



Central Valley Regional Water Quality Control Board

31 October 2023

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NOTICE OF APPLICABILITY (NOA); STATE WATER RESOURCES CONTROL BOARD ORDER WQ-2014-0153-DWQ; GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS; CAMP SIERRA IMPROVEMENT ASSOCIATION AND THE UNITED STATES FOREST SERVICE; CAMP SIERRA WASTEWATER TREATMENT FACILITY; FRESNO COUNTY

On 29 April 2022, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a Report of Waste Discharge (RWD) prepared by McMillan Mountain Services/Zaninovich Engineering, signed and stamped by Lui N. Zaninovich (RCE 57769) on behalf of the Camp Sierra Improvement Association and the United States Forest Service (collectively referred to as Discharger). The RWD was submitted for the Camp Sierra Wastewater Treatment Facility (Facility or WWTF). The Facility is currently regulated under Waste Discharge Requirements (WDRs) Order No. 5-00-199, which was adopted on 15 September 2000.

Based on the information provided and a review of available information, the Facility treats and disposes of less than 100,000 gallons per day (gpd) of domestic wastewater and is therefore eligible for coverage under the general and specific conditions of the State Water Board Water Quality Order 2014-0153-DWQ, *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order). This letter serves as formal notice that the General Order is applicable to your system and the wastewater discharge described below. You are hereby assigned enrollee number **2014-0153-DWQ-R5387** for your system. After WDRs Order 5-00-199 has been rescinded, coverage under the General Order will become effective immediately.

You should familiarize yourself with the entire General Order and its attachments enclosed with this letter, which describes mandatory discharge and monitoring

MARK BRADFORD, CHAIR | PATRICK PULUPA, ESQ., EXECUTIVE OFFICER

requirements. Sampling, monitoring, and reporting requirements applicable to your treatment and disposal methods must be completed in accordance with the appropriate treatment system sections of the General Order and the attached Monitoring and Reporting Program (MRP) No. **2014-0153-DWQ-R5387**. This MRP was developed after consideration of your waste characterization and site conditions described in the attached memorandum.

DISCHARGE DESCRIPTION

The Camp Sierra Improvement Association (a non-profit organization) owns the WWTF on land permitted on a long-term basis from the United States Forest Service (USFS). As of 1 February 2023, the Discharger hired the contract operator Central Cal Waterworks, Inc. to operate the WWTF. The Camp Sierra Improvement Association is responsible for the costs associated with maintaining and repairing the WWTF. The WWTF provides sewage treatment and disposal for the Camp Sierra Conference Association, which is primarily a summer camp (Camp) and 67 site-holder cabins adjacent to the Camp, which are owned by the members of the Camp Sierra Improvement Association. The Camp and WWTF are about two miles southwest of the community of Big Creek at an elevation of about 4,500 feet above mean sea level in Section 32, T8S, R25E, MDB&M. The Camp has about 40 camp cabins and a large mess hall. The Camp has a peak summer occupation of about 250 but is nearly empty during the winter months. Occasionally the Camp will book small groups on the weekends. The site-holder cabins receive some use throughout the year. The WWTF flows during the off-season are very low. Monthly average flows from 2017 to present range from 100 gallons per day (MGD) to 6,000 gallons per day.

The WWTF, built in 1964, is an extended aeration-activated sludge plant with a reported design capacity of 30,000 gpd. The Discharger agreed to have a monthly average flow limit in the NOA of 20,000 gpd as flows are considerably less than 30,000 gpd. This NOA also specifies a 1 October to 31 May flow limit of 10,000 gpd as discussed in more detail in the enclosed memorandum. The WWTF consists of a comminutor, serpentine-style aeration trenches, a final clarifier/Return Activated Sludge (RAS) pump trench, an effluent wet well, an aerated sludge storage tank, and a sprayfield. It also includes a backup power supply and a flow meter (added in September 2023). Treated effluent is discharged to the sprayfield on a forested hillside.

