

Central Valley Regional Water Quality Control Board

27 June 2025

Tracie Mueller
Wastewater Utility Manager
City of Roseville
1800 Booth Road
Roseville, CA 95747

VIA EMAIL:
trmueller@roseville.ca.us
CERTIFIED MAIL
7021 1970 0000 8962 2512

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; CITY OF ROSEVILLE, PLEASANT GROVE WASTEWATER TREATMENT PLANT, PLACER COUNTY

Our office received a Notice of Intent (NOI) dated 26 July 2023 from the City of Roseville (hereinafter Discharger), for discharge of tertiary treated domestic wastewater to surface water from the Pleasant Grove Wastewater Treatment Plant (hereafter Facility) to Pleasant Grove Creek. The Municipal General Order requires the submittal of an NOI to apply for regulatory coverage of a surface water discharge. Based on the NOI and subsequent information submitted by the Discharger, staff have 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 R5-2023-0025-006 under NPDES Permit CAG585001. Please reference your Municipal General Order Enrollee Number, **R5-2023-0025-006**, in your correspondence and submitted documents.

Discharges to surface water from the Facility are currently regulated by the Municipal General Order R5-2017-0085-02 through an NOA issued by the Executive Officer on 28 June 2019, Municipal General Order Enrollee Number R5-2017-0085-005 (NOA R5-2017-0085-005). This NOA, Enrollee Number R5-2023-0025-006 (NOA R5-2023-0025-006), authorizing coverage under the 2023 Municipal General Order, shall become effective on **1 October 2025**, at which time the terms and conditions in the Discharger's NOA R5-2017-0085-005 and General Order R5-2017-0085-02 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 (CWA) and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements contained in the 2023 Municipal General Order and as specified in this NOA R5-2023-0025-006. This action in no way prevents the Central Valley Water Board from taking enforcement action for past violations of NOA R5-2017-0085-005.

The enclosed [Municipal General Order](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2023-0025.pdf) 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/) (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 R5-2023-0025-006 as Appendix D. **Only the monitoring and reporting requirements specifically listed in Appendix D of this NOA R5-2023-0025-006 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 R5-2023-0025-006.

Table 1. Facility Information

WDID	5A310106007
CIWQS Facility Place ID	248706
Discharger	City of Roseville
Name of Facility	Pleasant Grove Wastewater Treatment Plant
Facility Street Address	5051 Westpark Drive
Facility City, State, Zip Code	Roseville, CA 95747
Facility County	Placer County
Facility Contact, Title and Phone	Jason Fick, Wastewater Operations Superintendent (916) 746-1940
Authorized Person to Sign and Submit Reports	Tracie Mueller, Wastewater Utility Manager, (916) 259-6693
Mailing Address	1800 Booth Road, Roseville, CA 95747
Billing Address	Same as Mailing
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Major
Threat to Water Quality	1
Complexity	A
Pretreatment Program	Yes
Recycled Water Requirements	See Master Reclamation Permit, Order 97-147, Amendment No. 2
Facility Design Average Dry Weather Flow (ADWF)	12 (MGD), average dry weather flow
Permitted ADWF	12 MGD, average dry weather flow
Watershed	Lower Sacramento
Receiving Water	Pleasant Grove Creek
Receiving Water Type	Inland Surface Water
Discharge Point 001	Latitude 38° 79' 21" N, Longitude 121° 37' 01" W

I. FACILITY INFORMATION

The Facility provides sewerage service for the northwest portion of the City of Roseville, portions of Placer County, and the South Placer Municipal Utilities District and serves a population of approximately 110,000 and 10 of the City's 12 significant industrial users. The current design average dry weather flow capacity of the Facility is 12 MGD. As communicated in and covered by previous Orders and NOAs, the Discharger plans to increase the Facility's capacity to 15 MGD.

The Facility provides full nitrification and denitrification for nitrogen removal and uses tertiary filtration followed by ultraviolet light (UV) for disinfection. The components of the treatment system at the Facility include:

- two bar screens;
- two aerated grit chambers;
- four primary clarifiers;
- three oxidation ditches;
- four secondary clarifiers;
- six sand filters;
- four UV disinfection channels;
- three storage basins totaling 64 million gallons storage capacity;
- one influent emergency storage basin with 20.6 million gallons storage capacity; and
- two anaerobic digesters.

The Facility includes four storage basins that are part of the treatment process and are covered under the Municipal General Order, as specified in this NOA. The Emergency Storage Basin (PND-004) is constructed with a 3-foot-thick clay liner using compacted native clay materials from the site. These materials were pre-tested to ensure they could achieve a permeability of 1×10^{-6} cm/sec. The basin is used infrequently to store influent during periods of plant upset or capacity exceedance and is typically returned to the headworks within 24 to 48 hours.

The southeast corner of the Emergency Storage Basin contains a high-density polyethylene (HDPE)-lined drainage trough that collects filter backwash, which is directly routed back to the treatment system without storage. The three tertiary effluent storage basins (North, East, and Northwest; PND-001 through PND-003) are constructed with compacted native clay soils and underlain by natural claypan or hardpan formations. No formal post-construction permeability testing was conducted; however, dry conditions in adjacent monitoring wells and lack of groundwater mounding confirm that seepage is not occurring.

The combined effective storage capacity of the effluent basins is approximately 47.1 million gallons, which satisfies CEQA mitigation requirements for 100-year flood protection. Stored tertiary effluent is returned to the headworks via 15-horsepower submersible pumps rated at 1,650 gallons per minute (2.4 MGD). Depending on volume, complete drainage takes approximately 4 days (PND-001), 6 days (PND-002), or 10 days (PND-003). Most diverted effluent is returned within 24 hours. Basin freeboard and surface area are as follows: all basins have bottom elevations of 91 feet and berm tops of approximately 99 feet, except PND-004 which has a west berm elevation of 101 feet. Surface areas are: PND-001 – 489,000 sq ft; PND-002 –

459,000 sq ft; PND-003 – 678,000 sq ft; PND-004 – 489,000 sq ft. The previously reported daily discharge of less than 0.03 MGD to the Emergency Storage Basin was incorrectly labeled as “plant runoff.” This event was a controlled diversion of 2.2 MGD of tertiary effluent and has been corrected in the facility records.

The Facility also includes a reinforced concrete Storm Drainage basin located in the northwest corner of the main plant, south of PND-001 and east of PND-004. This 1.5 MG unit collects stormwater, containment drainage, and UV channel water, returning it to the headworks. It can be isolated if needed and is not used for wastewater storage. Although the Facility’s Flow Schematic depicts a potential discharge route from the storage basins to Pleasant Grove Creek, no direct discharges from the basins to surface water occur under current operations. All stored wastewater is returned to the treatment process prior to discharge.

Stormwater generated at the Facility is managed through a separate storm drainage system and is not discharged to any of the wastewater storage basins. In accordance with the State Water Board’s Industrial Storm Water General Order (Order WQ 2014-0057-DWQ), stormwater is collected via on-site drainage infrastructure and conveyed to Pleasant Grove Creek separately. This drainage system includes stormwater inlets and conveyance piping that are physically separated from the wastewater treatment system. This operational separation ensures that stormwater is appropriately managed without impacting treatment basin capacity or function.

The Facility formerly included two shallow groundwater monitoring wells (GW-002 and GW-003) installed to evaluate perched groundwater conditions near the storage basins. These wells were decommissioned under the previous 2014 NPDES permit after consistently yielding dry readings, indicating the absence of perched groundwater. A third well, GW-001, remains in service and is located downgradient of the Facility’s storage basins based on the regional groundwater gradient, which flows from northeast to southwest. GW-001 was originally constructed as a potable water supply well to a depth of approximately 530 feet but now serves as a groundwater monitoring well for the first encountered aquifer. Water quality results from this well have consistently shown no evidence of wastewater-related impacts.

II. RECEIVING WATER BENEFICIAL USES

The Facility discharges from Discharge Point 001 to Pleasant Grove Creek, a tributary to the Sacramento River via the Pleasant Grove Creek Canal and the Natomas Cross Canal within the Sacramento River watershed. According to the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) and the Tributary Rule, Pleasant Grove Creek is designated with the following beneficial uses:

- Municipal and Domestic Supply (MUN);
- Agricultural Supply (AGR);
- Water Contact Recreation (REC-1);
- Non-contact Water Recreation (REC-2);
- Warm Freshwater Habitat (WARM);
- Cold Freshwater Habitat (COLD);

- Wildlife Habitat (WILD);
- Navigation (NAV);
- Migration of Aquatic Organisms (MIGR); and
- Spawning, Reproduction, and/or Early Development (SPWN).

According to the Basin Plan, groundwater underlying the Facility is designated with the following existing beneficial uses:

- Municipal and Domestic Supply (MUN);
- Agricultural Supply, Including Irrigation and Stock Watering (AGR);
- Industrial Service Supply (IND); and
- Industrial Process Supply (PRO).

III. RECEIVING WATER TOTAL MAXIMUM DAILY LOADS (TMDLS)

The segment of Pleasant Grove Creek receiving the Facility's discharge is not subject to a TMDL. Therefore, no additional TMDL-based effluent limitations or monitoring requirements are included in this NOA R5-2023-0025-006.

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.** 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. The discharge of wastes at a location or in a manner different from that described in the NOI and this NOA R5-2023-0025-006 is prohibited.
- B.** The bypass 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.** Neither the discharge nor its treatment shall create a nuisance as defined in section 13050 of the Water Code.
- D.** Discharge of waste classified as 'hazardous', as defined in the CCR, Title 22, section 66261.1 et seq., is prohibited.
- E. Average Dry Weather Flow.** Discharges exceeding an average dry weather flow of 12 MGD are prohibited. Upon compliance with the facility expansion provision, Provision VIII.D of this NOA, the permitted average dry weather discharge flow may be increased up to a maximum of 15 MGD, as approved by the Executive Officer through an amendment to this or subsequent NOAs.

V. EFFLUENT LIMITATIONS

A. Effluent Limitations – Discharge Point 001

The Discharger shall maintain compliance with the following effluent limitations in sections V.A.1 through V.A.7 of this NOA when discharging to Discharge Point 001. Effluent limitations are provided in the Municipal General Order. Only the effluent limitations listed below in sections V.A.1 through V.A.7 are applicable to

this Facility. Unless otherwise specified in this NOA R5-2023-0025-006, compliance with effluent limitations in sections V.A.1 through V.A.7 shall be measured at Monitoring Location EFF-001, as described in the Monitoring and Reporting Program (MRP), Appendix D of this NOA R5-2023-0025-006.

1. The Discharger shall maintain compliance with the effluent limitations specified in Table 2.

Table 2. Effluent Limitations

Parameter	Units	Average Monthly	Average Weekly
Biochemical Oxygen Demand, 5-day @ 20°C (BOD ₅)	milligrams per liter (mg/L)	10	15
Total Suspended Solids (TSS)	mg/L	10	15
Ammonia, Total (as N)	mg/L	3.8	8.3
Nitrate plus Nitrite, Total (as N)	mg/L	10	13

2. **pH.** The pH shall at all times be within the range of 6.5 and 8.5.
3. **Percent Removal.** The average monthly percent removal of BOD₅ and TSS shall not be less than 85 percent.
4. **Total Coliform Organisms.** Effluent total coliform organisms shall not exceed:
 - a. 2.2 most probable number per 100 milliliters (MPN/100 mL), as a 7-day median;
 - b. 23 MPN/100 mL, more than once in any 30-day period; and
 - c. 240 MPN/100 mL, at any time.
5. **Chronic Whole Effluent Toxicity**
 - a. **Maximum Daily Effluent Limitation (MDEL).** No chronic aquatic toxicity test using *Ceriodaphnia dubia* shall result in a "Fail" (as defined in section V.B of the MRP) at the Instream Waste Concentration (IWC) for the sub-lethal endpoint measured in the test **AND** a percent effect greater than or equal to 50 percent (as defined in section V.B of the MRP) for the survival endpoint.
 - b. **Monthly Median Effluent Limitation (MMEL).** No more than one chronic aquatic toxicity test using *Ceriodaphnia dubia* initiated in a toxicity calendar month shall result in a "Fail" (as defined in section V.B of the MRP) at the IWC for any endpoint.
6. **Electrical Conductivity @ 25°C.** Effluent electrical conductivity shall not exceed 900 µmhos/cm as an annual average.

VI. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations for surface water are contained in section VI.A of the Municipal General Order. Based on the information provided in the NOI, only the following receiving water limitations listed in Municipal General Order (section number given below) are applicable to this Facility.

