clay materials to a depth of approximately 80 ft. Per the February 2025 Nitrate Assessment, since 2017, groundwater flow away from the site has persisted in a south and south east direction because of the LEHR facility's Groundwater Extraction and Treatment System well pumping operation located 1,000 ft southeast of the Facility.

   b. **Ponds.**

      i. **Sludge Stabilization Basins.**

      Sludge Stabilization Basin 1 and 2 are labeled as Solids Storage Basins in the Flow Schematic in Appendix B of this NOA. Sludge Stabilization Basin 1 has an operating water depth of 15 feet and is used to aerobically stabilize waste activated sludge and scum from the secondary clarifiers. Aeration in Sludge Stabilization Basin 1 is maintained by mechanical mixing. Digesting sludge is collected within the basin over the year, thus there is a constant hydraulic head in Sludge Stabilization Basin 1. Since Sludge Stabilization Basin 1 is always in operation, it has never been drained.

Sludge Stabilization Basin 2 is planned for use as temporary storage of peak wastewater flows, diverted after secondary treatment to prevent overwhelming the treatment system and protect against discharging noncompliant effluent. Also, during a plant upset, partially treated wastewater may be temporarily diverted to Sludge Stabilization Basin 2. These types of flows are first diverted to the Sludge Drying Beds for emergency storage and only diverted to Sludge Stabilization Basin 2 if additional storage capacity is needed. Only three or four diversion events per year are sufficiently large to require use of the Sludge Stabilization Basin 2 and each diversion event typically lasts 8 to 12 hours. Diverted wastewater is returned to the headworks for treatment as soon as the Facility has capacity. Wastewater pumped to Sludge Stabilization Basin 2 and the Sludge Drying Beds is returned to the headworks typically within 3 to 4 days of the diversion event.

Sludge Stabilization Basins 1 and 2 were constructed with a clay (native soils to site) liner, 3 feet in depth. Shallow soils are dominated by clay materials to a depth of approximately 80 ft. The clay liner at Sludge Stabilization Basin 2 was tested in September 2024 to determine hydraulic conductivity of the liner and to determine if possible fissures or damage were present. Specific discharge was calculated based on a rearrangement of Darcy's Law adapted from *Part 651 Agricultural Waste Management Field Handbook, Chapter 10, Agricultural Waste Management System Component Design* U.S. Department of Agriculture 2009. This resource contains Appendix 10D, *Design and Construction Guidelines for Impoundments Lined with Clay or Amendment-treated Soil*. Testing has demonstrated that the liner of Sludge Stabilization Basin 2 has an average hydraulic conductivity of 5.01×10^{-8} cm/s. The hydraulic conductivity of Sludge Stabilization Basin 2 was determined by the Discharger to be representative of both Sludge Stabilization Basin 1 and 2 since both sludge stabilization basins were constructed at the same time as the original Facility construction (in the year 2000), with the same construction methods and materials. Shallow excavation in Sludge Stabilization Basin 2 to sample the liner material did not identify any significant fissures or damage.

ii. **Sludge Drying Beds.** Two 1-acre Sludge Drying Beds (Sludge Drying Beds 1 and 2) were originally constructed with the WWTP in 2000, while a third Sludge Drying Bed (Sludge Drying Bed 3) was constructed in 2007 during an expansion of the treatment plant. Drawings show all Sludge Drying Beds underlain by compacted native soil, which is native clay as described above. Above this clay soil, the Sludge Drying Beds are composed of 9 inches of aggregate base and 3 inches of asphalt concrete.

Design of the Sludge Drying Beds was intended to make these units sufficiently impermeable to protect underlying groundwater from seepage while they are in use. Hydraulic head on the basins is of short duration and temporary. During the dry season, typically April through

October, solids from Sludge Stabilization Basin 1 are pumped into the Sludge Drying Beds to prepare the solids for hauling off-site. Sludge in Sludge Stabilization Basin 1 is pumped into one of the Sludge Drying Beds up to a depth of 2 feet. Each Sludge Drying Bed is used up to three times per year for drying solids.

The Sludge Drying Beds are sloped and drain by gravity. The sludge sits in the Sludge Drying Bed for five days with drains closed. After five days, the drains are opened to remove clear water from the bottom (the solids float); the drains are closed when water looks turbid. The rest of the liquid removal is through evaporation. The sludge is turned over every three days with an excavator and sits in a Sludge Drying Bed for a total of six weeks, after which it is hauled off to the landfill ahead of the wet season.

The February 2025 Nitrate Assessment did not provide a hydraulic conductivity for the asphalt-lined the Sludge Drying Beds (SDBs) but provided the rationale below:

> *Specific discharge rates through the SDBs are unknown but can be assumed to be low because of their construction and mode of operation. Brown clay is known to dominate the native soil profile and it can reasonably be assumed that it was compacted so that the subgrade native soil was properly prepared before the aggregate and asphalt liners were constructed for the SDBs, which is standard industry practice (Wolf Paving 2025). The pore structure of clay materials is known to cement and become clogged with solids from wastewater. The routine solids drying and removal process introduces solids to the asphalt pore space and equipment used in the SDBs compacts material into the pores continually overtime. In addition, UC Davis resealed the asphalt bottoms twice since their construction, in 2015 and 2024, and routinely fixes any damage to the asphalt due to normal use.*
>
> *Each SDB is used up to three times per year to dewater biosolids and during each event a water depth of 1 to 2 ft is maintained on the SDB for up to 5 days. Following this, the standing water is drained from the SDB, leaving negligible hydraulic head to induce further seepage. SDBs are also used for emergency storage, approximately 17 times per year, for a duration of 1 to 2 days, and of 1 to 2 ft of water. During the periods of intervening SDB use, evaporation allows the asphalt to dry, thus limiting downward migration of water that has seeped into the asphalt and upper soil.*
>
> *Collectively, the construction, operation, and maintenance of the SDBs results in negligible risk and a reasonable assumption that rate of seepage from them is de minimis. This will not change over the next 20 years.*

II. RECEIVING WATER BENEFICIAL USES

Beneficial uses applicable to the South Fork of Putah Creek are as follows:

Table 2. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001 and 002	South Fork of Putah Creek	**Existing:** Municipal and Domestic Supply (MUN) Agricultural Supply (AGR) Water Contact Recreation (REC-1) Non-contact Water Recreation (REC-2) Warm Freshwater Habitat (WARM) Wildlife Habitat (WILD) Spawning, Reproduction, and/or Early Development (SPWN) **Potential:** Cold Freshwater Habitat (COLD)
--	Groundwater	**Existing:** Municipal and domestic water supply (MUN); agricultural supply (AGR); industrial service supply (IND); and industrial process supply (PRO).

III. RECEIVING WATER TOTAL MAXIMUM DAILY LOADS (TMDLS)

Putah Creek is listed for mercury on the Clean Water Act 303(d) List of impaired water bodies. At the time of this permit renewal, there are no approved Total Maximum Daily Loads (TMDLs) with waste load allocations (WLAs) that apply to the Facility. However, the 303(d) listings and TMDLs have been considered in the development of this NOA.

IV. DISCHARGE PROHIBITIONS

Discharge prohibitions are contained in section IV of the Municipal General Order. Only the discharge prohibitions listed below are applicable to this Facility.

A. MGO section IV.A. The discharge of wastes, other than those described in section I.A and meeting the eligibility criteria in section I.B of the Municipal General Order, is prohibited unless the Discharger obtains coverage under another general or individual Order that regulates the discharge of such wastes.

B. MGO section IV.B. The by-pass or overflow of wastes to surface waters is prohibited, except as allowed by Federal Standard Provisions sections I.G. and I.H in Attachment D, Standard Provisions, of the Municipal General Order.

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

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

E. MGO section IV.E. Discharges exceeding an average dry weather flow of 3.6 million gallons per day (MGD) are prohibited.

V. EFFLUENT LIMITATIONS

A. Effluent Limitations – Discharge Points 001 and 002

1. Final Effluent Limitations – Discharge Points 001 and 002

The Discharger shall maintain compliance with the following effluent limitations at Discharge Points 001 and 002. Unless otherwise specified compliance shall be measured at Monitoring Location EFF-001, as described in the Monitoring and Reporting Program (MRP), Appendix D of this NOA.

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

Table 4. Effluent Limitations

Parameter	Units	Average Monthly	Average Weekly
Biochemical Oxygen Demand, 5-day @ 20°Celcius (BOD_5)	milligrams per liter (mg/L)	10	15
Total Suspended Solids (TSS)	mg/L	10	15
Ammonia Nitrogen, Total as Nitrogen (N) (1 May - 31 October)	mg/L	0.61	1.9
Ammonia Nitrogen, Total as N (1 November – 30 April)	mg/L	1.0	3.2
Nitrate plus Nitrite (as N)	mg/L	10	14

b. **pH:**
   i. 6.5 Standard Units (SU) as an instantaneous minimum.
   ii. 8.5 SU as an instantaneous maximum.

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

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

e. **Chronic Whole Effluent Toxicity MMEL.** No more than one *Pseudokirchneriella subcapitata.* 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-002 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; and
   iii. 240 MPN/100 mL, at any time.

g. **Mercury, Total.** For a calendar year, the total annual mass discharge of total mercury shall not exceed 0.015 pounds.

VI. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations. (Municipal General Order section VI.A). The Municipal General Order includes receiving surface water limitations in Section VI.A. Only the following receiving surface water limitations listed in Municipal General Order Section VI.A are applicable to the Facility:

- Biostimulatory Substances (VI.A.3);
- Chemical Constituents (VI.A.4);
- Color (VI.A.5);
- Dissolved Oxygen (VI.A.6.a);
- Floating Material (VI.A.7);
- Oil and Grease (VI.A.8);
- pH (VI.A.9.a);
- Pesticides (VI.A.10.a and b);
- Radioactivity (VI.A.11);
- Suspended Sediments (VI.A.12);
- Settleable Substances (VI.A.13);
- Suspended Material (VI.A.14);
- Taste and Odors (VI.A.15);
- Temperature (VI.A.16.a);
- Toxicity (VI.A.17.a); and,
- Turbidity (VI.A.18.a).

B. Groundwater Limitations. Release of waste constituents from any storage, treatment, or disposal component associated with the Facility shall not cause the underlying groundwater to contain waste constituents in concentrations greater than background water quality or groundwater quality objectives, whichever is greater.

VII. MONITORING AND REPORTING

Monitoring and reporting program requirements are contained in Appendix D of this NOA.

VIII. PROVISIONS

Section VI.B (Groundwater Limitations) and section VIII.C.4 (Construction, Operation and Maintenance Specifications) of this NOA are included to implement State law only. Provisions are contained in section VII of the Municipal General Order and the applicable provisions are referenced below:

A. Standard Provisions.

Applicable to all Dischargers.

B. Monitoring and Reporting Program Requirements.

The MRP applicable to this Facility is contained in Appendix D of this NOA R5-2023-0025-018.