FACILITY-SPECIFIC REQUIREMENTS AND EFFLUENT LIMITATIONS

In accordance with Section B.1.a of the General Order, the total discharge from the WWTF to the sprayfield **shall not exceed 20,000 gpd (monthly average) from June 1 to September 30 and shall not exceed 10,000 gpd (monthly average) from October 1 to May 31.**

The General Order states in Section D that discharge shall not exceed the applicable effluent limitations as described in Table 4 of the General Order. Table 1 below summarizes the applicable 5-day biochemical oxygen demand (BOD₅) and total suspended solids (TSS) effluent limitations for the Facility's discharge to the sprayfield.

Table 1 - Effluent Limitations

Constituent	Units	Monthly Average Limit	7-Day Average Limit
BOD ₅	mg/L	30	45
TSS	mg/L	30	45

The General Order states in Section B.1 that the Discharger shall comply with the setbacks as described in Table 3 of the General Order. Table 2 below summarizes different setback requirements for wastewater treatment system equipment, activities, land application areas, and storage and/or treatment ponds from sensitive receptors and property lines where applicable. The Discharger shall comply with the applicable setback requirements, as summarized in Table 2 below:

Table 2 – Site-Specific Applicable Setback Requirements

Equipment or Activity	Domestic Well (feet)	Flowing Stream (feet)	Ephemeral Stream Drainage (feet)	Property Line (feet)	Lake or Reservoir (feet)
Septic Tank, Treatment Unit, Treatment System, or Collection System	150	50	50	5	200
Land Application Area (undisinfected secondary recycled water)	150	100	100	100	200

The Discharger shall comply with all applicable sections of the General Order, including:

1. Activated Sludge System requirements in Section B.4 of the General Order;
2. Land Application System and/or Recycled Water System requirements in Section B.7 of the General Order;
3. Sludge/Solids/Biosolids Disposal requirements in Section B.8 of the General Order; and
4. Groundwater and Surface Water Limitations specified in Section C.1 of the General Order.

Provision E.1 of the General Order requires dischargers enrolled under the General Order to prepare and implement the following reports **by 29 January 2024**:

- Spill Prevention and Emergency Response Plan (Provision E.1.a.).
- Sampling and Analysis Plan (Provision E.1.b).
- Sludge Management Plan (Provision E.1.c).

A copy of the Spill Prevention and Emergency Response Plan and the Sampling and Analysis Plan shall be maintained at the treatment facility and shall be presented to the

Regional Water Board staff upon request. The sludge management plan shall be submitted to the Central Valley Water Board **by 29 January 2024**.

As stated in Section E.2.w., in the event any change in control or ownership of the Facility or wastewater disposal areas, the Discharger must notify the succeeding owner or operator of the existence of this General Order by letter, a copy of which shall be immediately forwarded to the Central Valley Water Board Executive Officer.

Failure to comply with the requirements in this NOA, General Order 2014-0153-DWQ, with all attachments, and **MRP No. 2014-0153-DWQ-R5387** could result in an enforcement action as authorized by provisions of the California Water Code. Discharge of wastes other than those described in this NOA is prohibited. If the method of waste disposal changes from that described in this NOA, you must submit a new Report of Waste Discharge describing the new operation.

The required annual fee specified in the annual billing from the State Water Board shall be paid until this NOA is officially terminated. You must notify this office in writing if the discharge regulated by the General Order ceases, so that we may terminate coverage and avoid unnecessary billing.

On 31 May 2018, the Central Valley Water Board adopted Basin Plan amendments incorporating new strategies for addressing ongoing salt and nitrate accumulation in the Central Valley as part of the Central Valley Salinity Alternatives for Long-Term Sustainability (**CV-SALTS**) initiative. Further details of these strategies are discussed in the enclosed memorandum. As these strategies are implemented, the Central Valley Water Board may find it necessary to modify the requirements of this NOA to ensure the goals of the Salt and Nitrate Control Program are met.

All monitoring reports and other correspondence shall be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disk and mailed to the Central Valley Water Board office at 1685 E Street, Fresno, CA 93706. To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15,
Place ID: 212969,
Facility Name: Camp Sierra WWTF,
Order: 2014-0153-DWQ-R5387.