- Biostimulatory Substances (section VI.A.3);
- Chemical Constituents (section VI.A.4);
- Color (section VI.A.5);
- Dissolved Oxygen (section VI.A.6.a.);
- Floating Material (section VI.A.7);
- Oil and Grease (section VI.A.8);
- pH (section VI.A.9.a);
- Pesticides (section VI.A.10.a and b);
- Radioactivity (section VI.A.11);
- Suspended Sediments (section VI.A.12);
- Settleable Substances (section VI.A.13);
- Suspended Material (section VI.A.14);
- Taste and Odors (section VI.A.15);
- Temperature (section VI.A.16.c). The discharge to Pleasant Grove Creek shall not cause the temperature at Monitoring Location RSW-002 to exceed the following:

Table 3. Temperature Receiving Water Limitations for Pleasant Grove Creek

Period	Period Maximum (°F) (see table note 1.)	Period Average (°F) (see table note 2.)
January and February	69	64
March	70	67
April	74	70
May	78	75
June	81	77
July-September	83	80
October	81	77
November	77	72
December	70	65

Table 3 Notes:

1. Instantaneous maximum not to be exceeded in period.
 2. Arithmetic average of measurements not to be exceeded in period.
- Toxicity (section VI.A.17.a); and
 - Turbidity (section 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

MRP requirements are contained in Appendix D of this NOA R5-2023-0025-006.

VIII. PROVISIONS

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 R5-2023-0025-006.

C. Special Provisions

Special Provisions are contained in section VII.C of the Municipal General Order. Only the following Special Provision sections from the Municipal General Order apply to this Facility, as specified in Table 4 below:

Table 4. Summary of Applicable Special Provisions

Special Provision	Applicable Provisions
1. Reopener Provisions	a. Major Modification of Treatment Works c. Water Effect Ratios (WERs) and Metal Translators
2. Special Studies, Technical Reports and Additional Monitoring Requirements	Not applicable
3. Best Management Practices and Pollution Prevention	c. Pyrethroid Management Plan
4. Construction, Operation and Maintenance Specifications	a. Filtration System Operating Specifications, subpart i only b. UV Disinfection System Operating Specifications i. UV Dose, subpart (a) only; and ii. UV Transmittance, subpart (a) only; and iii-vi. c. Treatment/Storage Pond, i-xiii, excluding iv.(a), vii, and xii.

Special Provision	Applicable Provisions
5. Special Provisions for Municipal Facilities	a. Pretreatment Requirements, i-iv only. b. Sludge/Biosolids Treatment or Discharge Specifications
6. Other Special Provisions	a. Disinfection Requirements
7. Compliance Schedules	Not applicable

Table 4 Notes:

1. **Filtration System Operating Specifications.** Turbidity measurements at FIL-001 shall be used to determine compliance.
2. **Pretreatment Requirements.** Pretreatment reporting requirements are included in section X.D.5 of Appendix D.

D. Facility Expansion.

The Discharger shall submit a report to the Central Valley Water Board documenting the increase in Facility treatment capacity. The report shall be certified by a registered and licensed Civil Engineer that the Facility has appropriate treatment capacity to the new design average dry weather flow rate up to 15 MGD. The Discharger shall submit a request for permitted flow increase and the permitted flow increase shall not be effective until the request is approved by the Executive Officer through an amendment to this NOA.

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. Only the following compliance determination sections from the Municipal General Order apply to this Facility:

- A. BOD₅ and TSS Effluent Limitations;
- E. Average Dry Weather Flow Effluent Prohibition;
- F. Total Coliform Organisms Effluent Limitations;
- I. Effluent Limitations;
- J. Dissolved Oxygen Receiving Water Limitation;
- K. Whole Effluent Toxicity Effluent Limitations or Triggers;
- O. Period Average, Calendar Month Average, and Annual Average; and
- P. Turbidity Receiving Water Limitation.

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 ammonia, flow, pH, and acute toxicity are less stringent than prescribed in the previous NOA R5-2017-0085-005. This Order includes chronic toxicity effluent limitations in lieu of acute toxicity limitations. A more detailed anti-backsliding analysis is provided in Appendix C to this NOA R5-2023-0025-006 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 R5-2023-0025-006 does not allow an increase in flow or mass of pollutants to the receiving water and the relaxation of effluent limitations for ammonia, pH, and acute toxicity are 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 R5-2023-0025-006, 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 R5-2023-0025-006.

XIII. ENFORCEMENT

Failure to comply with the applicable requirements of the Municipal General Order, as specified in this NOA R5-2023-0025-006, 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 R5-2023-0025-006 becomes effective on 1 October 2025, you will need to comply with the effluent limitations, and monitoring and reporting requirements, contained in your existing NOA R5-2017-0085-005. For your monthly SMRs, you will need to demonstrate compliance with your existing NOA R5-2017-0085-005, through 30 September 2025. You will need to demonstrate compliance with this NOA R5-2023-0025-006 beginning 1 October 2025.

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 R5-2023-0025-006 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: City of Roseville
- Facility: Pleasant Grove Wastewater Treatment Plant
- County: Placer County
- CIWQS Place ID: 248706

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 R5-2023-0025-006 is issued, except that if the thirtieth day following the date this NOA R5-2023-0025-006 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 R5-2023-0025-006 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 R5-2023-0025-006. 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 – Location Map
Appendix B – Flow Schematic and Storage Basins Location Map

City of Roseville
Pleasant Grove Wastewater Treatment Plant

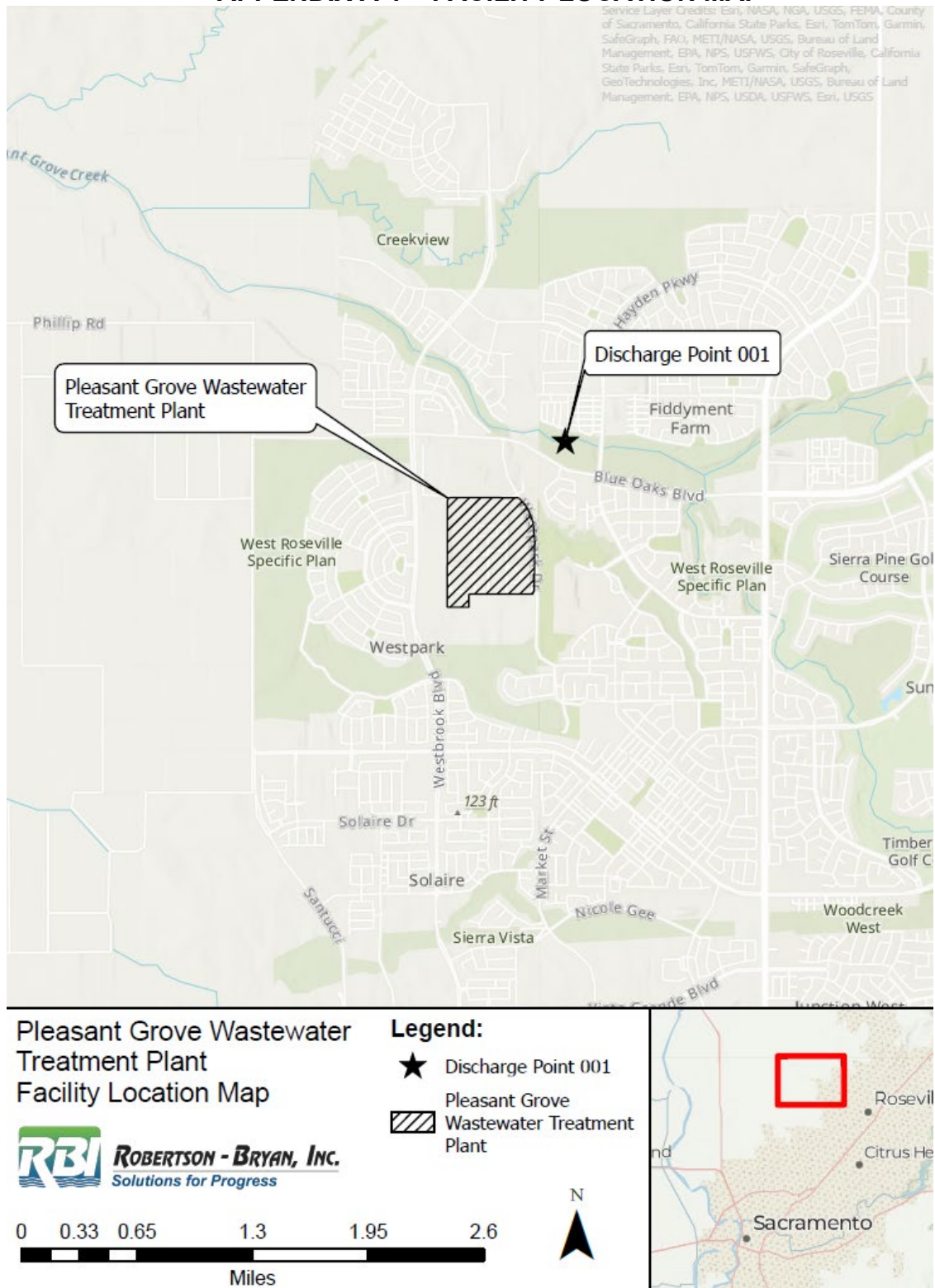
27 June 2025
R5-2023-0025-006

Appendix C – Supplemental Fact Sheet
Appendix D – Monitoring and Reporting Program
Appendix E – Determination of WQBELs

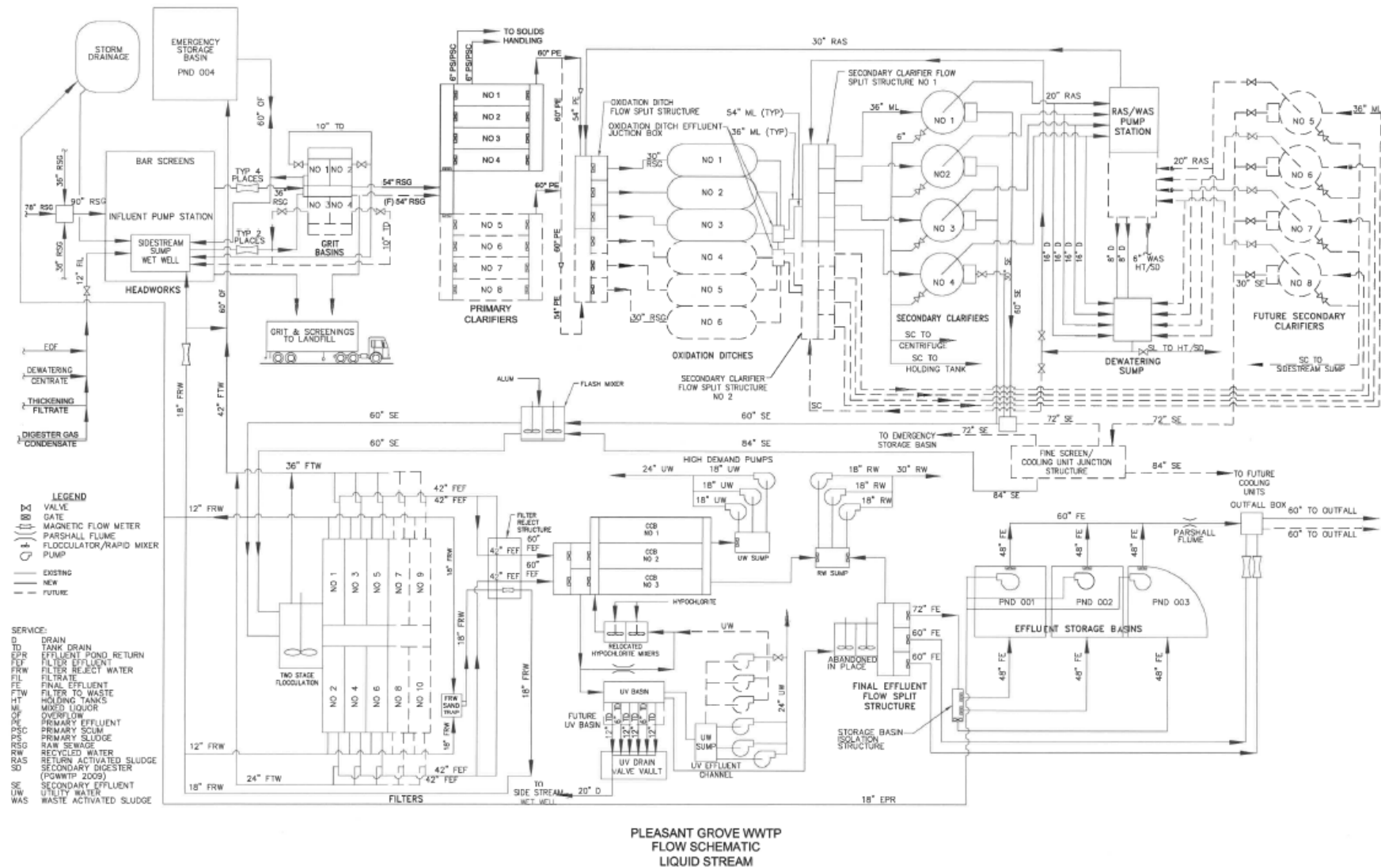
Enclosure (1):
Municipal General Order R5-2023-0025 (Discharger Only [email only])

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)
Jessica Rader, Central Valley Water Board, Rancho Cordova (email only)
Jo Anne Kipps, Fresno (email only)

APPENDIX A-1 – FACILITY LOCATION MAP



APPENDIX B – FLOW SCHEMATIC



APPENDIX B – STORAGE BASINS LOCATION MAP



Pleasant Grove Wastewater
Treatment Plant
Storage Basins Location Map



ROBERTSON - BRYAN, INC.
Solutions for Progress

Legend:

-  PGWWTP Facility Boundary
-  Storage Basins

0 0.04 0.08 0.16 0.24 0.32



Miles



APPENDIX C – SUPPLEMENTAL FACT SHEET

I. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this NOA R5-2023-0025-006 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 R5-2023-0025-006.