C. Special Provisions.

Special Provisions are contained in section VII.C of the Municipal General Order. Only the following Special Provision sections listed below from the Municipal General Order apply to this Facility, all other Special Provisions listed in the Municipal General Order are not applicable to this Facility.

1. Reopener Provisions

a. (MGO section VII.C.1.a) Conditions that necessitate a major modification of a permit are described in 40 C.F.R 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.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. **Cyanide Constituent Study** (MGO section VII.C.2.b). The study includes a quarterly monitoring (1/Quarter) sampling schedule at minimum for cyanide starting 1 October 2026 and concluding on 30 September 2028; followed by a report of its findings submitted electronically via CIWQS submittal by the due date specified in Table D-8 of this NOA.

3. Best Management Practices and Pollution Prevention

a. Salinity Evaluation and Minimization Plan (SEMP) for the Alternative Salinity Permitting Approach. (MGO section VII.C.3.b) 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 1,300 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.** (MGO section VII.C.4.a)

i 2 NTU as a daily average;

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

iii 10 NTU at any time.

b. **UV Disinfection System Operating Specifications.** (MGO section VII.C.4.b and 3 May 2023 Title 22 Engineering Report)

i. **UV Dose.** The UV system must be operated, with two banks on-line as a minimum, to deliver a minimum UV dose of 100 millijoules per square centimeter (mJ/cm^2) at all times.

ii. **UV Transmittance.** The minimum hourly average UV transmittance (at 254 nanometers) in the wastewater measured at UVS-001 shall not fall below 30.8 percent.

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

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

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

c. **Treatment/Storage Pond.** (MGO section VII.C.4.c) For Sludge Stabilization Basins 1 and 2, the Discharger shall comply with the following pond operating specifications (As per Municipal General Order section VII.C.4.c, not including Municipal General Order section VII.C.4.c.xii):

i. The discharge of waste classified as "hazardous" as defined in the California Code of Regulations (CCR), title 22, section 66261.1 et seq., is prohibited.

ii. No waste constituent shall be released, discharged, or placed where it will cause a violation of the Groundwater Limitations of this General Order and as specified in the NOA.

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

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

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

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

viii. The Discharger shall operate and maintain all ponds sufficiently to protect the integrity of containment dams and berms and prevent overtopping and/or structural failure. Unless a California-registered civil engineer certifies (based on design, construction, and conditions of operation and maintenance) that less freeboard is adequate, the operating freeboard in any pond shall never be less than two feet (measured vertically from the lowest possible point of overflow of the pond levee).

ix. Prior to the onset of the storm season of each year, available capacity shall at least equal the volume necessary to comply with sections iv and viii above.

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

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

(b) Weeds shall be minimized through the control of water depth, harvesting, or herbicides.

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

(d) The Discharger shall consult and coordinate with the local Mosquito Abatement District to minimize the potential for mosquito breeding as needed to supplement the above measures.

xi. Newly constructed or rehabilitated berms or levees (excluding internal berms that separate ponds or control the flow of water within a pond) shall be designed and constructed under the supervision of a California Registered Civil Engineer.

xii. The Discharger shall monitor sludge accumulation in wastewater storage ponds at least every five years and shall periodically remove sludge as necessary to maintain adequate storage capacity.

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

a. **Sludge/Biosolids Treatment or Discharge Specifications.** (MGO section VII.C.5.b) 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.

The Discharger shall comply with the sludge/biosolids treatment specifications (As per Municipal General Order section VII.C.5.b, not including Municipal General Order section VII.C.5.b.iii):

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 VI.B. of the Municipal General 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 VI.B. of the Municipal General 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, the Municipal General 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 the Municipal General Order.

iii. The onsite sludge/biosolids treatment, processing, and storage for the Facility is described in section I.A.2 of this Notice of Applicability. Any proposed change in the onsite treatment, processing, or storage of sludge/biosolids shall be reported to the Executive Officer at least 90 days in advance of the change, and shall not be implemented until written approval by the Executive Officer.

6. Other Special Provisions (MGO section VII.C.6)

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

IX. COMPLIANCE DETERMINATION

Compliance determination language is contained and more fully described in section VIII of the Municipal General Order. Additional reporting requirements are included in section X of the MRP, Appendix D. The applicable compliance determination sections from the Municipal General Order shown below apply to this Facility, all other compliance determination sections listed in the Municipal General Order are not applicable to this Facility:

- BOD_5 and TSS Effluent Limitations (VIII.A).
- Total Mercury Mass Loading Effluent Limitations (VIII.D).
- Average Dry Weather Flow Prohibition (VIII.E).
- Total Coliform Organisms Effluent Limitations (VIII.F).
- Effluent Limitations. (VIII.I)
- Whole Effluent Toxicity Effluent Limitations. (VIII.K)
- Period Average, Calendar Month Average, and Annual Average (VIII.O).

X. ANTI-BACKSLIDING REQUIREMENTS

Anti-backsliding requirements are specified in the Municipal General Order, section V.D.3, Attachment F (Fact Sheet). Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 Code of Federal Regulations (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. Effluent limitations for acute toxicity, electrical conductivity, and ammonia (1 May - 31 October) are less stringent than prescribed in the Order R5-2021-0007. A more detailed anti-backsliding analysis is provided in Appendix C to this NOA R5-2023-0025-018 in section II.A Satisfaction of Anti-Backsliding Requirements. The relaxation of effluent limitations meets the exceptions provided in the federal anti-backsliding regulations.

XI. ANTIDEGRADATION REQUIREMENTS

Antidegradation requirements are specified in the Municipal General Order, section V.D.4, Attachment F (Fact Sheet). This NOA R5-2023-0025-018 does not allow an increase in flow or mass of pollutants to the receiving water and the relaxation of effluent limitations for acute toxicity is consistent with the antidegradation provisions of 40 C.F.R. 131.12 and State Water Board Resolution 68-16. A more detailed discussion of antidegradation is provided in Appendix C to this NOA R5-2023-0025-018, section II.B Antidegradation Policies.

XII. RATIONALE FOR LIMITATIONS AND MONITORING REQUIREMENTS

Additional rationale for limitations and monitoring requirements is included in Attachment F, section V (Rationale for Effluent Limitations and Discharge Specifications), of the Municipal General Order and Appendix C of this NOA R5-2023-0025-018.

XIII. ENFORCEMENT

Failure to comply with the applicable requirements of the Municipal General Order, as specified in this NOA R5-2023-0025-018, may result in enforcement actions, which could include civil liability (penalties). Effluent limitation violations may be subject to a Mandatory Minimum Penalty (MMP) of $3,000 per violation. In addition,

late monitoring reports may be subject to MMPs and/or discretionary penalties of up to $1,000 per day late. If discharges do not occur during any report monitoring period, the Discharger must still submit the monitoring report indicating that no discharge occurred to avoid being subject to enforcement actions.

XIV. COMMUNICATION

Until this NOA R5-2023-0025-018 becomes effective on 1 October 2026, you will need to comply with the effluent limitations, and monitoring and reporting requirements, contained in your existing NPDES permit, Order R5-2021-0007. For your monthly SMRs, you will need to demonstrate compliance with Order R5-2021-0007, through 30 September 2026. You will need to demonstrate compliance with this NOA R5-2023-0025-018 beginning 1 October 2026.

The Central Valley Water Board is implementing a Paperless Office system to reduce our paper use, increase efficiency, and provide a more effective way for our staff, the public, and interested parties to view documents in electronic form. Therefore, the Discharger is required to submit all self-monitoring, technical, and progress reports required by this NOA R5-2023-0025-018 via California Integrated Water Quality System (CIWQS) submittal. In general, if any monitoring data for a monitoring location can be submitted using a computable document format (CDF) file upload, then it should be submitted as a CDF file upload, such as characterization monitoring data. However, certain parameters that cannot be uploaded to the CIWQS data tables, such as Annual Operations Reports, should be uploaded as a Portable Document Format (PDF), Microsoft Word, or Microsoft Excel file attachment. Also, please upload or enter a cover letter summarizing the content of the report to the submittal tab of the CIWQS module for each submittal.

All other documents not required to be submitted via CIWQS shall be converted to a searchable PDF and submitted by email to centralvalleysacramento@waterboards.ca.gov. Please include the following information in the body of the email:

- Attention: NPDES Compliance and Enforcement Section
- Discharger: University of California Regents
- Facility: UC Davis WWTP
- County: Yolo County
- CIWQS Place ID: 268926

Documents that are 50 megabytes or larger must be transferred to a DVD or flash drive, and mailed to our office, attention “ECM Mailroom-NPDES".

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 California Water Code section 13320 and California Code of Regulations, Title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date this NOA R5-2023-0025-018 is issued, except that if the thirtieth day following the date this NOA R5-2023-0025-018 is issued 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. Links to the laws and regulations applicable to filing petitions (http://www.waterboards.ca.gov/public_notices/petitions/water_quality)

may be found on the Internet or will be provided upon request.

Now that your NOA R5-2023-0025-018 has been issued, the Central Valley Water Board's Compliance and Enforcement Section will take over management of your case. Paul Wadding of the Compliance and Enforcement section is your point of contact for any questions regarding this NOA R5-2023-0025-018. If you find it necessary to make a change to your permitted operations, you will be directed to the appropriate Permitting staff. You may contact Paul Wadding by phone at (916) 464-4826 or email at Paul.Wadding@waterboards.ca.gov.

Patrick Pulupa
Executive Officer

Appendices:
Appendix A – Maps
Appendix B – Flow Schematic
Appendix C – Supplemental Fact Sheet
Appendix D – Monitoring and Reporting Program
Appendix E – Determination of WQBELs

Enclosures:
Municipal General Order R5-2023-0025 (Discharger Only [email only])

cc:
Peter Kozelka, U.S. EPA, Region IX, San Francisco (email only)
Prasad Gullapalli, U.S. EPA Region IX, San Francisco (email only)
Afrooz Farsimadan, California State Water Resources Control Board (email only)
Renan Jauregui, California State Water Resources Control Board (email only)
Jarma Bennett, California State Water Resources Control Board (email only)
Discharge Monitoring Reports, California State Water Resources Control Board (via email at dmr@waterboards.ca.gov)
Chron File (RB5S-chron@Waterboards.ca.gov)
Xuan Luo, Central Valley Water Board, Rancho Cordova (email only)