In order to conserve paper and reduce mailing costs, a paper copy of General Order WQO 2014-0153-DWQ has been sent only to the Discharger. Others are advised that the [General Order](http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0153_dwq.pdf) is available on the State Water Board's website (http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0153_dwq.pdf).

All documents, including responses to inspections and written notifications, submitted to comply with this NOA shall be directed, via the paperless office system, to the Compliance and Enforcement Unit, attention to Omar Mostafa. Mr. Mostafa can be reached at (559) 445-5197 or Omar.Mostafa@waterboards.ca.gov. Questions regarding the permitting aspects of the NOA, and notification for termination of coverage under the Small Domestic General Order, shall be directed, via the paperless office system, to the WDR Permitting Unit, attention Jeff Robins. Jeff Robins can be reached at (559) 445-5976 or by email at Jeff.Robins@waterboards.ca.gov.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Resources Control 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 Resources Control Board must receive the petition by 5:00 p.m., 30 days after the date of this NOA, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Resources Control Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the internet at [Copies of the laws and regulations applicable to filing petitions](https://www.waterboards.ca.gov/public_notices/petitions/water_quality) (https://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request.

WDRs Order 5-00-199 is proposed to be rescinded at the 15/16 February 2024 meeting of the Central Valley Water Board. Upon rescission of your individual WDRs, coverage for your Facility under the General Order shall be applicable under this Notice of Applicability.

If you have any questions regarding this matter, please contact Jeff Robins by phone at (559) 445-5976 or by email at Jeff.Robins@waterboards.ca.gov.

Original Signed by Alexander S. Mushegan
For Patrick Pulupa
Executive Officer

(see next page for Attachments, Enclosures, and cc's list)

Attachments:

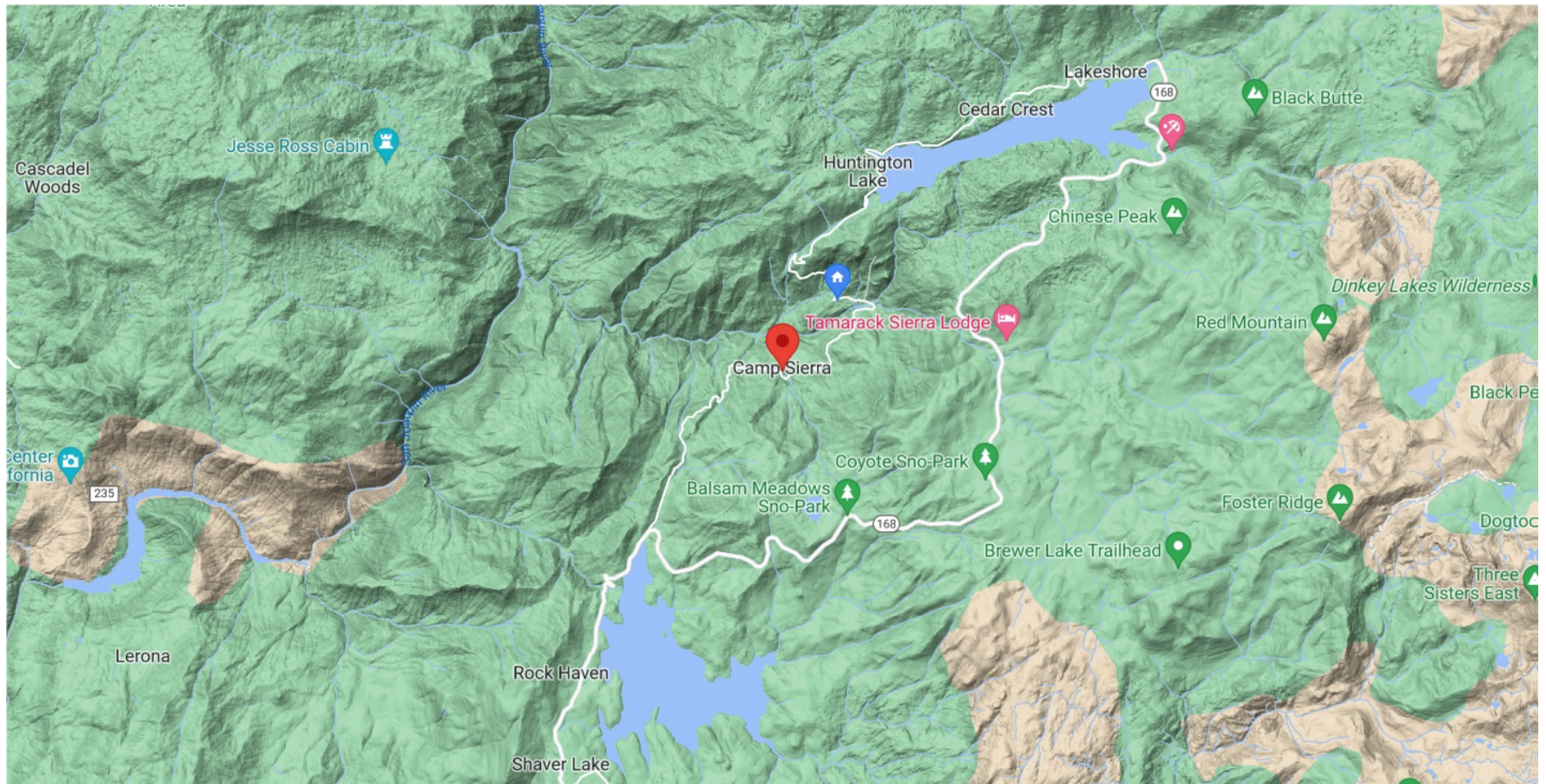
- Attachment A – Site Location Map
- Attachment B – Site Plan Map
- Attachment C – Process Flow Diagram