II. FINAL EFFLUENT LIMITATION CONSIDERATIONS

A. Satisfaction of Anti-Backsliding Requirements

The Clean Water Act 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 Code of Federal Regulations (C.F.R.) section 122.44(l).

The effluent limitations in this NOA R5-2023-0025-006 are at least as stringent as the effluent limitations in the Facility's previous NOA R5-2017-0085-005, with the exception of effluent limitations for pH, flow, acute toxicity, and ammonia. This NOA establishes numeric effluent limitations for chronic toxicity, which protect against acute and chronic toxicity. Consequently, the effluent limitations for toxicity are equally or more stringent than previous permits even though the previous acute toxicity effluent limitation has been replaced with a chronic toxicity effluent limitation. This relaxation and/or 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.

Pleasant Grove Creek is considered an attainment water for acute toxicity, pH, 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 ammonia and pH effluent limitations and removal of the acute toxicity limits complies with federal and state antidegradation

requirements. Thus, relaxation and/or removal 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 NOA R5-2017-0085-005 was issued indicates that acute toxicity does not exhibit reasonable potential to cause or contribute to an exceedance of water quality objectives in the receiving water. The updated information that supports the removal of the effluent limitations for acute toxicity and relaxation of ammonia effluent limitations includes the following:

- a. **Acute Toxicity.** Acute toxicity testing performed from July 2021 through June 2024 resulted in 100% survival of the test species (rainbow trout) and therefore, no acute toxicity. The discharge does not show reasonable potential to cause acute toxicity in the receiving water.
- b. **Ammonia.** Ammonia testing performed from July 2021 through June 2024, as well as the implementation of the 2013 U.S. EPA National Ambient Water Quality Criteria for ammonia that were recalculated through a Central Valley Clean Water Association (CVCWA) special study (discussed below), resulted in the calculation of less stringent effluent limitations.

Thus, removal of the effluent limitations for acute toxicity and relaxation of ammonia limitations in this NOA R5-2023-0025-006 is in accordance with CWA section 402(o)(2)(B)(i), which allows for the relaxation or removal of effluent limitations based on information that was not available at the time the previous NOA R5-2017-0085-005 was issued. Furthermore, this NOA establishes numeric effluent limitations for chronic toxicity, which protect against acute and chronic toxicity.

3. **Flow.** NOA R5-2017-0085-005 included flow as an effluent limit at Discharge Point 001 based on the Facility design flow. Compliance with the flow limit was calculated using the average daily flow over three consecutive dry weather months. Flow is not a pollutant; therefore, flow has been changed from an effluent limit to a discharge prohibition in this NOA R5-2023-0025-006, which is an equivalent level of regulation. This NOA R5-2023-0025-006 is not less stringent because compliance with flow as a discharge prohibition will be calculated the same way as the previous NOA R5-2017-0083-005. Flow as a discharge prohibition adequately regulates the Facility, does not allow for an increase in the discharge of pollutants, and does not constitute backsliding.

B. Antidegradation Policies

This NOA R5-2023-0025-006 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 R5-2023-0025-006 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.

The Discharger has upgraded and expanded the Facility to accommodate anticipated development in the service area, which reestablished the original 12 MGD design treatment capacity of the Facility. The Central Valley Water Board found in Order R5-2008-0079-01 that “This Order [R5-2008-0079-01] provides for an increase in the volume and mass of pollutants discharged and is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16 as updated by State Water Board Administrative Procedure Update (APU) No. 90-004.” Previous orders permitted the Facility with an average dry weather flow of 12 MGD (Orders R5-2008-0079-01 and R5-2014-0051). An increase in the permitted average dry weather discharge flow up to 15 MGD was authorized under Orders R5-2008-0079-01 and R5-2014-0051, and it was retained in Order R5-2017-0085-005. Based on the Facility’s most recent design treatment capacity, the Discharger demonstrated that it was able to achieve 12 MGD, average dry weather flow. Consistent with Orders R5-2008-0079-01, R5-2014-0051, and R5-2017-0085-005, this NOA establishes the permitted average dry weather discharge flow as 12 MGD based on the Facility’s upgrades and performance in the last five years. The antidegradation findings of the Facility’s previous orders (Orders R5-2008-0079-01 and R5-2014-0051) are incorporated by reference and apply to a permitted average dry weather discharge flow up to 15 MGD. After the Discharger submits a report to the Central Valley Water Board documenting the increase in Facility treatment capacity to 15 MGD, along with a request for permitted flow increase, the Executive Officer will review the request. If the Executive Officer concurs with the treatment capacity increase, this NOA will be amended to allow for the increase in average dry weather flow.

This NOA R5-2023-0025-006 relaxes or removes effluent limitations for ammonia, flow, pH, and acute toxicity. Based on Facility performance, the relaxation 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 R5-2023-0025-006 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 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.

C. Salinity (Electrical Conductivity or EC)

Based on effluent electrical conductivity data collected from February 2018 through January 2022, the maximum calendar annual average electrical conductivity of the effluent was 460 $\mu\text{mhos/cm}$. The Basin Plan contains a chemical constituent objective that incorporates by reference numeric thresholds for certain specified water bodies for electrical conductivity. Numeric values for the protection of these uses are typically based on site specific conditions and evaluations to determine the appropriate constituent threshold necessary to interpret the narrative chemical constituent Basin

Plan objective. The applicable numeric limit to implement the narrative objective for the protection of agricultural supply is 900 $\mu\text{mhos/cm}$. This site-specific threshold for the Facility was adopted into the Basin Plan by the Central Valley Water Board on 10 December 2020 (Resolution R5-2020-0057) to determine the applicability of the Salt Control Program's Conservative Permitting Pathway.

When only considering the numeric water quality standards for salinity, the discharge does not have reasonable potential to cause or contribute to an in-stream excursion of water quality objectives for salinity. However, due to the Region-wide concerns regarding salinity and to ensure implementation of the Basin Plan's numeric water quality objectives, effluent limitations for EC that are applicable to this Facility are included. The EC concentration of the effluent is within the historical range of the EC concentration observed in Pleasant Grove Creek and below the Salt Control Program's 900 $\mu\text{mhos/cm}$ site-specific threshold for the Conservative Permitting Pathway to protect the agricultural supply beneficial use of this receiving water. Under the State Antidegradation Policy, the waste discharge requirements must result in the best practicable treatment or control (BPTC) of the discharge necessary to assure that (a) a pollution or nuisance will not occur; and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained. In this case, the Discharger is currently utilizing BPTC, and an annual average effluent limitation of 900 $\mu\text{mhos/cm}$ for EC is applied limiting the discharge to current levels (thus ensuring that BPTC will continue to be met).

D. Ammonia

The Municipal General Order includes findings which describe a special study by the Central Valley Clean Water Association (CVCWA) titled the *Freshwater Mussel Collaborative Study for Wastewater Treatment Plants*. Site-specific ammonia criteria were developed as part of the CVCWA study and are used in the Municipal General Order to implement the Basin Plan's narrative toxicity objective to protect aquatic life beneficial uses of the receiving water. Equations for calculating acute and chronic ammonia criteria differ depending on whether salmonids and/or unionid mussels are present in a facility's receiving water.

The Discharger provided the Central Valley Water Board an August 2012 report titled *Temperature Study City of Roseville Pleasant Grove Wastewater Treatment Plant*. This report documented comments from representatives from the California Department of Fish and Wildlife stating that there is no documented or reported use of Pleasant Grove Creek by anadromous salmonids or other cold water fish species. It further documented available biological surveys for Pleasant Grove Creek demonstrating that it supports communities of warmwater fishes and insects, but not cold water populations of either fish or aquatic insects.

Phase II of the CVCWA study evaluated and field-verified an environmental-DNA (eDNA) sampling technique to determine the presence or absence of unionid mussels in typical receiving waters for Central Valley POTWs. For the CVCWA study, monitoring for unionid mussel eDNA was conducted in Pleasant Grove Creek during October 2015 at three monitoring locations: 1,400 feet upstream of the Facility's outfall, 550 feet downstream of the Facility's outfall (RSW-002 monitoring station), and approximately 4 miles downstream of the Facility's outfall. Replicate samples collected at each location

all tested negative for the presence of all three unionid mussel species known to reside in California. The CVCWA study also documented that unionid mussels had not previously been observed or reported to occur in Pleasant Grove Creek. Therefore, acute and chronic ammonia criteria were calculated using the CVCWA Criteria Recalculation Report assuming salmonids and mussels absent.

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 R5-2023-0025-006 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. Temperature

Pleasant Grove Creek has the beneficial uses of COLD and WARM. The Basin Plan includes the objective that “[a]t not time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature.” Order R5-2008-0079-01 included a receiving water limitation based on the Basin Plan objective.

The Discharger is unable to consistently comply with the Basin Plan objective and submitted an *August 2012 Temperature Study City of Roseville Pleasant Grove Wastewater Treatment Plant* (Robertson-Bryan, Inc.) supporting site-specific receiving water limits for temperature. The temperature study concluded that “The intermittency of flow and the disrupted hydrology caused by an urbanized watershed render upstream versus downstream temperature differentials an inappropriate means of regulating the thermal effects of the [Facility] discharge to Pleasant Grove Creek.” In lieu of receiving water limitations based on the Basin Plan objective, the Discharger proposed site-specific receiving water limitations for Pleasant Grove Creek, with compliance measured at Monitoring Location RSW-002, as follows:

Table C-1. Temperature Receiving Water Limitations for Pleasant Grove Creek

Period	Period Maximum (°F) (see table note 1)	Period Average (°F) (see table note 2)
January and February	69	64
March	70	67
April	74	70
May	78	75
June	81	77

Period	Period Maximum (°F) (see table note 1)	Period Average (°F) (see table note 2)
July-September	83	80
October	81	77
November	77	72
December	70	65

Table C-1 Notes:

1. Instantaneous maximum not to be exceeded in period.
2. Arithmetic average of measurements not to be exceeded in period.

The Department of Fish and Wildlife (DFW) reviewed the temperature study and submitted a letter to the Central Valley Water Board dated 4 September 2013 indicating that the Basin Plan objective is not practical in a stream system such as Pleasant Grove Creek that lacks flow and determining that the Discharger's proposed site-specific temperature limitations are protective of aquatic life beneficial uses for species that are known to occur or likely to occur in Pleasant Grove Creek at this time. DFW recommended that the Central Valley Water Board accept the Discharger's proposed temperature limitations. Therefore, Order R5-2014-0051 discontinued the receiving water limitation for temperature based on the Basin Plan objective and included the site-specific temperature receiving water limitations based on the Discharger's temperature study. Consistent with Order R5-2014-0051 and NOA R5-2017-0085-005, this NOA retains the site-specific temperature receiving water limitations.

C. 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 (MRP), Appendix D, of this NOA R5-2023-0025-006.

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., BOD₅ and TSS reduction requirements). All monitoring frequencies from NOA R5-2017-0085-005 have been carried forward in this NOA R5-2023-0025-006.

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.

The following effluent monitoring frequencies have been revised from NOA R5-2017-0085-005. All other effluent sampling frequencies from NOA R5-2017-0085-005 are carried forward to this NOA R5-2023-0025-006:

Table C-2. Revised Sampling Frequencies for Effluent Monitoring

Parameter	Unit	Prior Sample Frequency	Revised Sample Frequency	Rationale for Sample Frequency Revision
Dissolved Oxygen	mg/L	--	1/Month	Quantify discharge contribution to receiving water
Hardness	mg/L	1/Month	1/Quarter	Adequate frequency for future reasonable potential analysis
Dissolved Organic Carbon	mg/L	Not Required	1/Quarter	Calculate site-specific freshwater aluminum criteria for future reasonable potential analysis
Acute Toxicity	% survival	2/Year	Discontinue	A chronic aquatic toxicity test is generally protective of both chronic and acute aquatic toxicity

C. Whole Effluent Toxicity Testing Requirements

1. **Acute Toxicity – Not Applicable.** The discharge demonstrated no reasonable potential during the previous NOA term and Statewide Toxicity Provisions states that chronic toxicity monitoring is generally protective of acute and chronic aquatic toxicity.
2. **Chronic Toxicity.** Chronic whole effluent toxicity testing is required when discharging to Pleasant Grove Creek in order to demonstrate compliance with the Statewide Toxicity Provisions. Based on the Statewide Toxicity Provisions and the Municipal General Order, the effluent discharge can retain once per quarter chronic toxicity testing because the discharge qualifies for reduced monitoring from once per month sampling.