APPENDIX A –MAPS
Figure A-1. Location Map

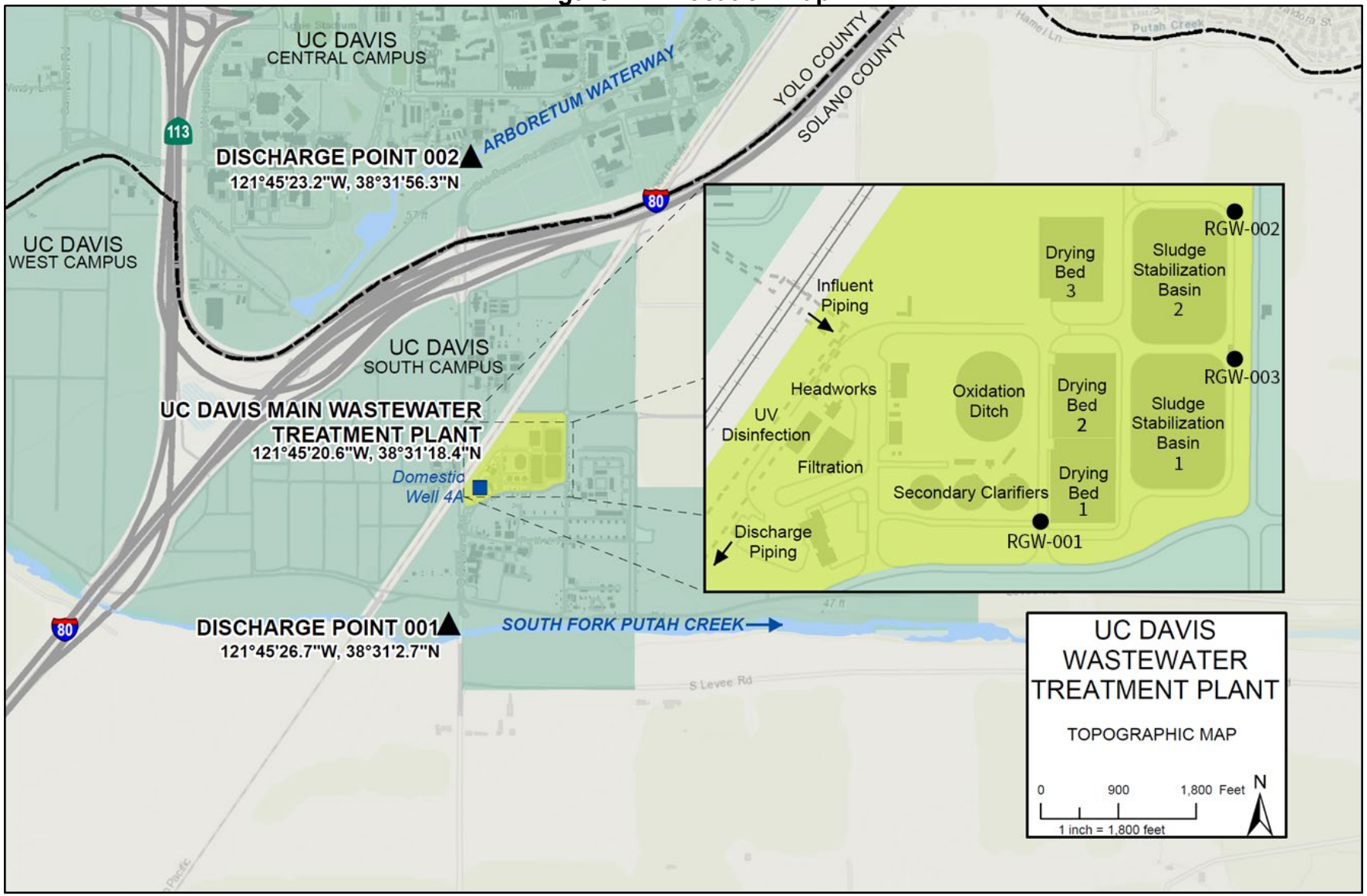
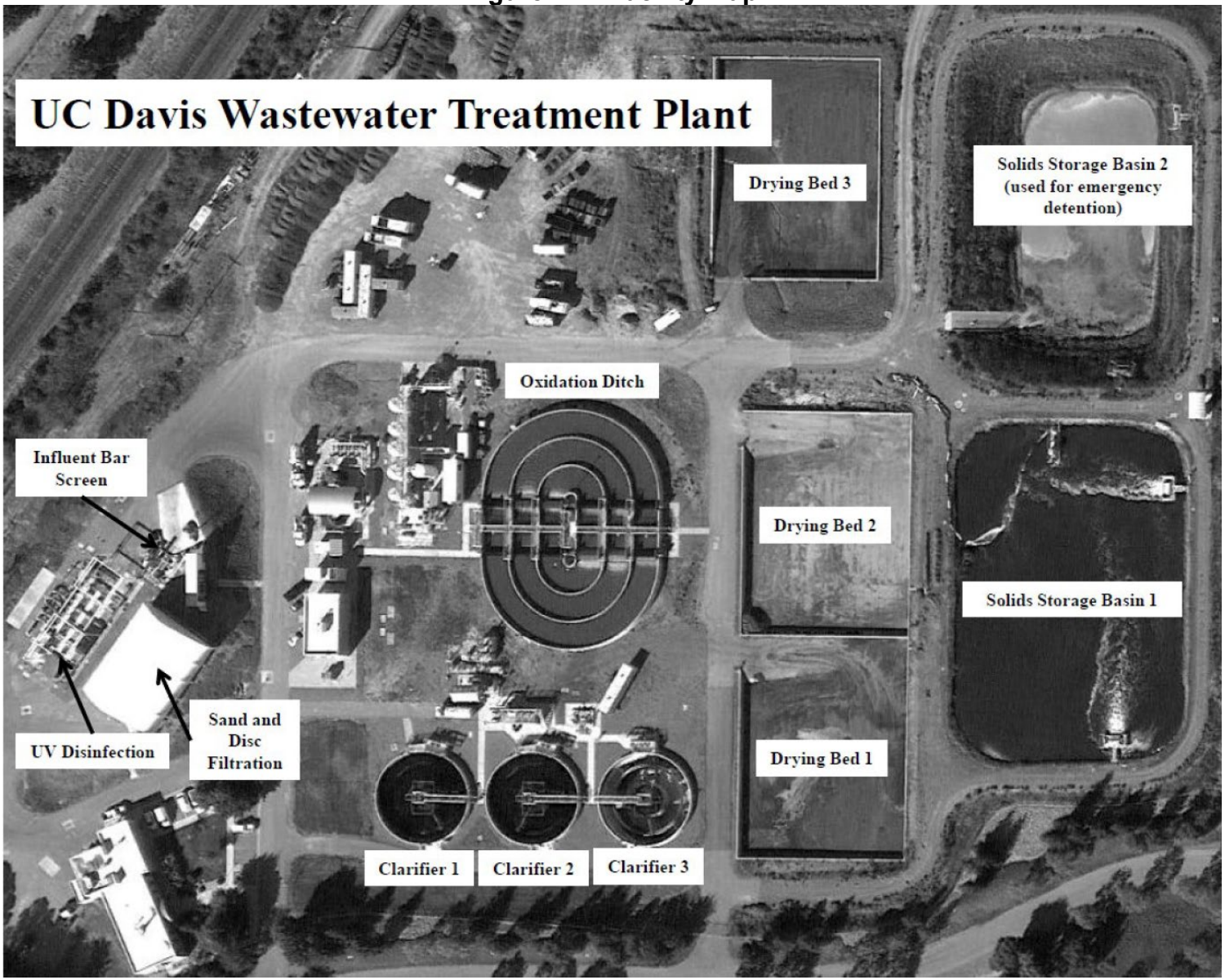
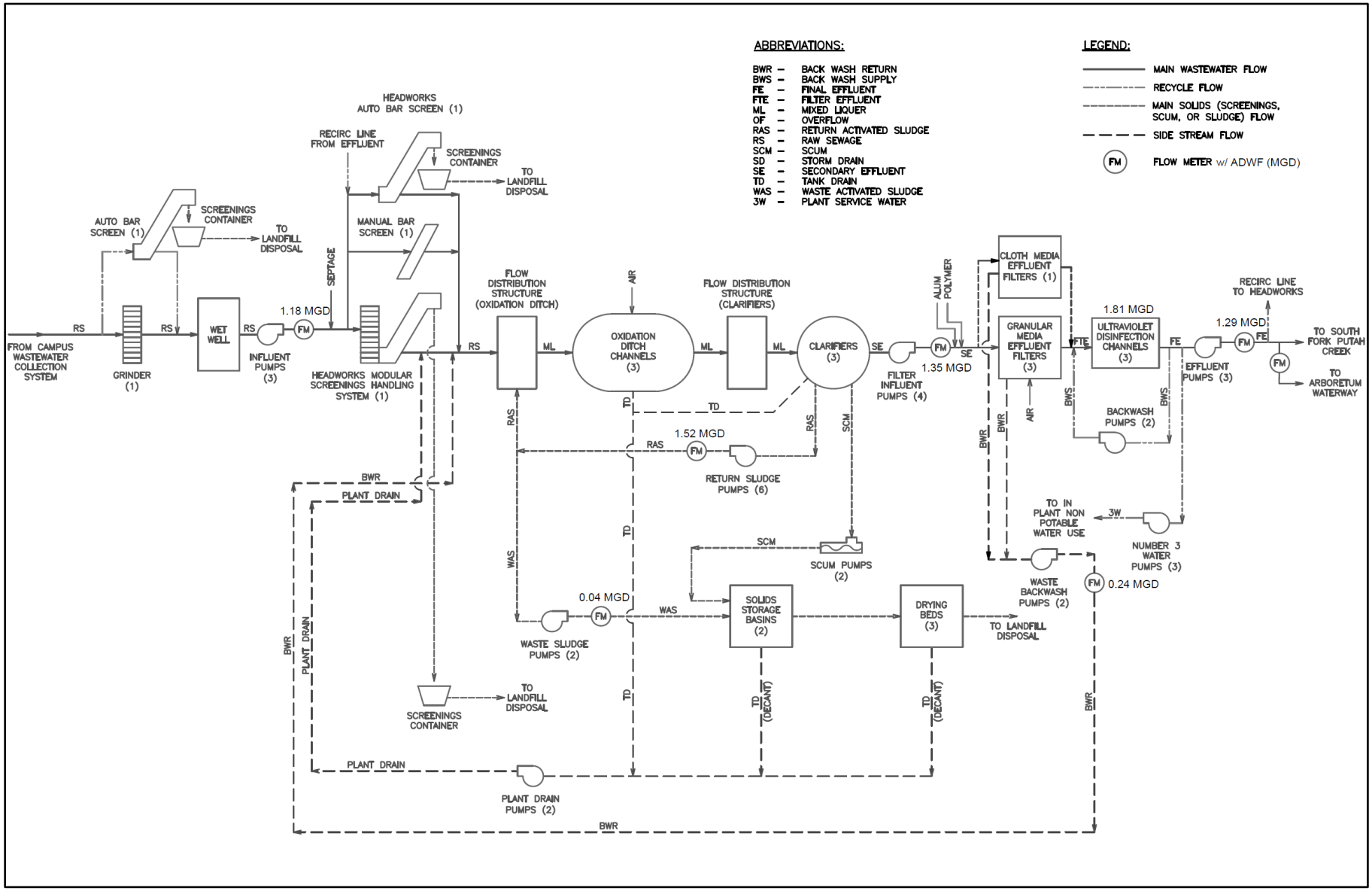


Figure A-2. Facility Map



APPENDIX B – FLOW SCHEMATIC



APPENDIX C – SUPPLEMENTAL FACT SHEET

I. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this NOA are based on the requirements and authorities described in Attachment F, Section III of the Municipal General Order. In addition to the Fact Sheet contained in the Municipal General Order, the Central Valley Water Board incorporates this Supplemental Fact Sheet as findings of the Central Valley Water Board supporting the issuance of this NOA.