Enclosures:

- Monitoring and Reporting Program 2014-0153-DWQ-R5387
- Staff Review Memorandum for Camp Sierra WWTF
- State Water Resources Control Board Order WQ 2014-0153-DWQ (Discharger only)

cc's:

- Laurel Warddrip, State Water Resources Control Board, DWQ, Sacramento (via email)
- Chris Moskal, State Water Resources Control Board, OCC, Sacramento (via email)
- Omar Mostafa, Central Valley Water Board, Fresno (via email)
- Sudarban Poudyal, State Water Resources Control Board, DDW, Fresno (via email)
- Fresno County Environmental Health, Fresno, CA
- Elaine Locke, USDA/Forest Service (via email)
- David Nielsen, PE, President Camp Sierra (via email)
- Brett McArron, Vice President Camp Sierra (via email)
- Bruce Blayney, Secretary/Treasurer Camp Sierra (via email)
- Jason Sherrell, Central California Waterworks (via email)
- Debbie Webster, CVCWA (via email)
- Lui N. Zaninovich (via email))



ATTACHMENT A – SITE LOCATION MAP

NOTICE OF APPLICABILITY 2014-0153-DWQ-R5387

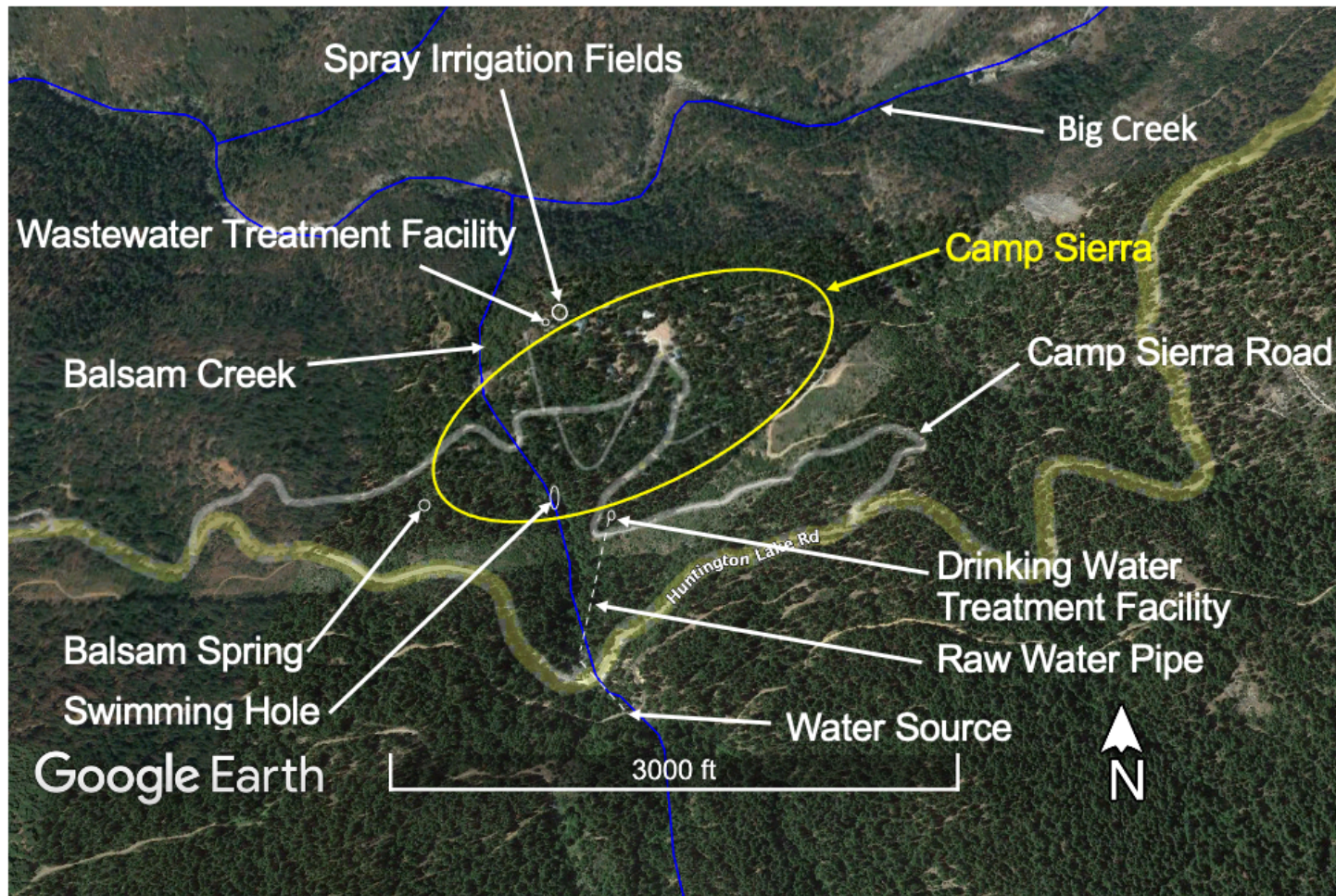
FOR

CAMP SIERRA IMPROVEMENT ASSOCIATION AND THE UNITED STATES FOREST SERVICE;

CAMP SIERRA WASTEWATER TREATMENT FACILITY

FRESNO COUNTY

Drawing Reference: RWD (Dated April 2020 and received April 2022)