D. Receiving Water Monitoring

1. Pleasant Grove Creek

- a. Receiving water monitoring is necessary to assess compliance with receiving water limitations and to assess the impacts of the discharge to Pleasant Grove Creek.

The following receiving water monitoring frequencies have been revised from NOA R5-2017-0085-005. All other receiving water sampling frequencies from NOA R5-2017-0085-005 are carried forward to this NOA R5-2023-0025-003:

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

Parameter	Unit	Prior Sample Frequency	Revised Sample Frequency	Rationale for Sample Frequency Revision
Dissolved Organic Carbon	mg/L	Not Required	1/Quarter	Calculate site-specific freshwater aluminum criteria for future reasonable potential analysis
Hardness, Total (as CaCO ₃)	mg/L	1/Month	1/Quarter	Quarterly monitoring is adequate for future reasonable potential analysis
Turbidity	NTU	Not Required	1/Month	Add monitoring to determine effluent turbidity impact on the receiving water

2. Groundwater – Not Applicable

E. Biosolids Monitoring

1. Biosolids monitoring for compliance with 40 C.F.R. part 503 regulations administered by U.S. EPA is not included in the Municipal General Order, and therefore, is not included in this NOA R5-2023-0025-006.

The following webpage provides information on compliance with [U.S. EPA's part 503 biosolids program](https://www.epa.gov/biosolids/compliance-and-annual-biosolids-reporting) (https://www.epa.gov/biosolids/compliance-and-annual-biosolids-reporting).

Biosolids monitoring is required to ensure compliance with pretreatment requirements contained in C.F.R. part 403, included in the Municipal General Order and as specified in the MRP, Appendix D of this NOA R5-2023-0025-006. Biosolids monitoring is required per U.S. EPA guidance to evaluate the effectiveness of the pretreatment program.

F. Ponds Monitoring

The Facility includes four storage basins, the design and operation for each of the storage basins is described below. The Facility's Northwest, North, and East Storage Basins fulfill a CEQA requirement to provide 100-year flood protection. They are also

used to prevent discharge of effluent that does not meet discharge requirements. The Facility also includes an Emergency Storage Basin.

1. Storage Basin Design

a. Northwest Storage Basin (PND-001)

PND-001 is earth lined and stores tertiary-treated wastewater for the purposes of reducing flood impacts to the receiving water and for addressing plant upsets. This storage basin has a total volume of 14.2 MGD and considering the freeboard, can store up to 10.7 MGD. The basin is constructed of native soil with recommended compaction of the pond materials at or above optimum moisture content and compacted to a minimum of 90% relative compaction.

The Final Geotechnical Report for the Pleasant Grove Wastewater Treatment Plan (PGWWTP Geotech Report) from Carollo Engineers, dated August 24, 1999, provides the following information:

Permeability tests completed on soils from the site resulted in hydraulic conductivities of 2.4×10^{-6} centimeters per second (cm/sec) and 2.5×10^{-6} cm/sec. Empirical estimates based on the soil types in the pond areas suggest hydraulic conductivities ranging from 1.0×10^{-3} to 2.5×10^{-6} cm/sec. Hard silts underlying the pond areas at variable depths are expected to act as relatively impermeable barriers to vertical flow of infiltrating water. Lateral flow of infiltrating water is expected to occur at very slow rates considering the low anticipated permeabilities and short-term loading of the ponds with effluent. Pond basins typically become less permeable with age due to sedimentation that occurs which will also reduce vertical and lateral flows of infiltrating water.

b. North Storage Basin (PND-002)

PND-002 is earth lined and stores tertiary-treated wastewater for the purposes of reducing flood impacts to the receiving water and for addressing plant upsets. This storage basin has a total volume of 19.3 MGD and considering 2 feet of freeboard, can store up to 14.5 MGD. The basin is constructed as described above for the Northwest Storage Basin.

c. East Storage Basin (PND-003)

PND-003 is earth lined and stores tertiary-treated wastewater for the purposes of reducing flood impacts to the receiving water and for addressing plant upsets. This storage basin was originally designed with a total volume of 33.1 MGD with 24.9 MGD available considering 2 feet of freeboard. These volumes have been reduced by approximately 3 MGD each because primary clarifiers were constructed in this area in 2020–2022. The basin is constructed as described above for the Northwest Storage Basin.

d. Emergency Storage Basin (PND-004)

PND-004 is designed with clay-lined side slopes and bottom to store both raw sewage that exceeds the influent pumping capacity and filtered, secondary effluent that does not meet Title 22 tertiary requirements. This storage basin has a total volume of 20.6 MGD and considering 2 feet of freeboard, can store up to 15.5 MGD. In 2012, the Emergency Storage Basin was modified to route filter

reject water through a drainage trough constructed in the bottom, southeast corner of this basin. The trough is 150 feet long, 25 feet wide, and 6 feet deep; and it is lined with HDPE. This is a “pass-through” operation, and no filter reject water is stored in the basin.

2. Storage Basin Operation. The four storage basins Northwest Storage Basin (PND-001), North Storage Basin (PND-002), East Storage Basin (PND-003), and Emergency Storage Basin (PND-004) were used intermittently between January 2018 and May 2024, primarily to store tertiary-treated effluent during storm events or operational maintenance. The following summarizes impoundment activity, including duration and volumes, based on the Facility’s Basin Logs and technical memoranda.

a. Northwest Storage Basin (PND-001)

Fifty-five (55) diversion events occurred, averaging 2.1 MG of tertiary effluent per event. Of these, 53 diversions lasted less than 24 hours. The longest recorded event lasted no more than 104 hours (approximately 4.3 days) in January 2019.

b. North Storage Basin (PND-002)

Twelve (12) diversion events occurred, averaging 3.0 MG per event. Ten (10) of the events lasted less than 24 hours. The longest event lasted 104 hours (4.3 days) during the January 2019 storm.

c. East Storage Basin (PND-003)

Sixteen (16) diversion events occurred, with an average volume of 4.9 MG of tertiary effluent. Thirteen (13) of the events lasted less than 24 hours, and the longest lasted 106 hours (4.4 days) in January 2019.

d. Emergency Storage Basin (PND-004)

Thirty-one (31) tertiary effluent diversion events occurred, averaging 0.7 MG. Thirty (30) of these lasted less than 24 hours. One filtered secondary effluent diversion (4.5 MG) also lasted less than 24 hours. Raw influent was diverted only three times during extreme rainfall events in 2019 and 2022–2023 (average 7.4 MG). One additional controlled diversion of 2.2 MG of tertiary effluent was previously mislabeled as plant runoff; this diversion also lasted less than 24 hours.

Based on this operating history, approximately most of all diversion events across the basins lasted less than 24 hours, with only isolated exceptions during major storm conditions. Basin operation is consistent with incidental, emergency, or short-term storage practices. The Facility maintains logs of all diversions, including type of wastewater, volume, duration, and freeboard, to ensure compliance with the Municipal General Order and this NOA.

Use of the Facility’s four storage basins are part of the treatment process as described above, and thus are covered by the provisions in the Municipal General Order, as specified in this NOA. The Emergency Storage Basin is clay-lined and is used infrequently for emergency storage for high influent flows and plant upsets. The HDPE-lined portion of the southeast corner of the Emergency Storage Basin receives water that is diverted from the filters that is directly routed back to the treatment process. The Northwest, North, and East Storage Basins are also used infrequently, have held only

tertiary effluent the last NOA term, and water is returned for treatment within 7 days. The storage basins are used only for incidental, emergency, or short-term facility operation and maintenance, and are not subject to the additional requirements in the Municipal General Order.

When any type of wastewater is directed to any storage basin, this NOA requires the Discharger to keep a log for PND-001, PND-002, PND-003, and PND-004 to record the date, type of wastewater, volume, duration, and freeboard for each pond. Additional pond monitoring requirements contained in the Municipal General Order are applicable as specified in section IX, Provisions, Table 4 of the NOA. The Central Valley Water Board finds that monitoring for these parameters is necessary to ensure proper operation of the storage basins; therefore, these parameters have been included in this NOA.

G. Municipal Water Supply Monitoring – Not Applicable

H. Filtration System Monitoring

1. Continuous monitoring for turbidity is included under the UV Disinfection System monitoring requirements in previous Order R5 2017-0085-005. Continuous monitoring for turbidity is retained in this NOA as specified in section IX.D of the MRP, Appendix D.]

I. UV Disinfection System Monitoring

1. Monitoring frequencies for flow (continuous), number of UV banks in operation (continuous), UV transmittance (continuous), and UV dose (continuous) have been retained from previous NOA R5-2017-0085-005, to evaluate compliance with UV disinfection system operating specifications.

J. Pyrethroid Pesticides Monitoring

1. Based on the Basin Plan, the goals of baseline monitoring are to determine if pyrethroids in the discharge exceed pyrethroid triggers and to determine if pyrethroids in the discharge are causing or contributing to exceedances of the narrative water quality objective for toxicity in receiving waters. Pyrethroids in the Facility's discharge did not exceed the acute and chronic pyrethroid numeric triggers of 1 Concentration Goal Unit (CGU) based on data collected between August 2016 and January 2017.

Monthly samples were collected between August 2016 and January 2017, and quarterly samples were collected between March 2017 and October 2017 in Pleasant Grove Creek upstream and downstream of the Facility's outfall. The downstream location (R2) was approximately 350 to 430 feet from the Facility's outfall. This location was near the RSW-002 as described in the Facility's NOA R5-2017-0085-005. The upstream location (R1) was approximately 400 to 600 feet upstream of the outfall. The final effluent (EFF-001) at the Facility was collected from a supply line inside the bioassay building that was historically used for flow-through acute toxicity testing.

Pyrethroids in the Facility discharge did not exceed the pyrethroid numeric triggers and the Discharger did not observe any downstream receiving water toxicity. Therefore, chemical and toxicity data from the Facility and Pleasant Grove Creek

fulfill the Basin Plan baseline pyrethroid monitoring requirements. However, the 2016/2017 Special Study was conducted prior to the adoption of the Pyrethroid Control Program, resulting in deviations from the Pyrethroid Control Program monitoring requirements, most notably in the pyrethroid analytical method. Subsequent to the adoption of the Pyrethroid Control Program, the Central Valley Water Board, in coordination with the State Water Board Environmental Laboratory Accreditation Program, validated methods and accredited three laboratories to perform water column chemistry analysis for the Pyrethroid Control Program. Given the different analytical method used in the 2016/2017 Special Study, the Central Valley Water Board is unable to determine whether the data collected satisfies the Pyrethroids Pesticides Monitoring requirements. Therefore, the Discharger may submit records to demonstrate method equivalency as outlined in the following section or conduct the Pyrethroids Pesticides Monitoring as outlined in Section IX.E.

2. **Previously Collected Pyrethroid Pesticide Monitoring Equivalency.** The Discharger may submit a declaration from the laboratory that conducted the analysis for the 2016/2017 Special Study (Caltest Analytical Laboratory or Caltest) certifying that the method used at the time (EPA 8270D MOD) has equivalent sensitivity and robustness to the current pyrethroid analytical method for which Caltest is accredited (EPA 625.1). In addition to the declaration, the Discharger shall demonstrate equivalency through the submission of laboratory records pertaining to calibration linearity, calibration verification, method detection limit (MDL) demonstration, and minimum reporting limit (MRL) verification from the time period of the 2016/2017 Special Study. The records should be consistent with the requirements outlined in the 13 March 2019 Central Valley Water Board method validation solicitation letter (available upon request).

The Discharger must submit its demonstration of method equivalency by 1 April 2026. The Executive Officer will consider and determine whether the submittal demonstrates sufficient equivalency. If approved, the data collected during the 2016/2017 Special Study shall satisfy the Pyrethroids Pesticides Monitoring requirements of this Order.

K. Effluent and Receiving Water Characterization Monitoring

1. NOA R5-2017-0085-005 included quarterly effluent characterization monitoring events for one year. This NOA R5-2023-0025-006 retains the quarterly effluent characterization monitoring events to be completed between 1 October 2026 and 30 September 2027.
2. NOA R5-2017-0085-005 included two upstream receiving water characterization monitoring events. This NOA R5-2023-0025-006 retains the two upstream receiving water characterization monitoring events to be completed once between 1 October 2026 and 31 December 2026 and once between 1 January 2027 and 31 March 2027. Each receiving water monitoring event shall be concurrent with the effluent characterization sampling event during the respective quarter, as specified in section IX.F of Appendix D.