II. FINAL EFFLUENT LIMITATION CONSIDERATIONS

A. Satisfaction of Anti-Backsliding Requirements

The Clean Water Act (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 NOA are at least as stringent as the effluent limitations in the Facility's previous NPDES Permit, Order R5-2021-0007, with the exception of effluent limitations for acute whole effluent toxicity, electrical conductivity, and ammonia (1 May – 31 October). This NOA also removes mass-based effluent limitations for ammonia. This relaxation and removal of effluent limitations is consistent with the anti-backsliding requirements of the CWA and federal regulations.

1. **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 (WQBELs) "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.

   a. For waters where standards are not attained, CWA section 303(d)(4)(A) specifies that any effluent limit based on a TMDL or other waste load allocation (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.

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

   The South Fork of Putah Creek is considered an attainment water for acute whole effluent toxicity, electrical conductivity, and ammonia because the receiving water is not listed as impaired on the 303(d) list for these constituents. The exceptions in Section 303(d)(4) address both waters in attainment with water quality standards and those not in attainment, i.e. waters on the section 303(d) impaired waters list (State Water Resources Control Board Order WQ-2008-0006, Berry Petroleum Company, Poso Creek/McVan Facility). As discussed below, relaxation of the effluent limitations for ammonia (1 May – 31 October) and the removal of the effluent limitations for acute whole effluent toxicity, electrical conductivity, and mass-based effluent limitations for ammonia complies with federal and state antidegradation requirements. Thus, removal and relaxation of these effluent limitations meets the exception in CWA section 303(d)(4)(B).

2. **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.

   Updated information that was not available at the time Order R5-2021-0007 was issued indicates that electrical conductivity does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. Furthermore, the Discharger is participating in the CV-SALTS Priority and Optimization Study (P&O Study) as part of the Salt Control Program compliance. Hence, this NOA includes an effluent trigger for electrical conductivity. The Statewide Toxicity Provisions state that chronic whole effluent toxicity tests are generally protective of both acute and chronic toxicity. Since the Discharger did not have any acute toxicity issues during the permit term of Order R5-2021-0007, this NOA does not include acute whole effluent toxicity limitations. Additionally, updated information that was not available at the time Order R5-2021-0007 was issued indicates that less stringent effluent limitations for ammonia satisfy requirements in CWA section 402(o)(2). The updated information that supports the relaxation of effluent limitations for ammonia and the removal of the effluent limitations for acute whole effluent toxicity, electrical conductivity, and mass-based effluent limitations for ammonia includes the following:

   a. **Acute Toxicity.** All acute toxicity tests conducted between June 2021 and July 2025 showed 100% fathead minnow survival, except for one test that resulted in 95% survival; therefore, the discharge does not show reasonable potential to cause acute toxicity in the receiving water.

   b. **Ammonia**. The ammonia effluent limitations have been revised based on new pH and temperature data used for the calculation of the ammonia water quality criteria that was not available at the time of issuance of the previous NOA.

   c. **Electrical Conductivity.** Monitoring data collected over the permit term for Order R5-2021-0007 indicates that electrical conductivity in the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the respective water quality objectives/criteria.

   Thus, relaxation of effluent limitations for ammonia and the removal of the effluent limitations for acute whole effluent toxicity, electrical conductivity, and mass-based effluent limitations for ammonia from this NOA is in accordance with CWA section 402(o)(2)(B)(i), which allows for the removal or relaxation of effluent limitations based on information that was not available at the time previous Order R5-2021-0007 was issued.

B. Antidegradation Policies

This NOA does not allow for an increase in flow or mass of pollutants to the receiving water. Therefore, a complete antidegradation analysis is not necessary. This NOA 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. The permitted discharge is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Anti-Degradation Policy. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

This NOA relaxes effluent limitations for ammonia (1 May – 31 October) and removes effluent limitations for acute whole effluent toxicity, electrical conductivity, and mass-based effluent limitations for ammonia. Based on Facility performance, the relaxation or removal of these effluent limitations is not expected to result in an increase in pollutants concentration or loading, a decrease in the level of treatment or control, or a reduction of water quality. Implementation of this NOA will result in the best practicable treatment or control of the discharge necessary to assure that a pollution or nuisance will not occur and the highest water quality consistent with the maximum benefit to the people of the State will be maintained. Thus, the removal and relaxation of effluent limitations for these constituents is consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and State Water Resources Control Board (State Water Board) Resolution No. 68-16.

The mass-based effluent limitations removal for ammonia is based on 40 C.F.R. Part 122.45.(f). These changes in effluent limitations will not result in a decrease in the level of treatment or control, or a reduction in water quality. Furthermore, concentration-based average monthly effluent limitations (AMELs) and average weekly effluent limitations (AWELs) are included for ammonia, as well as a prohibition (section V.D of this NOA) on discharging flows greater than the average dry weather flow that limits the amount of flow that can be discharged to the receiving water during dry weather months. The combination of flow and concentration-based effluent limits in this NOA are equivalent to mass-based effluent limitations, which were redundant limits contained in previous individual Orders by multiplying the concentration based effluent limits and permitted average dry weather flow by a conversion factor to determine the mass-based effluent limitations. These effluent limitation changes do not result in an allowed increase in pollutants or any additional degradation of the receiving water and are therefore consistent with the antidegradation provisions of 40 C.F.R. section 131.12 and the State Antidegradation Policy.

C. Constituents with Total Maximum Daily Load (TMDL).

The South Fork of Putah Creek is subject to TMDLs for mercury. The State Water Board adopted Resolution 2017-0027 on 2 May 2017, which approved Part 2 of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Tribal and Subsistence Fishing Beneficial Uses and Mercury Provisions (Statewide Mercury Provisions). The Statewide Mercury Provisions establish a Sport Fish Water Quality Objective of an average 0.2 mg/kg methylmercury fish tissue concentration within a calendar year for waters with the beneficial uses of commercial and sport fishing (COMM), tribal tradition and culture (CUL), wildlife habitat (WILD), and marine habitat (MAR). This fish tissue objective corresponds to a water column concentration of 12 ng/L of total mercury for flowing water bodies. As shown in Table 2 of this NOA, the beneficial uses of the South Fork of Putah Creek includes WILD; therefore, the Sport Fish Water Quality Objective is applicable and is the most stringent objective.

The Statewide Mercury Provisions specify that the RPA shall be conducted using the maximum annual average effluent and background mercury concentrations for comparison with the Sport Fish Water Quality Objective. Based on 8 samples collected between June 2022 and October 2023 with a maximum effluent concentration was 0.98 ng/L, a maximum annual loading 0.0045 pounds per year, and a maximum annual average background concentration of 2.1 ng/L, the discharge does not exhibit reasonable potential to cause or contribute to an exceedance of the Sport Fish Water Quality Objective in the receiving water. However, the South Fork of Putah Creek has been listed as an impaired water body pursuant to CWA section 303(d) because of mercury and the discharge must not cause or contribute to increased mercury levels. This Order retains the performance-based mass effluent limitation for total mercury of 0.015 pounds per year. This limitation is based on maintaining the mercury loading at the current level until a TMDL can be established.

D. Chronic Whole Effluent Toxicity (WET).

The Discharger requested that green alga (*Pseudokirchneriella subcapitata*) be considered the most sensitive species. The Discharger conducted species sensitivity screening, quarterly, in 2025 and the first quarter of 2026. Neither fathead minnow (*Pimephales promelas*) (Survival or growth) or water flea (*Ceriodaphnia dubia*) (survival) showed toxic effects during the species sensitivity screening. Water flea (*Ceriodaphnia dubia*) reproduction and green alga (*Pseudokirchneriella subcapitata*) growth tests showed toxic effect and the results are shown below:

Table C-1. Species Sensitivity Screening*: Ceriodaphnia dubia* Reproduction and *Selenastrum capricornutum* Growth

Quarter	*Ceriodaphnia dubia* Reproduction (TUc)	*Ceriodaphnia dubia* Reproduction (Percent Effect)	*Selenastrum capricornutum* Growth (TUc)	*Selenastrum capricornutum* Growth (Percent Effect)
Q1 2025	>16 (Possible Pathogen Interference)	80.7%	1.0	-66.3%
Q2 2025	1.0	-5.1%	1.0	-169%
Q3 2025	1.0	48.6%	>1.0	54.8%
Q4 2025	1.0	2.7%	1.0	-108%
Q1 2026	1.3	58.7%	>1.0	18.2%

The Discharger has been under a compliance schedule for chronic whole effluent toxicity limitations for significant effects observed intermittently in the *Ceriodaphnia dubia* bioassays since 2015. The Discharger has determined that the primary cause of these significant effects on C*eriodaphnia dubia* has been pathogen interference; the growth or proliferation of bacteria or other microorganisms within the C*eriodaphnia dubia* bioassay test that causes adverse effects (reduced reproduction). Pathogen interference is difficult to prevent because of the optimal and artificial conditions of a bioassay lab/test (ample light, warm temperatures, food additions, etc.). The characteristics typical of bacterial/pathogen interference include anomalous dose-responses (interrupted or flat dose-response), sporadic mortalities across effluent dilutions, and/or high coefficient of variations (high variability among replicates within an effluent concentration and/or in the control).

The Discharger noted that bacterial/pathogen interference within a test does not always exhibit these characteristics and it can appear, at times, like a traditional toxicant lacking sporadic mortalities, absent high coefficients of variation (CVs), and without an anomalous dose-response. However, the Discharger has observed anomalous dose responses in 39% of the bioassays that exhibit significant effects (i.e., >1 TUc). Toxicity Identification Evaluation (TIE) testing to confirm bacteria/pathogen interference provided little additional information because the toxicity/effects went away while the samples that initially had shown toxicity were held refrigerated in advance of the TIE. When an unresolvable test interference is observed, the Board's Executive Officer has the authority to grant the permittee the ability to test with the next most sensitive species. Therefore, it would be appropriate to designate *Pseudokirchneriella subcapitata* as the most sensitive species for assessing compliance with effluent limits.

E. Cyanide

During the quarterly sampling conducted during the effluent and receiving water characterization monitoring between 1 April 2022 and 31 March 202, one effluent sample collected on 18 August 2022, exceeded the 5.2 µg/L California Toxics Rule chronic freshwater aquatic life criterion for total cyanide. The 18 August 2022 sample is one of only two quantifiable measurements (i.e., detected above the reporting limit) among the 60 samples collected since September 2010. Attachment F of the Municipal General Order provides the Central Valley Water Board discretion to require additional monitoring or evaluation where there are indications that a discharge may contain a pollutant at concentrations that have reasonable potential to cause or contribute to an exceedance of water quality objectives.