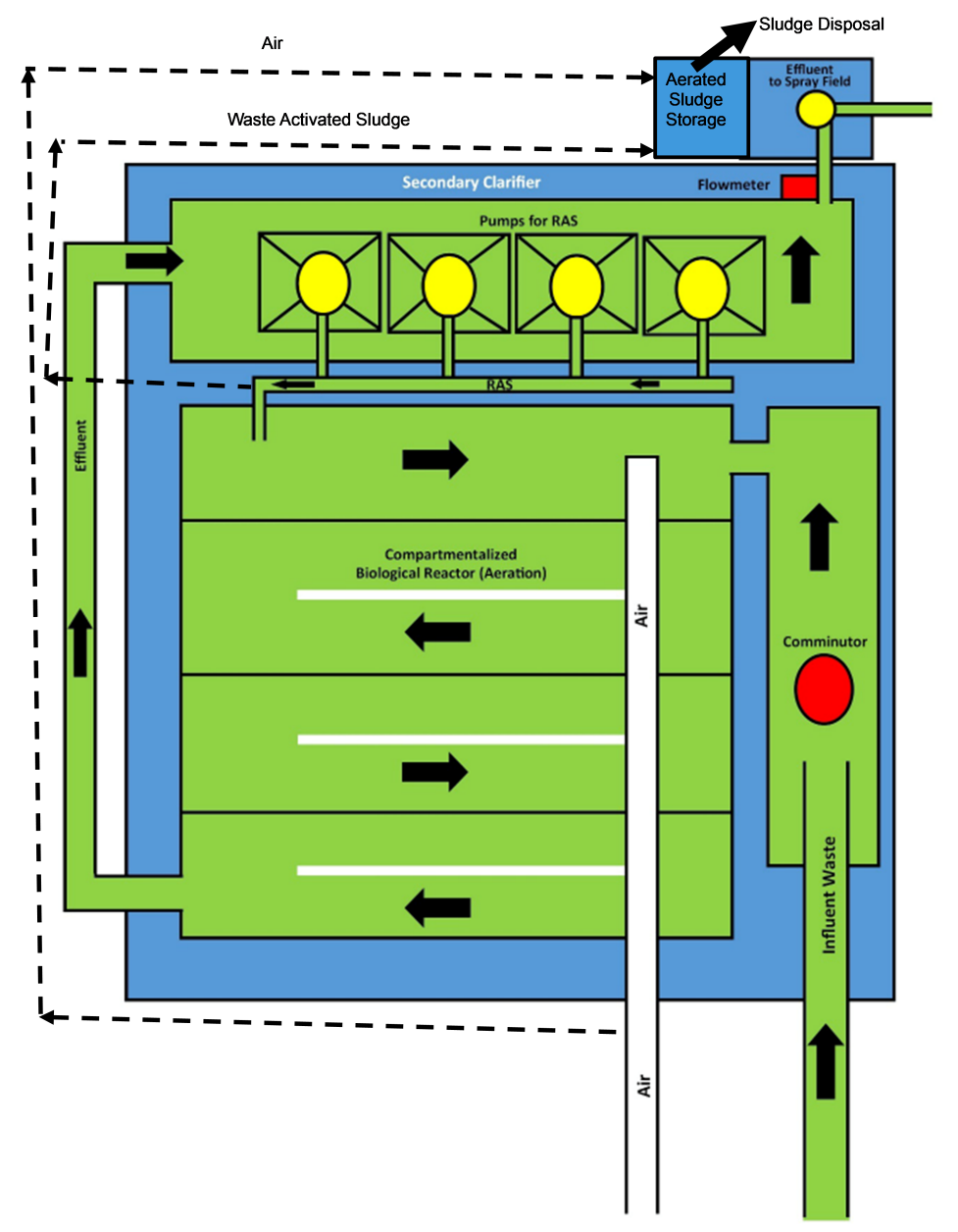
ATTACHMENT B – SITE PLAN MAP

NOTICE OF APPLICABILITY 2014-0153-DWQ-R5387

FOR

CAMP SIERRA IMPROVEMENT ASSOCIATION AND THE UNITED STATES FOREST SERVICE;
CAMP SIERRA WASTEWATER TREATMENT FACILITY
FRESNO COUNTY

Drawing Reference: Google Earth



ATTACHMENT C - PROCESS FLOW DIAGRAM
 NOTICE OF APPLICABILITY 2014-0153-DWQ-R5387
 FOR
 CAMP SIERRA IMPROVEMENT ASSOCIATION AND
 THE UNITED STATES FOREST SERVICE;
 CAMP SIERRA WASTEWATER TREATMENT FACILITY
 FRESNO COUNTY

Drawing Reference: RWD (Dated April 2020, received April 2022 and modified by
 Central Valley Water Board staff in September 2023)

**REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

**MONITORING AND REPORTING PROGRAM NO. 2014-0153-DWQ-R5387
FOR
CAMP SIERRA IMPROVEMENT ASSOCIATION
AND THE UNITED STATES FOREST SERVICE;
CAMP SIERRA WASTEWATER TREATMENT FACILITY
FRESNO COUNTY**

This Monitoring and Reporting Program (MRP) describes requirements for monitoring a wastewater treatment system. This MRP is issued pursuant to Water Code section 13267. The Camp Sierra Improvement Association and the United States Forest Service (collectively referred to as Discharger) shall not implement any changes to this MRP unless and until a revised MRP is issued by the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) or Executive Officer.