V. PRETREATMENT PROVISION

A. Pretreatment Requirements

1. On 9 January 1984, the U.S. EPA approved the Discharger's Industrial Pretreatment Program in accordance with 40 CFR Part 403. The Industrial Pretreatment Program requires issuance of waste discharge permits to Significant Industrial Users/Categorical Industrial Users, Non-significant Industrial Users, and food service establishments (to control fats, oils, and grease). The program also regulates Significant Commercial Users and dental offices and implements best management practices.
2. The federal CWA section 307(b), and federal regulations, 40 C.F.R. part 403, require POTWs to develop an acceptable industrial pretreatment program. A pretreatment program is required to prevent the introduction of pollutants which will interfere with treatment plant operations or sludge disposal and prevent pass through of pollutants that exceed water quality objectives, standards or permit limitations. Pretreatment requirements are imposed pursuant to 40 C.F.R. part 403.
3. The Discharger shall implement and enforce its approved pretreatment program in accordance with 40 C.F.R. part 403 and is an enforceable condition of this NOA R5-2023-0025-006. If the Discharger fails to perform the pretreatment functions, the Central Valley Water Board, the State Water Board or U.S. EPA may take enforcement actions against the Discharger as authorized by the CWA.

VI. DISCHARGE MONITORING REPORT-QUALITY ASSURANCE (DMR-QA) STUDY PROGRAM

- A.** 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.

VII. RECYCLED WATER POLICY ANNUAL REPORTS

- A.** On 11 December 2018, the State Water Board adopted Resolution 2018-0057, which amends the Recycled Water Policy, section 3, to require wastewater and recycled water dischargers to annually report monthly volumes of influent, recycled water produced, and effluent, including treatment level and discharge type. Therefore, to incorporate

monitoring and reporting required by the Recycled Water Policy, the Municipal General Order requires annual reporting of wastewater and recycled water use into Geotracker and confirmation of annual reporting to Geotracker is required by this NOA R5-2023-0025-006.

VI. SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Abbreviations used in Table C-4:

MEC = Maximum Effluent Concentration
 B = Maximum Receiving Water Concentration
 C = Criterion used for Reasonable Potential Analysis
 CMC = Criterion Maximum Concentration
 CCC = Criterion Continuous Concentration
 Water and Org = Human Health Criterion for Consumption of Water and Organisms
 Org Only = Human Health Criterion for Consumption of Organisms Only
 Basin Plan = Numeric Site-Specific Basin Plan Water Quality Objective
 MCL = Drinking Water Standards Maximum Contaminant Level
 RP = Reasonable Potential

Table C-4. SUMMARY OF REASONABLE POTENTIAL ANALYSIS

Parameter	Units	MEC	B	C	CMC	CCC	Water and Org	Org. Only	Basin Plan	MCL	RP
Ammonia, Total (as N)	mg/L	0.94	--	4.0	11.6	4.0	--	--	--	--	Yes
Nitrate Plus Nitrite (as N)	mg/L	5.4	3.1	10	--	--	--	--	--	10	Yes
Electrical Conductivity @ 25°C	µmhos/cm	460	430	900	--	--	--	--	900	--	No

1. Table C-4 Notes:

- i. **CMC.** For ammonia, the CMC or criterion maximum concentration is based on the U.S. EPA National Recommended Ambient Water Quality Criteria Freshwater Aquatic Life Protection, 1-hour average.
- ii. **CCC.** For ammonia, the CCC or criterion continuous concentration is based on the U.S. EPA National Recommended Ambient Water Quality Criteria Freshwater Aquatic Life Protection, 30-day average.
- iii. **Ammonia and Nitrate plus Nitrite.** Reasonable potential exists due to the biological processes inherent to the treatment of domestic wastewater.
- iv. **Electrical Conductivity.** Reasonable potential does not exist, however an effluent limitation is included in this NOA R5-2023-0025-006 consistent with the site-specific threshold for the Facility adopted into the Basin Plan by the Central Valley Water Board on 10 December 2020 (Resolution R5-2020-0057) .

Table C-5. SUMMARY OF CHRONIC TOXICITY DATA

Date	<i>Pimephales promelas</i>				<i>Ceriodaphnia dubia</i>				<i>Pseudokirchneriella subcapitata</i>	
	Survival		Growth		Survival		Reproduction		Growth	
	% Effect	TST Result	% Effect	TST Result	% Effect	TST Result	% Effect	TST Result	% Effect	TST Result
Q1 2017	3.1%	PASS	-2.2%	PASS	0.0%	PASS	4%	PASS	-10%	PASS
Q2 2017	-2.0%	PASS	1.2%	PASS	0.0%	PASS	5%	PASS	-1%	PASS
Q3 2017	NR	NR	NR	NR	0.0%	PASS	6%	PASS	-45%	PASS
Q4 2017	NR	NR	NR	NR	0.0%	PASS	-4%	PASS	-34%	PASS
Q1 2018	2.0%	PASS	-2.5%	PASS	0.0%	PASS	-20%	PASS	-10%	PASS
Q2 2018	0.0%	PASS	0.8%	PASS	NR	NR	NR	NR	-32%	PASS
Q3 2018	0.0%	PASS	-9.1%	PASS	0.0%	PASS	-20%	PASS	-48%	PASS
Q4 2018	2.5%	PASS	3.1%	PASS	0.0%	PASS	5%	PASS	-36%	PASS
Q1 2019	-3.2%	PASS	0.5%	PASS	0.0%	PASS	-12%	PASS	-21%	PASS
Q2 2019	0.0%	PASS	-1.4%	PASS	NR	NR	NR	NR	-20%	PASS

1. Table C-5 Notes:

- i. **% Effect** at 100% effluent.
- ii. **TST**. Test of Significant Toxicity.
- iii. **NR** – Not representative due to test interference or contamination.
- iv. ***Ceriodaphnia dubia*** (water flea) resulted in the highest % effect and therefore is chosen as the most sensitive species.

APPENDIX D – MONITORING AND REPORTING PROGRAM

I. GENERAL MONITORING PROVISIONS	33
II. MONITORING LOCATIONS	34
III. INFLUENT MONITORING REQUIREMENTS	35
A. Monitoring Location INF-001	35
IV. EFFLUENT MONITORING REQUIREMENTS	36
A. Monitoring Location EFF-001	36
V. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS	38
A. Acute Toxicity Testing – Not Applicable	38
B. Chronic Toxicity Testing	38
C. Quality Assurance and Additional Requirements.....	40
D. WET Testing Notification Requirements	41
E. WET Testing Reporting Requirements	41
F. Most Sensitive Species Screening	41
G. Toxicity Reduction Evaluations.....	43
VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE.....	44
VII. RECYCLED WATER MONITORING REQUIREMENTS – NOT APPLICABLE	44
VIII. RECEIVING WATER MONITORING REQUIREMENTS	44
A. Monitoring Locations RSW-001 and RSW-002.....	44
IX. OTHER MONITORING REQUIREMENTS	45
A. Biosolids	45
B. Ponds	45
C. Municipal Water Supply – Not Applicable	46
D. Filtration System and Ultraviolet Light (UV) Disinfection System.....	46
E. Pyrethroid Pesticides Monitoring	47
F. Effluent and Receiving Water Characterization	51
X. REPORTING REQUIREMENTS.....	57
A. General Monitoring and Reporting Requirements	57
B. Self-Monitoring Reports	57
C. Discharge Monitoring Reports (DMRs).....	60
D. Other Reports	60

Tables

Table D-1. Monitoring Station Locations	34
Table D-2. Influent Monitoring	36
Table D-3. Effluent Monitoring.....	36
Table D-4. Receiving Water Monitoring Requirements	44
Table D-5. Filtration System Monitoring Requirements	46
Table D-6. UV Disinfection System Monitoring Requirements	46
Table D-7. Pyrethroid Pesticides Monitoring	48
Table D-8. Pyrethroid Pesticide Partition Coefficients	50
Table D-9. Effluent and Receiving Water Characterization Monitoring.....	52
Table D-10. Monitoring Periods and Reporting Schedule	57
Table D-11. Technical Reports.....	65

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 R5-2023-0025-006 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 Board.
- 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 R5-2023-0025-006. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

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 R5-2023-0025-006.

Table D-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	A location where a representative sample of the influent to the Facility can be collected.

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
001	EFF-001	A location where a representative sample of wastewater can be collected immediately downstream of the ultraviolet light (UV) disinfection system and the last connection through which water can be admitted into the outfall. Latitude: 38° 79' 21" N Longitude: 121° 37' 01" W
--	RSW-001	In Pleasant Grove Creek, approximately 200 feet upstream of Discharge Point 001.
--	RSW-002	In Pleasant Grove Creek, approximately 200 feet downstream of Discharge Point 001.
--	BIO-001	A location where a representative sample of the biosolids can be obtained.
--	FIL-001	Monitoring of the filter effluent to be measured downstream of the filters and upstream of the point of diversion to the effluent storage basins.
--	UVS-001	A location where a representative sample of wastewater can be collected immediately upstream of the UV disinfection system.
--	UVS-002	A location where a representative sample of wastewater can be collected immediately downstream of the UV disinfection system.
--	PND-001	Northwest Storage Basin, monitoring within Effluent Storage Basin 1.
--	PND-002	North Storage Basin, monitoring within Effluent Storage Basin 2.
--	PND-003	East Storage Basin, monitoring within Effluent Storage Basin 3.
--	PND-004	Emergency Storage Basin, monitoring within the Emergency Storage Basin.

Table D-1 Note:

1. 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	Sampling Frequency
Flow	million gallons per day (MGD)	Meter	Continuous
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	24-hour Composite	1/Week
Total Suspended Solids	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:
- 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, the sample type may be modified by the Executive Officer to another 40 C.F.R. part 136 allowed sample type.
 - Composite Sample.** All composite samples shall be collected from a 24-hour flow proportional composite.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

- 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	Sampling Frequency
Flow	MGD	Meter	Continuous
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	24-hr Composite	1/Week
Biochemical Oxygen Demand (5-day @ 20°C)	percent removal	Calculate	1/Month
pH	standard units	Grab	1/Day
Total Suspended Solids	mg/L	24-hr Composite	1/Week

Parameter	Units	Sample Type	Sampling Frequency
Total Suspended Solids	percent removal	Calculate	1/Month
Ammonia, Total (as N)	mg/L	Grab	1/Week
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month
Dissolved Oxygen	mg/L	Grab	1/Month
Dissolved Organic Carbon (DOC)	mg/L	Grab	1/Quarter
Hardness, Total (as CaCO ₃)	mg/L	Grab	1/Quarter
Nitrate Plus Nitrite, Total (as N)	mg/L	Grab or Calculate	1/Month
Nitrate (as N)	mg/L	Grab	1/Month
Nitrite (as N)	mg/L	Grab	1/Month
Temperature	°F	Grab	1/Day

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:
- 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. In addition, if requested by the Discharger, the sample type may be modified by the Executive Officer to another 40 C.F.R. part 136 allowed sample type.
 - Composite Sample.** All composite samples shall be collected from a 24-hour flow proportional composite.
 - 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.
 - Ammonia.** Ammonia samples shall be taken at approximately the same time and on the same date as the pH and temperature samples.
 - Field Meter.** A hand-held field meter may be used for **dissolved oxygen, electrical conductivity, pH, and temperature**, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A

calibration and maintenance log for each meter used for monitoring required by this MRP shall be maintained at the Facility.

- f. **Dissolved Organic Carbon.** Dissolved organic carbon samples shall be taken at approximately the same time and on the same date as the hardness and pH samples.
- g. **Temperature, pH, Hardness, Dissolved Oxygen, and Dissolved Organic Carbon.** The effluent samples for temperature, pH, hardness, dissolved oxygen, and dissolved organic carbon shall be taken at approximately the same time and on the same date with the receiving water samples for these parameters (see Table D-4).
- h. **Flow.** Flow shall be reported in terms of the daily total.

V. WHOLE EFFLUENT TOXICITY (WET) TESTING REQUIREMENTS

A. Acute Toxicity Testing – Not Applicable

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** when there is expected to be at least 15 days of discharge within the toxicity calendar quarter. While the Discharger is conducting a TRE, the Executive Officer may authorize a reduction in the frequency of routine monitoring to a minimum of two (2) chronic aquatic toxicity tests per calendar year, as of the date authorized by the Executive Officer. The Discharger shall return to the routine monitoring schedule either at the conclusion of the TRE or one year after the initiation of the TRE, whichever occurs sooner.
- 3. **Toxicity Calendar Month, Quarter, and Year**
 - a. **Toxicity Calendar Month.** The toxicity calendar month is defined as the period of time from a day of one month to the day before the corresponding day of the next month if the corresponding day exists, or if not to the last day of the next month (i.e., from January 1 to January 31, from February 15 to March 14, etc.).
 - b. **Toxicity Calendar Quarter.** A toxicity calendar quarter is defined as **three consecutive toxicity calendar months**. For purposes of this NOA R5-2023-0025-006, the toxicity calendar quarters **begin on January 1, April 1, July 1, and October 1** (i.e., from January 1 to March 31, from April 1 to June 30, from July 1 to September 30, etc.).
 - c. **Toxicity Calendar Year.** A toxicity calendar year is defined as **twelve consecutive toxicity calendar months**. For purposes of this NOA R5-2023-0025-006, the toxicity calendar year **begins on January 1** (i.e., January 1 to December 31).