Based on the limited occurrence of the elevated cyanide concentration and the absence of reasonable potential in other sampling events, this NOA requires the Discharger to complete a Cyanide Constituent Study to determine the presence of cyanide in the effluent and Putah Creek along with potential effects on Putah Creek. The Cyanide Constituent Study includes a **quarterly monitoring (1/quarter)** sampling schedule at minimum for cyanide starting **1 October 2026** and concluding on **30 September 2028**; followed by a report of its findings submitted electronically via CIWQS submittal by the due date specified in Table D-8 of this NOA. Based on the results of the study, Central Valley Water Board staff will determine if this NOA R5-2023-0025-018 will be reopened and effluent limitations added for cyanide.

F. Salinity (Electrical Conductivity or EC)

This NOA accounts for drought conditions in which the drinking water system would rely more heavily on groundwater which has higher electrical conductivity than surface water. The highest annual average electrical conductivity with conjunctive use and extended drought conditions was in 2021 with a value of 928 µmhos/cm, the corresponding trigger in Municipal General Order Table 23 is 1,300 µmhos/cm. The discharge does not exceed the electrical conductivity screening level; therefore, the discharge does not have reasonable potential to cause or contribute to an in-stream excursion of water quality objectives for salinity. In accordance with the Basin Plan's Salinity Control Program the Discharger submitted a Notice of Intent on 12 July 2021 indicating participation in the Alternative Salinity Permitting Approach. Accordingly, the Municipal General Order includes a calendar annual average performance-based effluent trigger for electrical conductivity of 1,300 µmhos/cm, applicable to the Facility.

III. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

CWA section 303(a-c), requires states to adopt water quality standards, including criteria where they are necessary to protect beneficial uses. The Central Valley Water Board adopted water quality criteria as water quality objectives in the Basin Plan. The Basin Plan states that "[t]he numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses." The Basin Plan includes numeric and narrative water quality objectives for various beneficial uses and water bodies. This NOA contains receiving surface water limitations based on the Basin Plan numerical and narrative water quality objectives for 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.

B. Groundwater

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

IV. RATIONALE FOR MONITORING 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 also authorize the Central Valley Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements. The Monitoring and Reporting Program, Attachment E of the Municipal General Order establishes monitoring, reporting, and recordkeeping requirements that implement federal and state requirements. The following provides the rationale for the monitoring requirements contained in Monitoring and Reporting Program, Appendix D, of this NOA.

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., Biochemical Oxygen Demand (5-day @ 20°Celcius) (BOD_5) and Total Suspended Solids (TSS) reduction requirements). The continuous sampling frequency for flow has been retained from Order R5-2021-0007. The monitoring frequencies for BOD_5 and TSS have been reduced from Order R5-2021-0007 from twice per week to once per week due to a good history of BOD_5 and TSS removal.
2. Quarterly monitoring for electrical conductivity in the influent was not retained from Order R5-2021-0007. Continued monitoring of the effluent for electrical conductivity is adequate to determine compliance with the effluent electrical conductivity trigger.

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. The following effluent monitoring frequencies have been revised from R5-2021-0007, all other effluent sampling frequencies from R5-2021-0007 are carried forward to this NOA:

Table C-2. Revised Sampling Frequencies for Effluent Monitoring

Parameter	Unit	Prior Sample Frequency	Revised Sample Frequency	Rationale for Sample Frequency Revision
BOD_5	mg/L	2/Week	1/Week	Good history of removal
TSS	mg/L	2/Week	1/Week	Good history of removal
Total Cyanide	µg/L	--	1/Quarter	Note 1
Hardness Total (as $CaCO_3$)	mg/L	1/Month	1/Quarter	Note 2
pH	Standard Units	1/Day	3/Week	Note 3
Dissolved Organic Carbon	mg/L	1/Quarter	Discontinue	Note 4
Temperature	°F	1/Day	3/Week	Note 3

Table C-2 Notes:

1. **Total Cyanide.** The effluent monitoring frequency for total cyanide (1/Quarter) in this NOA R5-2023-0025-018 will cease after two years, from 1 October 2026 through 30 September 2028, to comply with the Cyanide Constituent Study requirements. Upon review of the study, Central Valley Water Board staff will determine if this NOA R5-2023-0025-018 will be reopened and additional effluent monitoring added.
2. **Hardness.** Quarterly monitoring of the effluent for total hardness is adequate to determine water quality objectives for hardness dependent metals.
3. **pH and Temperature.** The effluent has no potential to impact Putah Creek for these parameters and 3/Week monitoring is sufficient to determine site-specific water quality objectives for ammonia.
4. **Dissolved Organic Carbon.** DOC data is only needed concurrent with aluminum measurements from the effluent and receiving water characterization monitoring to derive the aluminum freshwater aquatic life criteria.

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity**. Effluent monitoring frequency for acute toxicity 96-hour bioassay (quarterly) has been removed. As per the Statewide Toxicity Provisions, a chronic aquatic toxicity test is generally protective of both chronic and acute aquatic toxicity.
2. **Chronic Toxicity.** Effluent monitoring frequency for chronic toxicity bioassay testing (quarterly) has been retained from previous Order R5-2021-0007.

D. Receiving Water Monitoring

1. **South Fork of Putah Creek.** Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge to the South Fork of Putah Creek. The following receiving water monitoring frequencies have been revised from R5-2021-0007, all other receiving water sampling frequencies from R5-2021-0007 are carried forward to this NOA:

Table C-3. Revised Sampling Frequencies for Receiving Water Monitoring

Parameter	Unit	Prior Sample Frequency	Revised Sample Frequency	Rationale for Sample Frequency Revision
Hardness Total (as $CaCO_3$)	mg/L	1/Month	1/Quarter	Note 1
Dissolved Organic Carbon	mg/L	1/Quarter	--	Note 2

1. **Hardness.** Quarterly monitoring of the effluent for total hardness is adequate to determine water quality objectives for hardness dependent metals.
2. **Dissolved Organic Carbon.** DOC data is only needed concurrent with aluminum measurements from the effluent and receiving water characterization monitoring to derive the aluminum freshwater aquatic life criteria.

2. **Groundwater.** Groundwater monitoring was not required in Order R5-2021-0007 and is not required in the NOA. As described in section I.A.3 of this NOA, tests at Sludge Stabilization Basin 2 resulted in hydraulic conductivities of 2.83×10^{-8} cm/s, 5.92×10^{-8} cm/s, and 6.28×10^{-8} cm/s, an average of 5.01×10^{-8} cm/s. The Sludge Drying Beds were constructed using similar material to the Sludge Stabilization Basin 2, are asphalt lined and equipped with a drain back to the headworks.

E. Biosolids Monitoring – Not Applicable

F. Water Supply Monitoring

1. Order R5-2021-0007 required annual monitoring of the water supply at Monitoring Location SPL-001 for electrical conductivity. This NOA removes monitoring water supply at Monitoring Location SPL-001 since the Discharger has obtained a higher quality source water.

G. Filtration System Monitoring

1. Filtration system monitoring for turbidity is required for Dischargers of tertiary treated wastewater that meet the eligibility criteria in section I.B.4 of the Municipal General Order to determine compliance with the filtration system operating specifications in section VII.C.4.a of the Municipal General Order.
2. The monitoring frequency for turbidity is retained from previous Order R5-2021-0007 to evaluate compliance the turbidity operating specifications.

H. UV Disinfection System Monitoring

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

I. Pond Monitoring

1. Per section VIII.E.5 in the Fact Sheet of the Municipal General Order, pond monitoring is required to ensure proper operation of the treatment/storage ponds.

2. When any type of wastewater is directed to the ponds, this NOA requires the Discharger to keep a log related to the use of the ponds per section IX.C.1.a of Appendix D of this NOA.

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

1. 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.

K. Effluent and Receiving Water Characterization Monitoring

1. Order R5-2021-0007 included quarterly effluent characterization monitoring for one year when discharging to the South Fork of Putah Creek. This NOA reduces the quarterly effluent characterization monitoring to twice per year because of the consistent high quality effluent produced by the Facility.
2. Order R5-2021-0007 included quarterly upstream receiving water characterization monitoring for one year when discharging to the South Fork of Putah Creek. This NOA reduces the quarterly effluent characterization monitoring to twice per year because of the consistent set of historical receiving water data on record for the Facility.

V. PRETREATMENT PROVISION – NOT APPLICABLE

VI. SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Abbreviations used in Table C-3:

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

Table C-3: SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Constituent	Units	MEC	B	C	CMC	CCC	Water & Org	Org. Only	Basin Plan	MCL	RP
Ammonia, Total as Nitrogen (1 May – 31 October)	mg/L	1.2	ND	0.73	5.1	0.73	--	--	--	--	Yes
Ammonia, Total as Nitrogen (1 November – 30 April)	mg/L	1.3	ND	1.2	6.2	1.2	--	--	--	--	Yes
Nitrate plus Nitrite, Total as Nitrogen	mg/L	12	ND	10	--	--	--	--	--	10	Yes
Total Cyanide	µg/L	13	1.1	5.2	22	5.2	700	--	--	--	Note 4
Total Mercury	ng/L	0.98	2.1	12	--	--	--	--	--	--	No

Table C-3 Notes:

1. **Ammonia, total as Nitrogen.** CMC represents the U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 1-hour average. The CCC represents the U.S. EPA National Recommended Ambient Water Quality Criteria, Freshwater Aquatic Life Protection, 30-day average.
2. **Ammonia and Nitrate plus Nitrite.** Reasonable potential exists due to the biological processes inherent to the treatment of domestic wastewater (see sections V.C.3.b.ii and V.C.3.b.ix in Attachment F, Fact Sheet, of the Municipal General Order).
3. **Mercury.** MEC represents the maximum observed annual average concentration for comparison with water column concentration corresponding to the Sport Fish Water Quality Objective in the Statewide Mercury Provisions. The Basin Plan criteria of 12 ng/L represents the water column concentration corresponding to the Sport Fish Water Quality Objective in the Statewide Mercury Provisions.
4. **Cyanide.** The available cyanide dataset indicates that the 18 August 2022 result may not be representative of the Discharger's typical effluent quality. Out of 60 samples since 2010, only two quantifiable cyanide detections have been recorded, and the 18 August 2022 sample exceeded the long-term dataset mean by more than six standard deviations. A cyanide study was granted in lieu of effluent limitations given the infrequent total cyanide detections, the potential for false-positive results associated with acid-distillation analytical methods for total cyanide, and the likelihood of preservative/matrix related interferences.

APPENDIX D – MONITORING AND REPORTING PROGRAM

Tables

APPENDIX D – MONITORING AND REPORTING PROGRAM (MRP)

The Municipal General Order contains monitoring and reporting requirements in Attachment E. Some of the monitoring and reporting requirements listed in the Municipal General Order are not applicable to the Facility. The monitoring and reporting requirements applicable to the Facility are contained in this Appendix and are described herein.

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all NPDES permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Valley Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement state and federal regulations.