Section 13267 of the California Water Code states, in part:

“In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports and shall identify the evidence that supports requiring that person to provide the reports.”

Section 13268 of the California Water Code states, in part:

“(a) Any person failing or refusing to furnish technical or monitoring program reports as required by subdivision (b) of Section 13267, or failing or refusing to furnish a statement of compliance as required by subdivision (b) of Section 13399.2, or falsifying and information provided therein, is guilty of a misdemeanor and may be liable civilly in accordance with subdivision (b).

(b)(1) Civil liability may be administratively imposed by a regional board in accordance with Article 2.5 (commencing with section 13323) of Chapter 5 for a violation of subdivision (a) in an amount which shall not exceed one thousand dollars (\$1,000) for each day in which the violation occurs.”

The Camp Sierra Improvement Associations owns the Camp Sierra Wastewater Treatment System (Facility or WWTF) that is subject to the Notice of Applicability (NOA) 2014-0153-DWQ-R5387. The Facility is on land owned by the United States Forest Service. The NOA enrolls the WWTF under State Water Resources Control Board Order WQ 2014-0153-DWQ, *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order) upon the rescission of WDRs Order 5-00-199. The reports required in this MRP are necessary to ensure that the Discharger complies with the NOA and General Order. Pursuant to Water Code section 13267, the Discharger shall implement this MRP and shall submit the monitoring reports described herein.

All samples shall be representative of the volume and nature of the discharge or matrix of material sampled. The name of the sampler, sample type (grab or composite), time, date, location, bottle type, and any preservative used for each sample shall be recorded on the sample chain of custody form. The chain of custody form must also contain all custody information including date, time, and to whom samples were relinquished. If composite samples are collected, the basis for sampling (time or flow weighted) shall be approved by Central Valley Water Board staff.

Field test instruments (such as those used to test pH, dissolved oxygen, and electrical conductivity) may be used provided that they are used by a State Water Resources Control Board, Environmental Laboratory Accreditation Program (ELAP) certified laboratory, or:

1. The user is trained in proper use and maintenance of the instruments;
2. The instruments are field calibrated prior to monitoring events at the frequency recommended by the manufacturer;
3. Instruments are serviced and/or calibrated by the manufacturer at the recommended frequency; and
4. Field calibration reports are maintained and available for at least three years.

ACTIVATED SLUDGE TREATMENT SYSTEM MONITORING

A. Effluent Monitoring

Effluent samples shall be taken at a location that represents the effluent quality and effluent flow distributed to the sprayfield. At a minimum, effluent monitoring shall include the monitoring specified in Table 1 below.

Table 1 - Effluent Monitoring

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
Flow	MGD	Meter	Continuous (see 1 below)	Quarterly
BOD ₅	mg/L	Grab	Monthly	Quarterly

Constituent	Units	Sample Type	Monitoring Frequency	Reporting Frequency
TSS	mg/L	Grab	Monthly	Quarterly
pH	SU	Grab	Monthly	Quarterly
EC	µmhos/cm	Grab	Monthly	Quarterly
Total Nitrogen (as N)	mg/L	Grab	Quarterly	Quarterly

1. For continuous analyzers, the Discharger shall report documented routine meter maintenance activities including date, time of day, and duration, in which the analyzer(s) is not in operation.

SPRAYFIELD AREA MONITORING

The Discharger shall monitor the sprayfield when wastewater is applied. If wastewater is not applied during a reporting period, the monitoring report shall state so. Sprayfield monitoring shall include the following:

Table 2 - Land Application Area Monitoring

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Discharge Off-Site	--	Observation	Weekly See note 1.	Quarterly
Wastewater Flow	gpd	Meter See note 2.	Monthly	Quarterly
Local Rainfall	inches	Weather Station See note 3.	Monthly	Quarterly
Acreage Applied See note 4.	acres	Calculated	Monthly	Quarterly
Application Rate See note 5.	gal/acre/mo	Calculated	Monthly	Quarterly
Soil Erosion Evidence	--	Observation	Monthly	Quarterly
Containment Berm Condition	--	Observation	Monthly	Quarterly
Soil Saturation/Ponding	--	Observation	Monthly	Quarterly
Nuisance Odors/Vectors	--	Observation	Monthly	Quarterly