4. **Chronic Toxicity Monthly Median Effluent Limitation (MMEL) Compliance Testing.** If a routine chronic toxicity monitoring test results in a “Fail” (as defined in section V.C below) at the IWC, then a maximum of two chronic toxicity MMEL compliance tests shall be completed. The chronic toxicity MMEL compliance tests shall be initiated within the same toxicity calendar month that the routine monitoring chronic toxicity test was initiated that resulted in the “Fail” at the IWC. If the first chronic toxicity MMEL compliance test results in a “Fail” at the IWC, then the second chronic toxicity MMEL compliance test is unnecessary and is waived.
5. **Additional Routine Monitoring Tests for Toxicity Reduction Evaluation (TRE) Determination.** In order to determine if a TRE is necessary, an additional routine monitoring test is required when there is one violation of the chronic toxicity MDEL or MMEL, but not two violations, in a single toxicity calendar month. This additional routine monitoring test is not required if the Discharger is already conducting a TRE. This additional routine monitoring test shall be initiated within two weeks after the toxicity calendar month in which the MMEL or MDEL violation occurred. The toxicity calendar month of the violation and the toxicity calendar month of the additional routine monitoring shall be considered “successive toxicity calendar months” for purposes of determining whether a TRE is required. This additional routine monitoring test is also used for compliance purposes and could result in the need to conduct MMEL compliance testing per section V.B.4 above.
6. **Sample Volumes.** Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
7. **Test Species.** The testing shall be conducted using the most sensitive species. The Discharger shall conduct chronic toxicity tests with the **water flea (*Ceriodaphnia dubia*)**.

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

8. **Test Methods.** The Discharger shall conduct the chronic toxicity tests on effluent samples at the IWC for the discharge in accordance with species and test methods described 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 are different from test organism culture water, then a second control using culture water shall also be used. A receiving water control or laboratory water control may be used as the diluent.
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 a MMEL compliance test 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 test, 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 toxicity calendar month. The new toxicity test for routine monitoring or for the MMEL compliance test, 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 test 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.

If it is determined that any specific monitoring event was not initiated in the required time period due to circumstances outside of the Discharger's control that were not preventable with the reasonable exercise of care, the Discharger is not required to initiate the specific monitoring event in the required time period if the Discharger promptly initiates or ultimately completes a replacement test.

C. Quality Assurance and Additional Requirements

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

1. The discharge is subject to determination of "Pass" or "Fail" from a chronic toxicity test using the Test of Significant Toxicity (TST) statistical t-test approach described in section IV.B.1.c of the Statewide Toxicity Provisions.
2. The null hypothesis (H_0) for the TST statistical approach is:

Mean discharge IWC response $\leq$ RMD x Mean control response, where the chronic RMD = 0.75 and the acute RMD = 0.80.

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

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

$$\text{Percent Effect} = ((\text{Mean control response} - \text{Mean discharge IWC response}) / (\text{Mean control response})) \times 100.$$

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 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, 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.

When there is no representative effluent available to complete tests in one of the sets in a species sensitivity screening, that set of testing shall not be required.

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 R5-2023-0025-006 is issued;

- b. *Pimephales promelas* (larval survival and growth test) for the entire toxicity calendar year following the toxicity calendar year this NOA R5-2023-0025-006 is issued;
- c. *Pseudokirchneriella subcapitata* (growth test) for the entire toxicity calendar year of the second year following the toxicity calendar year this NOA R5-2023-0025-006 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 compliance test.
 - a. **Preparation and Implementation of Detailed TRE Action Plan.** The Discharger shall conduct TREs in accordance with an approved TRE Work Plan. Within 30 days of the test result that triggered the TRE, the Discharger shall submit to the Executive Officer a TRE Action Plan 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. RECYCLED WATER MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Monitoring Locations RSW-001 and RSW-002

1. The Discharger shall monitor Pleasant Grove Creek at Monitoring Locations RSW-001 and RSW-002 as specified in Table D-4 and the testing requirements in section VIII.A.2. If there was no discharge to the receiving water during the designated monitoring period, monitoring is not required during that period. If there is no upstream flow in the receiving water during the designated monitoring period, monitoring is not required at RSW-001 during that period. Whenever monitoring is not required, the Discharger shall state so in the monthly SMR.

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 @ 25°C	µmhos/cm	Grab	1/Month
Dissolved Organic Carbon (DOC)	mg/L	Grab	1/Quarter
Hardness, Total (as CaCO ₃)	mg/L	Grab	1/Quarter
Turbidity	NTU	Grab	1/Month
Temperature	°F	Grab	1/Week

2. **Table D-4 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table D-4:
 - 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 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.
 - c. **Field Meter.** A hand-held field meter may be used for **dissolved oxygen, electrical conductivity, pH, temperature, and turbidity**, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A

calibration and maintenance log for each meter used for monitoring required by this MRP shall be maintained at the Facility.

- d. **Dissolved Organic Carbon.** Dissolved organic carbon samples shall be taken at approximately the same time and on the same date as the hardness and pH samples.
 - e. **Temperature, pH, Hardness, Dissolved Oxygen, and Dissolved Organic Carbon.** The receiving water samples for temperature, pH, hardness, dissolved oxygen, and dissolved organic carbon shall be taken at approximately the same time and on the same date with the effluent samples for these parameters (see Table D-3).
3. In conducting the receiving water sampling required by section VIII.A.1 above, a log shall be kept of the receiving water conditions throughout the reach bounded by Monitoring Locations RSW-001 and RSW-002. Attention shall be given to the presence or absence of:
- a. Floating or suspended matter;
 - b. Discoloration;
 - c. Bottom deposits;
 - d. Aquatic life;
 - e. Visible films, sheens, or coatings;
 - f. Fungi, slimes, or objectionable growths; and
 - g. Potential nuisance conditions.

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

IX. OTHER MONITORING REQUIREMENTS

A. Biosolids

1. Monitoring Location BIO-001

- a. Biosolids monitoring for compliance with 40 C.F.R. part 503 regulations administered by U.S. EPA is not included in the Municipal General Order, and therefore, is not included in this NOA. However, annual sludge monitoring is required for compliance with the pretreatment requirements as specified in the Municipal General Order, Attachment E, section X.D.5.a.

B. Ponds

1. Monitoring Locations PND-001, PND-002, PND-003 and PND-004

- a. The Discharger shall keep an emergency storage basin log regarding the use of the basins. In particular, the Discharger shall record in the log the following when any type of wastewater is directed to Effluent Storage Basin 1, Effluent Storage Basin 2, Effluent Storage Basin 3, and the Emergency Storage Basin at Monitoring Locations PND-001, PND-002, PND-003, and PND-004, respectively:
 - i. The date(s) when the wastewater is directed to the basin(s);

- ii. The type(s) of wastewater (e.g., untreated due to plant upset, tertiary treated, etc.) directed to the basin(s);
- iii. The total volume of wastewater directed to the basin(s) (volume may be estimated); and
- iv. The daily freeboard in the basin(s).

C. Municipal Water Supply – Not Applicable

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

1. Monitoring Location FIL-001

- a. When discharging to Pleasant Grove Creek, the Discharger shall monitor the filtration system at Monitoring Location FIL-001 as specified in Table D-5 and the testing requirements in section IX.D.2.

Table D-5. Filtration System Monitoring Requirements

Parameter	Units	Sample Type	Sampling Frequency
Turbidity	NTU	Meter	Continuous

- 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. **Turbidity.** Report daily average and maximum turbidity.
- b. **Continuous Analyzers.** The Discharger shall report documented routine meter maintenance activities including date, time of day, and duration, for instances in which a continuous measurement is not available for a period of 30 minutes or more due to the analyzer(s) not being in operation due to maintenance activities. 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.

3. Monitoring Location UVS-001 and UVS-002

- a. The Discharger shall monitor the UV disinfection system at Monitoring Location UVS-001 and UVS-002 as specified in Table D-6 and the testing requirements in section IX.D.4.

Table D-6. UV Disinfection System Monitoring Requirements

Parameter	Units	Sample Type	Sampling Frequency	Monitoring Location
Flow	MGD	Meter	Continuous	UVS-001
Number of UV Banks in operation	Number	Observation	Continuous	N/A
UV Transmittance	Percent	Meter	Continuous	UVS-001

Parameter	Units	Sample Type	Sampling Frequency	Monitoring Location
UV Dose	mJ/cm ²	Calculated	Continuous	N/A
Total Coliform Organisms	MPN/100 mL	Grab	3/Week	UVS-002

4. **Table D-6 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table D-6:
- Continuous Analyzers.** If analyzers are taken out of operation for routine maintenance activities and no continuous measurements are available from a redundant meter, the Discharger shall divert flow to another disinfection channel to the extent feasible. If the Discharger is not able to divert away from the analyzer and the analyzer is out of operation for longer than 30 minutes, 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 and no continuous measurements are available from a redundant meter. 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.
 - UV Banks.** Report daily minimum number of UV banks in operation.
 - UV Transmittance.** Report daily minimum hourly average UV transmittance. The minimum hourly average transmittance shall consist of lowest average transmittance recorded over an hour of a day when flow is being discharged. If the system does not operate for an entire hour interval on a given day or if effluent flow is not discharged for an entire hour, the transmittance will be averaged based on the actual operation time when discharges are occurring.
 - UV Dose.** Report daily minimum hourly 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 or when effluent flow is not discharged for the entire hour, the dose will be averaged based on the actual operation time when discharges occurred.
 - Total Coliform Organisms.** Pollutant 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.

E. Pyrethroid Pesticides Monitoring

- Water Column Chemistry Monitoring Requirements.** If the Discharger is unable to meet the requirements of section IX.E.1, the Discharger shall conduct effluent and receiving water baseline monitoring in accordance with

Table D-7. **Quarterly monitoring shall be conducted for one year beginning 1 October 2026 through 30 September 2027**, concurrent with the Effluent and Receiving Water Characterization Monitoring. The Discharger shall also submit a minimum of one quality assurance/quality control (QA/QC) sample during the year to be analyzed for the constituents listed in Table E-7.

Monitoring shall be conducted at effluent monitoring location EFF-001 and in the **downstream receiving water at receiving water monitoring location RSW-002**. The results of the effluent and downstream receiving water monitoring, in accordance with Table E-7, shall be submitted to the Central Valley Water Board with the quarterly self-monitoring reports. The Discharger shall use Environmental Laboratory Accreditation Program (ELAP)-accredited laboratories with analytical methods that have been approved by the Central Valley Water Board's Executive Officer for use in assessing compliance with the Basin Plan. A current list of ELAP-approved laboratories and points of contact can be found on the [Central Valley Pyrethroid Control Program Webpage](https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/pyrethroid_control_program/#analyticalmethods) (https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/pyrethroid_control_program/#analyticalmethods).

Monitoring can either be conducted by the Discharger or can be done as part of a group monitoring effort. If the Discharger chooses to participate in a group monitoring effort, the timing and the other study requirements of the monitoring can be modified by the Executive Officer.

Table D-7. Pyrethroid Pesticides Monitoring

Parameter	CAS Number	Units	Sample Type	Analytical Method	Reporting Level
Total Bifenthrin	82657-04-3	ng/L	Grab	See Table Note 1	1.3
Total Cyfluthrin	68359-37-5	ng/L	Grab	See Table Note 1	1.3
Total Cypermethrin	52315-07-8	ng/L	Grab	See Table Note 1	1.7
Total Esfenvalerate	51630-58-1	ng/L	Grab	See Table Note 1	3.3
Total Lambda-cyhalothrin	91465-08-6	ng/L	Grab	See Table Note 1	1.2
Total Permethrin	52645-53-1	ng/L	Grab	See Table Note 1	10
Freely Dissolved Bifenthrin	82657-04-3	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Cyfluthrin	68359-37-5	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Cypermethrin	52315-07-8	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Esfenvalerate	51630-58-1	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Lambda-Cyhalothrin	91465-08-6	ng/L	Calculated	Calculated from total concentration	--
Freely Dissolved Permethrin	52645-53-1	ng/L	Calculated	Calculated from total concentration	--

Parameter	CAS Number	Units	Sample Type	Analytical Method	Reporting Level
Dissolved Organic Carbon (DOC)	--	mg/L	Grab	--	--
Total Organic Carbon (TOC)	--	mg/L	Grab	--	--

Table D-7 Notes:

- The Discharger shall use ELAP-accredited laboratories and methods validated by Central Valley Water Board staff for pyrethroid pesticides water column chemistry monitoring. A current list of ELAP-approved laboratories and points of contact can be found on the [Central Valley Pyrethroid Control Program Webpage](https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/pyrethroid_control_program/#analyticalmethods):
(https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/pyrethroid_control_program/#analyticalmethods).

The freely dissolved concentration of each quantified pyrethroid pesticide in a sample may be directly measured or estimated using partition coefficients. Methods for direct measurement must be approved by the Executive Officer before they are used to determine the freely dissolved pyrethroid concentrations that are used for determining exceedances of the pyrethroid pesticides numeric triggers in Table 4-2 of the Basin Plan.