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 NOA R5-2023-0025-018 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), 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. Data generated from field measurements such as pH, dissolved oxygen, electrical conductivity (EC), turbidity, and temperature are exempt pursuant to Water Code section 13176. A manual containing the steps followed in this program for any field measurements such as, but not limited to pH, dissolved oxygen, EC, turbidity, and temperature 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 MRP.

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 pollutant/parameter where:

- The method minimum level (ML) is at or below the applicable water quality objective for the receiving water, or;
- 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;
- 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, via email, to QualityAssurance@waterboards.ca.gov to the State Water Resources Control.

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 MRP.

I. The results of all monitoring required by this MRP shall be reported to the Central Valley Water Board and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of the NOA. Unless otherwise specified, discharge flows shall be reported in terms of the total daily discharge flows.

J. Multiple Discharge Points – Not Applicable.

II. MONITORING LOCATIONS

The Discharger shall establish the monitoring locations listed in Table D-1 to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in the NOA R5-2023-0025-018.

Table D-1. Monitoring Station Locations

Discharge Point	Monitoring Location Name	Monitoring Location Description
--	INF-001	A location, after screening, where a representative sample of the influent into the Facility can be collected prior to entering the treatment process.
001	EFF-001	A location where a representative sample of the effluent from the Facility can be collected after all treatment processes prior to discharge into the South Fork of Putah Creek. Latitude: 38° 31' 22.2" N, Longitude: 121° 45' 21.6" W
002	EFF-001	A location where a representative sample of the effluent from the Facility can be collected after all treatment processes prior to discharge into the Arboretum Waterway. Latitude: 38° 31' 22.2" N, Longitude: 121° 45' 21.6" W
--	RSW-U	In the South Fork of Putah Creek, approximately 800 feet upstream of the confluence with the Arboretum Waterway.
--	RSW-D	In the South Fork of Putah Creek, approximately 200 feet downstream of Discharge Point 001.
--	UVS-001	A location where a representative sample of wastewater can be collected immediately upstream of the ultraviolet light (UV) disinfection system.
--	UVS-002	A location where a representative sample of the wastewater can be collected immediately downstream of the UV disinfection system.
--	PND-002	A location where a representative sample of Sludge Stabilization Basin 2 can be obtained.
--	PND-003	A location where a representative sample of Sludge Drying Bed 1 can be obtained.
--	PND-004	A location where a representative sample of Sludge Drying Bed 2 can be obtained.
--	PND-005	A location where a representative sample of Sludge Drying Beds 3 can be obtained.

The North latitude and West longitude information in Table D-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 as specified in Table D-2 and the testing requirements described in section III.A.2 below:

Table D-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	Million Gallons per Day (MGD)	Meter	Continuous

Parameter	Units	Sample Type	Minimum Sampling Frequency
Biochemical Oxygen Demand, 5-day @ 20°Celcius (BOD_5)	milligrams per liter (mg/L)	24-hour Composite	1/Week
Total Suspended Solids (TSS)	mg/L	24-hour Composite	1/Week

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

   a. **Applicable to all parameters**. Parameters 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. In addition, if requested by the Discharger, sample type may be modified by the Executive Officer to another 40 C.F.R. part 136 allowed sample type.
   b. **Composite Sample.** All composite samples shall be collected from a 24-hour flow proportional composite.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

1. The Discharger shall monitor treated domestic wastewater at Monitoring Location EFF-001 as specified in Table D-3 and the testing requirements in section IV.A.2. If there was no discharge to receiving water during the designated monitoring period, monitoring is not required for that period. If there was no discharge, the Discharger shall so state in the monthly self-monitoring report (SMR).

Table D-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency
Flow	MGD	Meter	Continuous
BOD_5	mg/L	24-hr Composite	1/Week
BOD_5	Percent Removal	Calculate	1/Month
TSS	mg/L	24-hr Composite	1/Week
TSS	Percent Removal	Calculate	1/Month
pH	Standard Units	Grab	3/Week
Ammonia, Total as Nitrogen	mg/L	Grab	1/Week
Nitrate, Total as Nitrogen	mg/L	Grab	1/Month
Nitrite, Total as Nitrogen	mg/L	Grab	1/Month
Nitrate plus Nitrite, Total as Nitrogen	mg/L	Calculate	1/Month
Total Cyanide	micrograms per liter (µg/L)	Grab	1/Quarter

Parameter	Units	Sample Type	Minimum Sampling Frequency
Electrical Conductivity @ 25°C (Electrical Conductivity)	micromhos per centimeter (µmhos/cm)	Grab	1/Month
Dissolved Oxygen	mg/L	Grab	1/Month
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Quarter
Temperature	°F	Grab	3/Week
Mercury, Total	µg/L	Grab	1/Year

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

   a. **Applicable to all parameters except flow.** 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. **Grab Sample.** 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.

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

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

   f. **Ammonia.** Ammonia samples shall be collected concurrently with whole effluent toxicity monitoring.

   g. **Total Cyanide.** In order to verify if cyanide is consistently present in the effluent discharge, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant. Cyanide sampling is only required for the first two years following the effective date of this NOA to complete the Cyanide Constituent Study. This NOA may be reopened depending on the results of the Cyanide Constituent Study to reimplement cyanide monitoring.

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

i. **Total Mercury.** Unfiltered 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 total mercury shall be by U.S. EPA method 1631 (Revision E), with a **reporting limit of 0.5 ng/L for total mercury**.

V. WHOLE EFFLUENT TOXICITY (WET) 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 (e.g., from January 1 to January 31, from June 15 to July 14, from January 31 to February 27, etc.).
2. **Toxicity Calendar Quarter.** A toxicity calendar quarter is defined as **three consecutive calendar months.** The toxicity calendar quarters begin on 1 January, 1 April, 1 July, and 1 October (i.e., from 1 January to 31 March, from 1 April to 30 June, from 1 July to 30 September, and 1 October to 31 December).
3. **Toxicity Calendar Year.** A toxicity calendar year is 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, from September 10 to September 9 of the following year, etc.).

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. While the Discharger is conducting a toxicity reduction evaluation the routine monitoring may be reduced to two (2) tests per toxicity calendar year. When there is no effluent available to complete a routine monitoring test or MMEL test, the test shall not be required, and subsequent routine monitoring continues at the frequency specified in the permit.
3. **Sample Types.** Effluent samples shall be 24-hour composite samples when discharging to Discharge Point 001 or Discharge Point 002 and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001.

4. **Chronic Toxicity MMEL Compliance Testing.** If a routine chronic toxicity monitoring test results in a “fail” at the IWC, then the Discharger shall complete a chronic toxicity MMEL compliance test. If the MMEL compliance test results in a “pass”, the Discharger shall complete a second chronic toxicity MMEL compliance test. All required chronic toxicity MMEL compliance tests shall be initiated within the same toxicity calendar month as the initiation of the routine monitoring chronic toxicity test. If the first chronic toxicity MMEL compliance test results in a “fail” at the IWC, then the second chronic toxicity MMEL compliance test is unnecessary and is waived.
5. **Additional Routine Monitoring Tests for TRE Determination.** A TRE is required when there is any combination of two or more MDEL or MMEL violations within a single toxicity calendar month or within two successive toxicity calendar months. In order to determine if a TRE is necessary when there is only one MDEL or MMEL violation in a single toxicity month, an additional routine monitoring test is required in the successive toxicity month. This additional routine monitoring test is not required if the Discharger is already conducting a TRE. This additional routine monitoring test could result in a violation of the MDEL and/or the need to conduct additional MMEL compliance tests per section V.B.4 above.
6. **Sample Volumes.** Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
7. **Test Species.** The testing shall be conducted using the next appropriate species, which is **green alga*, Pseudokirchneriella subcapitata*** (see Section V.F.2 for more information on the determination of the most sensitive species). The Executive Officer has the authority to allow the temporary use of the next appropriate species as the most sensitive species when the discharger submits documentation and the Executive Officer determines that the discharger has encountered unresolvable test interference or cannot secure a reliable supply of test organisms. The “next appropriate species” is a species in Table 1 of the Statewide Toxicity Provisions in the same test method classification (e.g., chronic aquatic toxicity test methods, acute aquatic toxicity test method), in the same salinity classification (e.g., freshwater or marine), and in the same taxon as the most sensitive species. When there are no other species in Table 1 in the same taxon as the most sensitive species (e.g., freshwater chronic toxicity tests), the “next appropriate species” is the species exhibiting the highest percent effect at the IWC tested in the species sensitivity screening other than the most sensitive species.
8. **Test Methods.** Discharger shall conduct the chronic toxicity tests on effluent samples at the instream waste concentration for the discharge in accordance with species and test methods in Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/821/R02/013, 2002; Table IA, 40 C.F.R. part 136).
9. **Dilution and Control Water.** Dilution water and control water shall be prepared and used as specified in the test methods manual. If dilution water

and control water is different from test organism culture water, then a second control using culture water shall also be used.

10. **Test Failure.** If the effluent chronic toxicity test does not meet all test acceptability criteria (TAC) specified in the referenced test method in EPA/821-R-02-013, the Discharger must conduct a Replacement Test as soon as possible, as specified in subsection B.11, below.

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

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 section IV.B.1.c of the Statewide Toxicity Provisions.
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, 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 "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 (routine, MMEL, TRE, etc.) and, if applicable, progress reports on TREs as attachments to the Quarterly SMRs in CIWQS for the reporting period, and shall provide the data (i.e., Pass/Fail) in the PET tool for uploading into CIWQS. The laboratory report shall include:

1. The valid toxicity test results for the TST statistical approach, reported as "Pass" or "Fail" and "Percent Effect" at the IWC for the discharge, the dates of sample collection and initiation of each toxicity test, and all results for effluent parameters monitored concurrently with the toxicity test(s);
2. The statistical analysis used in section IV.B.1.c of the Statewide Toxicity Provisions; and
3. Statistical program (e.g., TST calculator, CETIS, etc.) output results, including graphical plots, for each toxicity test.

F. Most Sensitive Species Screening

If the effluent used in the species sensitivity screening is no longer representative of the current effluent, the Discharger shall perform rescreening to re-evaluate the most sensitive species. The species sensitivity screening shall be conducted as follows:

1. **Frequency of Testing for Species Sensitivity Screening.** Species sensitivity screening for chronic toxicity shall include, at a minimum, a set of chronic WET testing conducted in **each toxicity calendar quarter in which there is expected to be at least 15 days of discharge**. Species sensitivity screening for chronic toxicity shall be conducted 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.** The Central Valley Water Board will determine the most sensitive species from the water flea (*Ceriodaphnia dubia*), fathead minnow (*Pimephales promelas*), and green alga (*Pseudokirchneriella subcapitata*) using the following procedure. 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.

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 NOA R5-2023-0025-018 is issued;
b. *Pimephales promelas* (larval survival and growth test) for the entire toxicity calendar year following the toxicity calendar year this NOA R5-2023-0025-018 is issued;
c. *Pseudokirchneriella subcapitata* (growth test) for the entire toxicity calendar year of the second year following the toxicity calendar year this NOA R5-2023-0025-018 is issued; and
d. Cycling back to *Ceriodaphnia dubia* (survival and reproduction test) after *Pseudokirchneriella subcapitata* (growth test) and continuing through the same rotation as above.