To estimate the freely dissolved concentration of a pyrethroid pesticide with partition coefficients, the following equation shall be used:

$$C_{dissolved} = \frac{C_{total}}{1 + (K_{OC} \times [POC]) + (K_{DOC} \times [DOC])}$$

Where:

$C_{dissolved}$ = concentration of an individual pyrethroid pesticide that is in the freely dissolved phase (ng/L),

C_{total} = total concentration of an individual pyrethroid pesticide in water (ng/L),

K_{OC} = organic carbon-water partition coefficient for the individual pyrethroid pesticide (L/kg),

[POC] = concentration of particulate organic carbon in the water sample (kg/L), which can be calculated as [POC]=[TOC]-[DOC],

[TOC] = total organic carbon in the sample (kg/L)

K_{DOC} = dissolved organic carbon-water partition coefficient (L/kg),

[DOC] = concentration of dissolved organic carbon in the sample (kg/L).

Site-specific or alternative study-based partition coefficients approved by the Executive Officer may be used for K_{OC} and K_{DOC} in the above equation. If site-specific or alternative study-based partition coefficients are not available

or have not been approved, the following partition coefficients shall be used for K_{OC} and K_{DOC} in the above equation:

Table D-8. Pyrethroid Pesticide Partition Coefficients

Pyrethroid Pesticide	Receiving water K_{OC} , (L/kg)	Receiving water K_{DOC} , (L/kg)	Effluent K_{OC} , (L/kg)	Effluent K_{DOC} , (L/kg)
Bifenthrin	4,228,000	1,737,127	15,848,932	800,000
Cyfluthrin	3,870,000	2,432,071	3,870,000	2,432,071
Cypermethrin	3,105,000	762,765	6,309,573	200,000
Esfenvalerate	7,220,000	1,733,158	7,220,000	1,733,158
Lambda-cyhalothrin	2,056,000	952,809	7,126,428	200,000
Permethrin	6,075,000	957,703	10,000,000	200,000

- 2. Water Column Toxicity Monitoring Requirements.** If the Discharger is unable to meet the requirements of section IX.E.1, the Discharger shall monitor the acute toxicity to *Hyalella azteca* of the downstream receiving water using U.S. EPA method EPA-821-R-02-012 (*Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, Fifth Edition, USEPA, October 2002, or most recent edition).

Except as specified in this NOA, water column toxicity testing shall follow the measurement quality objectives provided in the Surface Water Ambient Monitoring Program Quality Assurance Program Plan (SWRCB, 2018). When feasible, the Discharger shall use the Southern California Coastal Water Research Project (SCCWRP) guidance (Schiff and Greenstein, 2016) on test organism age and size for *Hyalella azteca*. Consistent with U.S. EPA Method EPA-821-R-02-012 and ELAP accreditation, *Hyalella azteca* water column toxicity testing for baseline monitoring shall be performed at 20 degrees Celsius.

Water Column Toxicity Monitoring shall be conducted quarterly for one year beginning 1 October 2026 through 30 September 2027, concurrent with the Effluent and Receiving Water Characterization Monitoring and the Pyrethroid Pesticides Water Column Chemistry Monitoring. Downstream receiving water monitoring shall be conducted at monitoring location RSW-002 when discharging to the receiving water and the results of such monitoring be submitted to the Central Valley Water Board with the quarterly self-monitoring reports. Monitoring can either be conducted by the Discharger or can be done as part of a group monitoring effort. If the Discharger chooses to participate in a group monitoring effort, the timing of the monitoring can be modified by the Executive Officer.

- 3. Exceedance of Numeric Triggers.** If the Pyrethroid Pesticides Water Column Chemistry Monitoring identifies an exceedance of any pyrethroid pesticides numeric trigger in the effluent, the Discharger shall notify the Central Valley Water Board in writing of the exceedance and the Discharger's intent to submit a Pyrethroid Management Plan. Monitoring results should be reviewed quarterly, and the Discharger shall notify the Central Valley Water

Board of any effluent exceedances of the Pyrethroid numeric triggers as soon as possible. The Pyrethroid Management Plan, as outlined in section VII.C.3.c of the 2023 Municipal General Order, shall be submitted to the Central Valley Water Board within one year from the date that an effluent exceedance is identified by either the Discharger or Central Valley Water Board staff. Effluent pyrethroid concentrations that exceed the acute and/or chronic pyrethroid numeric triggers, as outlined in Table 4-2 of the Basin Plan, constitute an exceedance of a numeric trigger. In the absence of an effluent pyrethroid numeric trigger exceedance, observed toxicity in the water column does not constitute a violation of the pyrethroid conditional prohibition.

Identification of an effluent exceedance provides the information that the Pyrethroid Pesticides Monitoring was designed to collect, per Chapter V of the Basin Plan; therefore, once an exceedance is identified, the Discharger may cease conducting subsequent Pyrethroid Pesticides Monitoring.

F. Effluent and Receiving Water Characterization

The Discharger shall monitor the effluent at Monitoring Location EFF-001 and Pleasant Grove Creek at Monitoring Location RSW-001 for the constituents listed in Table D-9, as described in this section.

1. Monitoring Frequency

- a. **Effluent Sampling.** Samples shall be collected from the effluent (Monitoring Location EFF-001) **quarterly** between **1 October 2026 and 30 September 2027**.
- b. **Receiving Water Sampling.** A sample shall be collected from the upstream receiving water (Monitoring Location RSW-001) **once** between **1 October 2026 and 31 December 2026** and **once** between **1 January 2027 and 31 March 2027**. The upstream receiving water samples shall be collected concurrent (on the same date and at approximately the same time) with one of the effluent sampling events required in the section above.

All sampling shall be analyzed for the constituents listed in Table D-9, below. The results of such monitoring shall be submitted to the Central Valley Water Board with the quarterly SMRs.

2. **Sample Type.** Effluent samples shall be taken as described in Table D-9, below and the testing requirements in section IX.F.4 below.
3. **Analytical Methods Report Certification.** Prior to beginning the Effluent Characterization monitoring, the Discharger shall provide a certification acknowledging the scheduled start date of the Effluent 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 the Central Valley Water Board staff with this NOA R5-2023-0025-006 that the Discharger can use to satisfy this requirement. The certification form shall be submitted electronically via the State Water Board's

California Integrated Water Quality System (CIWQS) in accordance with the reporting requirements in Technical Reports Table D-11.

Table D-9. Effluent and Receiving Water Characterization Monitoring

VOLATILE ORGANICS

CTR Number	Volatile Organic Parameters	CAS Number	Units	Effluent Sample Type
25	2-Chloroethyl vinyl Ether	110-75-8	µg/L	Grab
17	Acrolein	107-02-8	µg/L	Grab
18	Acrylonitrile	107-13-1	µg/L	Grab
19	Benzene	71-43-2	µg/L	Grab
20	Bromoform	75-25-2	µg/L	Grab
21	Carbon Tetrachloride	56-23-5	µg/L	Grab
22	Chlorobenzene	108-90-7	µg/L	Grab
24	Chloroethane	75-00-3	µg/L	Grab
26	Chloroform	67-66-3	µg/L	Grab
35	Methyl Chloride	74-87-3	µg/L	Grab
23	Dibromochloromethane	124-48-1	µg/L	Grab
27	Dichlorobromomethane	75-27-4	µg/L	Grab
36	Methylene Chloride	75-09-2	µg/L	Grab
33	Ethylbenzene	100-41-4	µg/L	Grab
89	Hexachlorobutadiene	87-68-3	µg/L	Grab
34	Methyl Bromide (Bromomethane)	74-83-9	µg/L	Grab
94	Naphthalene	91-20-3	µg/L	Grab
38	Tetrachloroethylene (PCE)	127-18-4	µg/L	Grab
39	Toluene	108-88-3	µg/L	Grab
40	trans-1,2-Dichloroethylene	156-60-5	µg/L	Grab
43	Trichloroethylene (TCE)	79-01-6	µg/L	Grab
44	Vinyl Chloride	75-01-4	µg/L	Grab
NL	Methyl-tert-butyl ether (MTBE)	1634-04-4	µg/L	Grab
41	1,1,1-Trichloroethane	71-55-6	µg/L	Grab
42	1,1,2-Trichloroethane	79-00-5	µg/L	Grab
28	1,1-Dichloroethane	75-34-3	µg/L	Grab
30	1,1-Dichloroethylene (DCE)	75-35-4	µg/L	Grab
31	1,2-Dichloropropane	78-87-5	µg/L	Grab
32	1,3-Dichloropropylene	542-75-6	µg/L	Grab
37	1,1,2,2-Tetrachloroethane	79-34-5	µg/L	Grab
101	1,2,4-Trichlorobenzene	120-82-1	µg/L	Grab
29	1,2-Dichloroethane	107-06-2	µg/L	Grab
75	1,2-Dichlorobenzene	95-50-1	µg/L	Grab
76	1,3-Dichlorobenzene	541-73-1	µg/L	Grab
77	1,4-Dichlorobenzene	106-46-7	µg/L	Grab

SEMI-VOLATILE ORGANICS

CTR Number	Semi-Organic Volatile Parameters	CAS Number	Units	Effluent Sample Type
60	Benzo(a)Anthracene	56-55-3	µg/L	Grab
85	1,2-Diphenylhydrazine	122-66-7	µg/L	Grab
45	2-Chlorophenol	95-57-8	µg/L	Grab
46	2,4-Dichlorophenol	120-83-2	µg/L	Grab
47	2,4-Dimethylphenol	105-67-9	µg/L	Grab
49	2,4-Dinitrophenol	51-28-5	µg/L	Grab
82	2,4-Dinitrotoluene	121-14-2	µg/L	Grab
55	2,4,6-Trichlorophenol	88-06-2	µg/L	Grab
83	2,6-Dinitrotoluene	606-20-2	µg/L	Grab
50	2-Nitrophenol	88-75-5	µg/L	Grab
71	2-Chloronaphthalene	91-58-7	µg/L	Grab
78	3,3-Dichlorobenzidine	91-94-1	µg/L	Grab
62	Benzo(b)Fluoranthene	205-99-2	µg/L	Grab
52	4-Chloro-3-methylphenol	59-50-7	µg/L	Grab
48	2-Methyl-4,6-Dinitrophenol	534-52-1	µg/L	Grab
51	4-Nitrophenol	100-02-7	µg/L	Grab
69	4-Bromophenyl Phenyl Ether	101-55-3	µg/L	Grab
72	4-Chlorophenyl Phenyl Ether	7005-72-3	µg/L	Grab
56	Acenaphthene	83-32-9	µg/L	Grab
57	Acenaphthylene	208-96-8	µg/L	Grab
58	Anthracene	120-12-7	µg/L	Grab
59	Benzidine	92-87-5	µg/L	Grab
61	Benzo(a)Pyrene	50-32-8	µg/L	Grab
63	Benzo(ghi)Perylene	191-24-2	µg/L	Grab
64	Benzo(k)Fluoranthene	207-08-9	µg/L	Grab
65	Bis (2-Chloroethoxy) Methane	111-91-1	µg/L	Grab
66	Bis (2-Chloroethyl) Ether	111-44-4	µg/L	Grab
67	Bis (2-Chloroisopropyl) Ether	108-60-1	µg/L	Grab
68	Bis(2-Ethylhexyl) Phthalate	117-81-7	µg/L	Grab
70	Butylbenzyl Phthalate	85-68-7	µg/L	Grab
73	Chrysene	218-01-9	µg/L	Grab
81	Di-n-butyl Phthalate	84-74-2	µg/L	Grab
84	Di-n-Octyl Phthalate	117-84-0	µg/L	Grab
74	Dibenzo(a,h)anthracene	53-70-3	µg/L	Grab
79	Diethyl Phthalate	84-66-2	µg/L	Grab
80	Dimethyl Phthalate	131-11-3	µg/L	Grab
86	Fluoranthene	206-44-0	µg/L	Grab
87	Fluorene	86-73-7	µg/L	Grab
88	Hexachlorobenzene	118-74-1	µg/L	Grab
90	Hexachlorocyclopentadiene	77-47-4	µg/L	Grab
91	Hexachloroethane	67-72-1	µg/L	Grab
92	Indeno(1,2,3-cd) Pyrene	193-39-5	µg/L	Grab
93	Isophorone	78-59-1	µg/L	Grab

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

NON-METALS/MINERALS

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

PESTICIDES/PCBs/DIOXINS

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

CONVENTIONAL PARAMETERS

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

NON-CONVENTIONAL PARAMETERS

CTR Number	Nonconventional Parameters	CAS Number	Units	Effluent Sample Type
NL	Foaming Agents (MBAS)	MBAS	mg/L	24-hour Composite
NL	Hardness (as CaCO ₃)	471-34-1	mg/L	Grab
NL	Specific Conductance (Electrical Conductivity or EC)	EC	µmhos/cm	Grab

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

4. **Table D-9 Testing Requirements.** The Discharger shall comply with the following testing requirements when monitoring for the parameters described in Table D-9:
- 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.
 - 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.
 - Composite Sample.** All composite samples shall be collected from a 24-hour flow proportional composite.
 - 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, except for dissolved organic carbon, hardness, pH, and temperature, which shall be conducted concurrently with the characterization sampling.
 - Concurrent Sampling.** When effluent and receiving water samples are required during the same calendar quarter, effluent and receiving water sampling shall be conducted on the same date, at approximately the same time.
 - Bis (2-ethylhexyl) phthalate.** In order to verify if bis (2-ethylhexyl) phthalate is truly 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.
 - Total Mercury.** Samples for total mercury 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), and shall be analyzed by U.S. EPA method 1630/1631 (Revision E) with a maximum reporting limit (RL) of 0.5 nanograms per liter (ng/L) for total mercury.