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 the next NOA reissuance.

G. Toxicity Reduction Evaluations

Reports for TREs shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan, or as amended by the Discharger's TRE Action Plan.

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 (as defined in paragraph V.B.5 above). If other information indicates toxicity (e.g., results of additional monitoring, results of monitoring at a higher concentration than the IWC, fish kills, or 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 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 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 – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Location RSW-U and RSW-D

1. The Discharger shall monitor the South Fork of Putah Creek at RSW-U and RSW-D in accordance with Table D-4 and the testing requirements for Table D-4 described in section VIII.A.2 below:

Table D-4. Receiving Water Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency
pH	Standard Units	Grab	1/Week
Dissolved Oxygen	mg/L	Grab	1/Month
Electrical Conductivity	µmhos/cm	Grab	1/Month
Hardness, Total (as $CaCO_3$)	mg/L	Grab	1/Quarter
Temperature	°F	Grab	1/Week

2. **Table D-4 Testing Requirements.** The Discharger shall comply with the following testing requirements:
   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, electrical conductivity,** and **pH**, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this Monitoring and Reporting Program shall be maintained at the Facility.
   c. **Grab Sample.** 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.
3. In conducting the receiving water sampling, a log shall be kept of the receiving water conditions throughout the reach bounded by RSW-U and RSW-D when discharging to the South Fork of Putah Creek, and notes on these conditions shall be summarized in the monitoring report. 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.

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids – Not Applicable

B. Municipal Water Supply – Not Applicable

C. Pond Monitoring

1. **PND-002, PND-003, PND-004, and PND-005**

   a. The Discharger shall keep a log regarding the use of Sludge Stabilization Basin 2 (PND-002) and Sludge Drying Bed 1, 2, and 3 (PND-003, PND-004, and PND-005, respectively) for emergency or maintenance diversions of partially treated or untreated wastewater and submit the log with the monthly SMRs. In particular, the Discharger shall record the following when any type of wastewater is directed to the ponds.

      i. The date(s) when the wastewater is directed to the ponds;

      ii. The type(s) of wastewater (e.g., untreated due to plant upset, tertiary treated, etc.) directed to the ponds;

      iii. The total volume of wastewater directed to the ponds (volume may be estimated), and;

      iv. The daily freeboard in the ponds.

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

1. **Monitoring Locations UVS-001 and UVS-002.** The Discharger shall monitor the filtration system and the UV disinfection system at Monitoring Locations UVS-001 and UVS-002 in accordance with Table D-5 and the testing requirements described in section IX.C.2 below:

Table D-5. 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	UVS-002	Continuous
UV banks in operation	Number	Observation	N/A	Continuous
UV Transmittance	Percent	Meter	UVS-001	Continuous
UV Dose	mJ/cm^2	Calculated	N/A	Continuous
Total Coliform Organisms	MPN/100mL	Grab	UVS-002	3/Week

2. **Table D-5 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table D-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. **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. Pyrethroid Pesticides Monitoring – Not Applicable

F. Effluent and Receiving Water Characterization

1. **Monitoring Frequency**

   a. **Effluent Sampling.** Samples shall be collected from the effluent (Monitoring Location EFF-001) twice, once between 1 January 2028 and 31 March 2028 and once between 1 July 2028 and 31 October 2028.

   b. **Receiving Water Sampling.** Samples shall be collected from the upstream receiving water (Monitoring Location RSW-U) twice, once between 1 January 2028 and 31 March 2028 and once between 1 July 2028 and 31 October 2028.

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, if receiving water is sampled.

3. **Analytical Methods Report Certification.** Prior to beginning the Effluent and Receiving Water Characterization monitoring, the Discharger shall provide a certification acknowledging the scheduled start date of the Effluent and Receiving Water Characterization monitoring and confirming that samples will be collected and analyzed as described in the previously

submitted Analytical Methods Report. If there are changes to the previously submitted Analytical Methods Report, the Discharger shall outline those changes. A one-page certification form will be provided by Central Valley Water Board staff with the permit's Notice of Adoption that the Discharger can use to satisfy this requirement. The certification form shall be submitted electronically via CIWQS submittal by the due date in the Technical Reports Table D-8.

4. The Discharger shall conduct effluent and receiving water characterization monitoring in accordance with Table D-6 and the testing requirements described in section IX.F.5 below.

Table D-6. Effluent and Receiving Water Characterization Monitoring
VOLATILE ORGANICS

CTR Number	Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
25	2-Chloroethyl vinyl Ether	110-75-8	µg/L	Grab
17	Acrolein	107-02-8	µg/L	Grab
18	Acrylonitrile	107-13-1	µg/L	Grab
19	Benzene	71-43-2	µg/L	Grab
20	Bromoform	75-25-2	µg/L	Grab
21	Carbon Tetrachloride	56-23-5	µg/L	Grab
22	Chlorobenzene	108-90-7	µg/L	Grab
24	Chloroethane	75-00-3	µg/L	Grab
26	Chloroform	67-66-3	µg/L	Grab
35	Methyl Chloride	74-87-3	µg/L	Grab
23	Dibromochloromethane	124-48-1	µg/L	Grab
27	Dichlorobromomethane	75-27-4	µg/L	Grab
36	Methylene Chloride	75-09-2	µg/L	Grab
33	Ethylbenzene	100-41-4	µg/L	Grab
89	Hexachlorobutadiene	87-68-3	µg/L	Grab
34	Methyl Bromide (Bromomethane)	74-83-9	µg/L	Grab
94	Naphthalene	91-20-3	µg/L	Grab
38	Tetrachloroethylene (PCE)	127-18-4	µg/L	Grab
39	Toluene	108-88-3	µg/L	Grab
40	trans-1,2-Dichloroethylene	156-60-5	µg/L	Grab
43	Trichloroethylene (TCE)	79-01-6	µg/L	Grab
44	Vinyl Chloride	75-01-4	µg/L	Grab
21	Methyl-tert-butyl ether (MTBE)	1634-04-4	µg/L	Grab
41	1,1,1-Trichloroethane	71-55-6	µg/L	Grab
42	1,1,2-Trichloroethane	79-00-5	µg/L	Grab
28	1,1-Dichloroethane	75-34-3	µg/L	Grab
30	1,1-Dichloroethylene (DCE)	75-35-4	µg/L	Grab
31	1,2-Dichloropropane	78-87-5	µg/L	Grab
32	1,3-Dichloropropylene	542-75-6	µg/L	Grab
37	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	Grab
101	1,2,4-Trichlorobenzene	120-82-1	µg/L	Grab

CTR Number	Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
29	1,2-Dichloroethane	107-06-2	µg/L	Grab
75	1,2-Dichlorobenzene	95-50-1	µg/L	Grab
76	1,3-Dichlorobenzene	541-73-1	µg/L	Grab
77	1,4-Dichlorobenzene	106-46-7	µg/L	Grab

SEMI-VOLATILE ORGANICS

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
60	Benzo(a)Anthracene	56-55-3	µg/L	Grab
85	1,2-Diphenylhydrazine	122-66-7	µg/L	Grab
45	2-Chlorophenol	95-57-8	µg/L	Grab
46	2,4-Dichlorophenol	120-83-2	µg/L	Grab
47	2,4-Dimethylphenol	105-67-9	µg/L	Grab
49	2,4-Dinitrophenol	51-28-5	µg/L	Grab
82	2,4-Dinitrotoluene	121-14-2	µg/L	Grab
55	2,4,6-Trichlorophenol	88-06-2	µg/L	Grab
83	2,6-Dinitrotoluene	606-20-2	µg/L	Grab
50	2-Nitrophenol	88-75-5	µg/L	Grab
71	2-Chloronaphthalene	91-58-7	µg/L	Grab
78	3,3-Dichlorobenzidine	91-94-1	µg/L	Grab
62	Benzo(b)Fluoranthene	205-99-2	µg/L	Grab
52	4-Chloro-3-methylphenol	59-50-7	µg/L	Grab
48	2-Methyl-4,6-Dinitrophenol	534-52-1	µg/L	Grab
51	4-Nitrophenol	100-02-7	µg/L	Grab
69	4-Bromophenyl Phenyl Ether	101-55-3	µg/L	Grab
72	4-Chlorophenyl Phenyl Ether	7005-72-3	µg/L	Grab
56	Acenaphthene	83-32-9	µg/L	Grab
57	Acenaphthylene	208-96-8	µg/L	Grab
58	Anthracene	120-12-7	µg/L	Grab
59	Benzidine	92-87-5	µg/L	Grab
61	Benzo(a)Pyrene	50-32-8	µg/L	Grab
63	Benzo(ghi)Perylene	191-24-2	µg/L	Grab
64	Benzo(k)Fluoranthene	207-08-9	µg/L	Grab
65	Bis (2-Chloroethoxy) Methane	111-91-1	µg/L	Grab
66	Bis (2-Chloroethyl) Ether	111-44-4	µg/L	Grab
67	Bis (2-Chloroisopropyl) Ether	108-60-1	µg/L	Grab
68	Bis(2-Ethylhexyl) Phthalate	117-81-7	µg/L	Grab
70	Butylbenzyl Phthalate	85-68-7	µg/L	Grab
73	Chrysene	218-01-9	µg/L	Grab
81	Di-n-butyl Phthalate	84-74-2	µg/L	Grab
84	Di-n-Octyl Phthalate	117-84-0	µg/L	Grab
74	Dibenzo(a,h)anthracene	53-70-3	µg/L	Grab
79	Diethyl Phthalate	84-66-2	µg/L	Grab

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

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

PESTICIDES/PCBs/DIOXINS

CTR Number	Pesticide/PCB/Dioxin Parameters	CAS Number	Units	Effluent Sample Type
110	4,4-DDD	72-54-8	µg/L	24-hour Composite
109	4,4-DDE	72-55-9	µg/L	24-hour Composite
108	4,4-DDT	50-29-3	µg/L	24-hour Composite
112	alpha-Endosulfan	959-98-8	µg/L	24-hour Composite
103	alpha-BHC (Benzene hexachloride)	319-84-6	µg/L	24-hour Composite
102	Aldrin	309-00-2	µg/L	24-hour Composite
113	beta-Endosulfan	33213-65-9	µg/L	24-hour Composite
104	beta-BHC (Benzene hexachloride)	319-85-7	µg/L	24-hour Composite
107	Chlordane	57-74-9	µg/L	24-hour Composite
106	delta-BHC (Benzene hexachloride)	319-86-8	µg/L	24-hour Composite
111	Dieldrin	60-57-1	µg/L	24-hour Composite
114	Endosulfan Sulfate	1031-07-8	µg/L	24-hour Composite
115	Endrin	72-20-8	µg/L	24-hour Composite
116	Endrin Aldehyde	7421-93-4	µg/L	24-hour Composite
117	Heptachlor	76-44-8	µg/L	24-hour Composite
118	Heptachlor Epoxide	1024-57-3	µg/L	24-hour Composite
105	gamma-BHC (Benzene hexachloride or Lindane)	58-89-9	µg/L	24-hour Composite
119	Polychlorinated Biphenyl (PCB) 1016	12674-11-2	µg/L	24-hour Composite
120	PCB 1221	11104-28-2	µg/L	24-hour Composite
121	PCB 1232	11141-16-5	µg/L	24-hour Composite
122	PCB 1242	53469-21-9	µg/L	24-hour Composite
123	PCB 1248	12672-29-6	µg/L	24-hour Composite
124	PCB 1254	11097-69-1	µg/L	24-hour Composite
125	PCB 1260	11096-82-5	µg/L	24-hour Composite
126	Toxaphene	8001-35-2	µg/L	24-hour Composite
16	2,3,7,8-TCDD (Dioxin)	1746-01-6	pg/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	24-hour Composite
NL	Specific Conductance (Electrical Conductivity or EC)	EC	µmhos /cm	24-hour Composite
NL	Total Dissolved Solids (TDS)	TDS	mg/L	24-hour Composite
NL	Dissolved Organic Carbon (DOC)	DOC	mg/L	Grab