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 CIWQS [Program website](https://www.waterboards.ca.gov/ciwqs/index.html) (<https://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 begin on **1 October 2025** and be completed according to the following schedule in Table D-10. All chronic toxicity test results shall be reported in the quarterly (1/Quarter) SMR as specified in this MRP under section V.E.

Table D-10. 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

Sampling Frequency	Monitoring Period	SMR Due Date
3/Week	Sunday through Saturday	Submit with monthly SMR
5/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 and 1/Toxicity Calendar 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)

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 ($\pm$ 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, including quality assurance/quality control information, with all its SMRs for which sample analyses were performed. This requirement only applies to Effluent and Receiving Water Characterization monitoring per section IX.F of Appendix D. Bench sheets are not required but should 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.

- a. **Calendar Annual Average Limitations.** The Discharger shall report the calendar year annual average electrical conductivity in the December SMR. The annual average shall be calculated as the average of the samples gathered for the calendar year.
- b. **Mass Loading Limitations. – Not Applicable**
- c. **Removal Efficiency (BOD₅ and TSS).** The Discharger shall calculate and report the percent removal of BOD₅ and TSS in the SMRs. The percent removal shall be calculated as specified in section VIII.A of the Waste Discharge Requirements in the Municipal General Order.
- d. **Total Coliform Organisms Effluent Limitations.** The Discharger shall calculate and report the 7-day median of total coliform organisms for the effluent. The 7-day median of total coliform organisms shall be calculated as specified in section VIII.F of the Waste Discharge Requirements in Municipal General Order.
- e. **Dissolved Oxygen Receiving Water Limitations.** The Discharger shall report monthly in the SMR the dissolved oxygen concentrations in mg/L in the effluent at Monitoring Location EFF-001 and receiving water at both Monitoring Locations RSW-001 and RSW-002.
- f. **Turbidity Receiving Water Limitations.** The Discharger shall calculate and report the monthly difference in turbidity of the receiving water based on the difference in turbidity at Monitoring Locations RSW-001 and RSW-002. A monthly averaging period may be used to calculate the monthly difference in turbidity.
- g. **Temperature Effluent Limitation. – Not Applicable**
- h. **Temperature Receiving Water Limitations.** As specified in this NOA, section VI.A.16.c., Table 3, and Table 3 Notes.
- i. **Chlorpyrifos and Diazinon Effluent Limitations. – Not Applicable**
- j. **Total Calendar Annual Mass Loading Mercury Effluent Limitations. – Not Applicable**
- k. **Amador Lake Percent Effluent (Compliance with the 20:1 Dilution Ratio). – Not Applicable**

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/) (https://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/).

D. Other Reports

1. **Special Study Reports – Not Applicable**

2. Each Discharger shall report the results of any special studies, acute and chronic toxicity testing, TRE/TIE, PMP, and Pollution Prevention Plan required by Special Provisions, section VIII.C of this NOA R5-2023-0025-006. Unless otherwise specified in this NOA, the Discharger shall submit reports with the first monthly SMR scheduled to be submitted on or immediately following the report due date.
3. **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-11 below. The Analytical Methods Report shall include the following for each constituent listed in tables D-3, D-4, D-7 and D-9 of this NOA R5-2023-0025-006: 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 R5-2023-0025-006 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.
4. **Annual Operations Report.** The Discharger shall submit, by the due dates shown in the Technical Reports Table D-11, a written Annual Operations 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.

- f. A summary of the emergency storage pond log containing the information gathered as required by section IX.B of this MRP. The summary shall also include a description of major pond liner damage detected and repairs performed within the year.
- 5. Annual Pretreatment Reporting Requirements.** The Discharger shall submit annually a report to the Central Valley Water Board, with copies to U.S. EPA Region 9 and the State Water Board (submittal requirements follow this section), describing the Discharger's pretreatment activities over the previous 12 months (1 January through 31 December). In the event that the Discharger is not in compliance with any pretreatment conditions or requirements of the Municipal General Order and this NOA R5-2023-0025-006, including noncompliance with pretreatment audit/compliance inspection requirements, then the Discharger shall also include the reasons for noncompliance and state how and when the Discharger shall comply with such conditions and requirements.

The annual reports shall be submitted by the due dates shown in the Technical Reports Table D-11 and include at least the following items:

- a. A summary of analytical results from representative sampling of the POTWs influent and effluent for those pollutants U.S. EPA has identified under section 307(a) of the Clean Water Act which are known or suspected to be discharged by nondomestic users. This will consist of an annual full priority pollutant scan. The Discharger is not required to sample and analyze for asbestos. The Discharger shall submit the results of the priority pollutant scan electronically to the Central Valley Water Board using the State Water Board's CIWQS Program Website. Influent and effluent sample types may be 24-hour composites or otherwise consistent with sample types listed in Table D-9.

Sludge shall be sampled during the same 24-hour period and analyzed for the same pollutants as the influent and effluent sampling and analysis. The sludge analyzed shall be a composite sample of a minimum of 12 discrete samples taken at equal time intervals during operational hours. Wastewater and sludge sampling and analysis shall be performed as specified in this NOA R5-2023-0025-006. The Discharger shall also provide any influent, effluent, or sludge monitoring data for other constituents of concern which may be causing or contributing to Interference, Pass-Through or adversely impacting sludge quality. Sampling and analysis shall be performed in accordance with the techniques prescribed in 40 C.F.R. part 136 and amendments thereto.

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

- existing requirements, may be necessary to prevent Pass-Through, Interference, or noncompliance with sludge disposal requirements.
- c. The cumulative number of nondomestic users that the Discharger has notified regarding Baseline Monitoring Reports and the cumulative number of nondomestic user responses.
 - d. An updated list of the Discharger's significant industrial users (SIUs) including their names and addresses, or a list of deletions, additions and SIU name changes keyed to a previously submitted list. The Discharger shall provide a brief explanation for each change. The list shall identify the SIUs subject to federal categorical standards by specifying which set(s) of standards are applicable to each SIU. The list shall indicate which SIUs, or specific pollutants from each industry, are subject to local limitations. Local limitations that are more stringent than the federal categorical standards shall also be identified.
 - e. The Discharger shall characterize the compliance status through the year of record of each SIU by employing the following descriptions:
 - i. complied with baseline monitoring report requirements (where applicable);
 - ii. consistently achieved compliance;
 - iii. inconsistently achieved compliance;
 - iv. significantly violated applicable pretreatment requirements as defined by 40 C.F.R. section 403.8(f)(2)(vii);
 - v. complied with schedule to achieve compliance (include the date final compliance is required);
 - vi. did not achieve compliance and not on a compliance schedule; and
 - vii. compliance status unknown.
 - f. A summary of the inspection and sampling activities conducted by the Discharger during the past year to gather information and data regarding the SIUs. The summary shall include:
 - i. The names and addresses of the SIUs subjected to surveillance and an explanation of whether they were inspected, sampled, or both and the frequency of these activities at each user; and
 - ii. The conclusions or results from the inspection or sampling of each industrial user.
 - g. The Discharger shall characterize the compliance status of each SIU by providing a list or table which includes the following information:
 - i. Name of SIU;
 - ii. Category, if subject to federal categorical standards;
 - iii. The type of wastewater treatment or control processes in place;
 - iv. The number of samples taken by the POTW during the year;
 - v. The number of samples taken by the SIU during the year;

- vi. For a SIU subject to discharge requirements for total toxic organics, whether all required certifications were provided;
 - vii. A list of the standards violated during the year. Identify whether the violations were for categorical standards or local limits;
 - viii. Whether the facility is in significant noncompliance (SNC) as defined at 40 C.F.R. section 403.8(f)(2)(viii) at any time during the year;
 - ix. A summary of enforcement or other actions taken during the year to return the SIU to compliance. Describe the type of action (e.g., warning letters or notices of violation, administrative orders, civil actions, and criminal actions), final compliance date, and the amount of fines and penalties collected, if any. Describe any proposed actions for bringing the SIU into compliance;
 - x. Restriction of flow to the POTW; and
 - xi. Disconnection from discharge to the POTW.
- h. A brief description of any programs the POTW implements to reduce pollutants from nondomestic users that are not classified as SIUs;
 - i. A brief description of any significant changes in operating the pretreatment program which differ from the previous year including, but not limited to, changes concerning: the program's administrative structure, local limits, monitoring program or monitoring frequencies, legal authority, enforcement policy, funding levels, or staffing levels;
 - j. A summary of the annual pretreatment budget, including the cost of pretreatment program functions and equipment purchases; and
 - k. A summary of activities to involve and inform the public of the program including a copy of the newspaper notice, if any, required under 40 C.F.R. section 403.8(f)(2)(viii).
 - l. Pretreatment Program reports shall be submitted as follows:
 - i. Electronically to the Central Valley Water Board using the CIWQS system or emailed as a PDF file to: RB5S-NPDES-Comments@waterboards.ca.gov; and
 - ii. Emailed to the State Water Board as a PDF file to: NPDES_Wastewater@waterboards.ca.gov; and
 - iii. Emailed to the U.S. EPA to: R9Pretreatment@epa.gov.
6. **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 R5-2023-0025-006, 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/) (<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.

7. **Technical Report Submittals.** The Municipal General Order, as specified in this NOA R5-2023-0025-006, 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-11 below summarizes the technical reports that are applicable to this discharge and required by this NOA R5-2023-0025-006, 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-11. Technical Reports

Report #	Technical Report	Due Date	CIWQS Report Name
1	Notice of Intent	30 September 2029	NOI
2	Analytical Methods Report	1 December 2025	MRP X.D.3
3	Analytical Methods Report Certification	1 July 2026	MRP IX.F.3
4	Annual Operations Report #1	1 February 2026	MRP X.D.4
5	Annual Operations Report #2	1 February 2027	MRP X.D.4
6	Annual Operations Report #3	1 February 2028	MRP X.D.4
7	Annual Operations Report #4	1 February 2029	MRP X.D.4
8	Annual Operations Report #5	1 February 2030	MRP X.D.4
9	Annual Pretreatment Report #1	28 February 2026	MRP X.D.5
10	Annual Pretreatment Report #2	28 February 2027	MRP X.D.5
11	Annual Pretreatment Report #3	28 February 2028	MRP X.D.5
12	Annual Pretreatment Report #4	28 February 2029	MRP X.D.5

Report #	Technical Report	Due Date	CIWQS Report Name
13	Annual Pretreatment Report #5	28 February 2030	MRP X.D.5
14	Recycled Water Policy Annual Report Upload Confirmation Form #1	30 April 2026	MRP X.D.6
15	Recycled Water Policy Annual Report Upload Confirmation Form #2	30 April 2027	MRP X.D.6
16	Recycled Water Policy Annual Report Upload Confirmation Form #3	30 April 2028	MRP X.D.6
17	Recycled Water Policy Annual Report Upload Confirmation Form #4	30 April 2029	MRP X.D.6
18	Recycled Water Policy Annual Report Upload Confirmation Form #5	30 April 2030	MRP X.D.6
19	Pyrethroid Management Plan (if required)	Due one year from the date of effluent exceedance of pyrethroid trigger	MGO WDR VII.C.3.c.
20	Pyrethroid Management Plan Mid-Term Progress Report (if required)	Due one year from the date of approval of the Draft Pyrethroid Management Plan	MGO WDR VII.C.3.c.i
21	Pyrethroid Management Plan End-Term Progress Report (if required)	30 September 2030	MGO WDR VII.C.3.c.ii

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

The Central Valley Water Board determined water quality-based effluent limitations (WQBELS) using the effluent limits tables included in section V of the Municipal General Order and as described in the Fact Sheet, Attachment F of the Municipal General Order. For parameters with both human health and aquatic life objectives/criteria, the final effluent limitations in this NOA R5-2023-0025-006 are based on the lower of the effluent limitations based on the aquatic life objectives/criteria and human health objectives/criteria.

Abbreviations and Notes:

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

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	0.20	20B	10	13

Table E-2. Aquatic Life WQBELS Calculations

Parameter	Units	CMC	CCC	CV	Effluent Limit Table in Municipal General Order	AMEL	AWEL
Ammonia, Total (as N)	mg/L	11.6	4.0	2.3	19C	3.8	8.3