NUTRIENTS

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

OTHER CONSTITUENTS OF CONCERN

CTR Number	Other Constituents of Concern	CAS Number	Units	Effluent Sample Type
NL	1,2,3-Trichloropropane (TCP)	96-18-4	µg/L	Grab
NL	Trichlorofluoromethane	75-69-4	µg/L	Grab
NL	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	µg/L	Grab
NL	Styrene	100-42-5	µg/L	Grab
NL	Xylenes	1330-20-7	µg/L	Grab
NL	Barium	7440-39-3	µg/L	24-hour Composite
NL	Fluoride	16984-48-8	mg/L	24-hour Composite
NL	Molybdenum	7439-98-7	µg/L	24-hour Composite
NL	Tributyltin	688-73-3	µg/L	24-hour Composite
NL	Alachlor	15972-60-8	µg/L	24-hour Composite
NL	Atrazine	1912-24-9	µg/L	24-hour Composite
NL	Bentazon	25057-89-0	µg/L	24-hour Composite
NL	Carbofuran	1563-66-2	µg/L	24-hour Composite
NL	2,4-D	94-75-7	µg/L	24-hour Composite
NL	Dalapon	75-99-0	µg/L	24-hour Composite
NL	1,2-Dibromo-3-chloropropane (DBCP)	96-12-8	µg/L	24-hour Composite
NL	Di(2-ethylhexyl)adipate	103-23-1	µg/L	24-hour Composite
NL	Dinoseb	88-85-7	µg/L	24-hour Composite
NL	Diquat	85-00-7	µg/L	24-hour Composite
NL	Endothal	145-73-3	µg/L	24-hour Composite
NL	Ethylene Dibromide (EDB)	106-93-4	µg/L	24-hour Composite
NL	Methoxychlor	72-43-5	µg/L	24-hour Composite
NL	Molinate (Ordram)	2212-67-1	µg/L	Grab

CTR Number	Other Constituents of Concern	CAS Number	Units	Effluent Sample Type
NL	Oxamyl	23135-22-0	µg/L	Grab
NL	Picloram	1918-02-1	µg/L	Grab
NL	Simazine (Princep)	122-34-9	µg/L	Grab
NL	Thiobencarb	28249-77-6	µg/L	Grab
NL	2,4,5-TP (Silvex)	93-72-1	µg/L	Grab
NL	Chlorpyrifos	2921-88-2	µg/L	24-hour Composite
NL	Diazinon	333-41-5	µg/L	24-hour Composite

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

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

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

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

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

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

   f. **Sample Type.** All receiving water samples shall be taken as grab samples. Effluent samples shall be taken as described in Table D-6.

   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 maximum reporting limit of 0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury.

   i. **Ammonia, Total as Nitrogen.** Only required at upstream receiving water.

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

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D of the Municipal General Order) related to monitoring, reporting, and recordkeeping. 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).
2. 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.
3. Monitoring frequencies may be adjusted by the Executive Officer to a less frequent basis if a Discharger makes a request and the request is backed by statistical trends of monitoring data submitted.

B. Self-Monitoring Reports

1. The Discharger shall electronically submit SMRs using the State Water Board's California Integrated Water Quality System (CIWQS) Program website (www.waterboards.ca.gov/ciwqs/index.html). The CIWQS Web site will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMRs including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this MRP. 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 MRP, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR.
3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table D-7. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period	SMR Due Date
Continuous	All	Submit with monthly SMR
1/Day	(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	Sunday through Saturday	Submit with monthly SMR
3/Week	Sunday through Saturday	Submit with monthly SMR
1/Month	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/Quarter	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 (respectively)
1/Year	1 January through 31 December	1 February of following year

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable 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 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 maximum daily effluent limitation (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 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; explain all unusual results, and/or events which affect interpretation of the results; and discuss 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. The cover letter must be uploaded directly into CIWQS and violations must be entered into CIWQS under the Violations tab for the reporting period in which the violation occurred in addition to them being identified in the cover letter.
    c. The Discharger shall attach final laboratory reports for all contracted commercial laboratories for total cyanide and the effluent and receiving water characterization monitoring, including quality assurance/quality control information, with all its SMRs for which sample analyses were performed. Bench sheets are not required but shall be available upon request by Regional Board staff.

7. The Discharger shall submit in the SMRs calculations and reports in accordance with the following requirements, all other SMRs calculations and report requirements listed in the MGO are not applicable to this Facility.

   a. **Calendar Annual Average Limitations/Triggers** For constituents with effluent limitations or triggers 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 VIII.A of the Municipal General Order.

   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 VIII.F of the Municipal General Order.

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

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

   f. **Temperature Receiving Water Concentrations** The Discharger shall calculate and report the temperature increase in the receiving water based on the difference in temperature at Monitoring Locations (RSW-U and RSW-D).

C. Discharge Monitoring Reports (DMRs)

1. The Discharger shall electronically submit DMRs together with SMRs using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic submittal of DMRs will be in addition to electronic submittal of SMRs. Information about electronic submittal of DMRs is provided by the Discharge Monitoring Report website https://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/.

D. Other Reports

1. **Special Study Reports.** Special study reports required by section VIII.C, Provisions, in this NOA shall be submitted in accordance with the reporting requirements in Table D-8, Technical Reports.

2. **Analytical Methods Report.** The Discharger shall complete and submit an Analytical Methods Report, electronically via CIWQS submittal, by the due date specified in Table D-8 below. The Analytical Methods Report shall include the following for each constituent listed in tables D-3, D-4 and D-6 of

this NOA R5-2023-0025-018: 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 (see also General Monitoring Provision F in the MRP, Attachment E of the Municipal General Order), 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 greater than the applicable water quality objective for a constituent, the Discharger shall explain how the proposed analytical method complies with the SSM Rule. Central Valley Water Board staff will provide a tool with this NOA R5-2023-0025-018 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.

3. **Annual Operations Report.** The Discharger shall submit in accordance with the reporting requirements in Table D-8, Technical Reports, a written report containing the following:

   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.

4. **Annual Pretreatment Reporting Requirements. – Not Applicable.**

5. **Recycled Water Policy Annual Reports.** In accordance with section 3 of the Water Quality Control Policy for Recycled Water (Recycled Water Policy) and as specified in this NOA R5-2023-0025-018, the Discharger shall electronically submit an annual report of monthly data to the State Water Board by 30 April each year covering the previous calendar year. The report shall be submitted 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 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 to demonstrate compliance with this reporting requirement.

6. **Technical Report Submittals.** The Municipal General Order, as specified in this NOA R5-2023-0025-018, includes requirements to submit various reports and documents that may include a Notice of Intent, special study technical reports, progress reports, and other reports identified in the MRP (hereafter referred to collectively as "technical reports"). Table D-8 below summarizes the technical reports that are applicable to this discharge and required by this NOA R5-2023-0025-018, and the due dates for each 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 D-8. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
1	Notice of Intent	30 September 2030	NOI
2	Cyanide Constituent Study	1 April 2029	NOA VIII.C.2
3	TRE Work Plan	1 October 2028	MRP V.G.
4	Analytical Methods Report	1 December 2026	MRP X.D.2
5	Analytical Methods Report Certification	1 October 2027	MRP IX.E.3.
6	Annual Operations Report	1 February 2027	MRP X.D.3
7	Annual Operations Report	1 February 2028	MRP X.D.3
8	Annual Operations Report	1 February 2029	MRP X.D.3
9	Annual Operations Report	1 February 2030	MRP X.D.3
10	Annual Operations Report	1 February 2031	MRP X.D.3
11	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2027	MRP X.D.5
12	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2028	MRP X.D.5
13	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2029	MRP X.D.5
14	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2030	MRP X.D.5
15	Recycled Water Policy Annual Report Submittal Confirmation	30 April 2031	MRP X.D.5

APPENDIX E – DETERMINATION OF WATER QUALITY-BASED EFFLUENT LIMITATIONS (WQBELS)

The Central Valley Water Board determined water quality-based effluent limitations (WQBELs) as described in the Municipal General Order, section V.C.4 of the Fact Sheet (Attachment F), using the effluent limits tables included in the Municipal General Order, section V.A.1 of the Limitations and Discharge Requirements. For parameters with both human health and aquatic life objectives/criteria, the final effluent limitations in this NOA are based on the lower of the effluent limitations based on the aquatic life objectives/criteria and human health objectives/criteria.

Abbreviations and Notes for Table E-1:

1. CV = Coefficient of Variation (established in accordance with section 1.4 of the SIP)
2. MDEL = Maximum Daily Effluent Limitation
3. AMEL = Average Monthly Effluent Limitation
4. MDEL = Maximum Daily Effluent Limitation
5. AWEL = Average Weekly Effluent Limitation
6. CMC = Criterion Maximum Concentration
7. CCC = Criterion Continuous Concentration
8. Coefficient of Variation (CV) calculated using effluent sample data for the parameter listed.
9. Effluent Limit Table as indicated and contained in section V, Effluent Limitations and Discharge Specifications, of the Municipal General Order. Specific table listed is used to determine the appropriate AMEL, AWEL, or MDEL.

Table E-1. Human Health WQBELs Calculations

Parameter	Units	Criteria	CV	Effluent Limit Table in Municipal General Order	AMEL	AWEL
Nitrate Plus Nitrite (as N)	mg/L	10	0.3	Table 20B	10	14

Table E-2. Aquatic Life WQBELs Calculations

Parameter	Units	CMC	CCC	CV	Effluent Limit Table in Municipal General Order	AMEL	AWEL
Ammonia, Total as Nitrogen (1 May – 31 October)	mg/L	5.1	0.73	1.1	18B	0.61	1.9
Ammonia, Total as Nitrogen (1 November – 30 April)	mg/L	6.2	1.2	1.1	18C	1.0	3.2