1. If treated wastewater, or evidence of treated wastewater from the spray irrigation system, is noted off-site, the Discharger shall note the observation in a logbook, take photos, and contact the Central Valley Water Board within 48 hours.
2. Meter requires meter reading, a pump run time meter, or other approved method.

3. Weather station may be site-specific station or nearby governmental reporting station.
4. Acreage applied denotes the acreage to which the wastewater is applied.
5. Application rate may be reported as inch/acre/month.

SLUDGE/BIOSOLIDS MONITORING

The Discharger shall report the handling and disposal of all solids (e.g., screenings, grit, sludge, biosolids, etc.) generated at the wastewater treatment facility. Records shall include the name/contact information for the hauling company, the type and amount of waste transported, the date removed from the wastewater system, the disposal facility name and address, and copies of analytical data required by the entity accepting the waste. These records shall be submitted as part of the annual monitoring report.

REPORTING

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, solids, etc.), and reported analytical or visual inspection results are readily discernable. The data shall be summarized to clearly illustrate compliance with the General Order and NOA as applicable. The results of any monitoring done more frequently than required at the locations specified in the MRP shall be reported in the next regularly scheduled monitoring report and shall be included in calculations as appropriate.

All regulatory documents, submissions, materials, data, monitoring reports, and correspondence should be converted to a searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50MB should be emailed to: centralvalleyfresno@waterboards.ca.gov. Documents that are 50MB or larger should be transferred to a disk and mailed to the appropriate Regional Water Board office, in this case 1685 E Street, Fresno, CA 93706. To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any email used to transmit documents to this office:

Program: Non-15,
Place ID: 212969,
Facility Name: Camp Sierra WWTF,
Order: 2014-0153-DWQ-R5387

A. Quarterly Monitoring Reports

Quarterly reports shall be submitted to the Regional Water Board on the **first day of the second month after the quarter ends** (e.g., the January-March Quarterly Report is due by May 1st). The reports shall bear the certification and signature of the Discharger's authorized representative. At the minimum, the quarterly reports shall include:

1. Results of all required monitoring.

2. A comparison of monitoring data to the requirements (including the flow limitation), disclosure of any violations of the NOA and/or General Order, and an explanation of any violation of those requirements. Data shall be presented in tabular format.
3. Copies of laboratory analytical report(s) and chain of custody form(s).

B. Annual Report

Annual Reports shall be submitted to the Regional Water Board **by February 1st following the monitoring year**. The Annual Report shall include the following:

1. Tabular and graphical summaries of all monitoring data collected during the year.
2. An evaluation of the performance of the wastewater treatment system, including discussion of the capacity issues, nuisance conditions, system problems and a forecast of the flows anticipated in the next year. A flow rate evaluation, as described in the General Order (Provision E.2.c), shall also be submitted.
4. A discussion of compliance and the corrective action taken, as well as any planned or proposed actions needed to bring the discharge into compliance with the NOA and/or General Order.
5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program
6. The name and contact information for the wastewater operator responsible for operation, maintenance, and system monitoring.

The Discharger shall implement the above monitoring program on the first day of the month following rescission of WDRs Order 5-00-199.

Ordered by:

Original Signed by Alexander S. Mushegan

For PATRICK PULUPA, Executive Officer

10/31/2023

(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
bgs	below ground surface
CaCO ₃	Calcium carbonate
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
FDS	Fixed dissolved solids
TDS	Total dissolved solids
TKN	Total Kjeldahl nitrogen
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
24-hr Composite	Samples shall be a flow-proportioned composite consisting of at least eight aliquots over a 24-hour period.
Daily	Every day except weekends or holidays.
Twice Weekly	Twice per week on non-consecutive days.
Weekly	Once per week.
Twice Monthly	Twice per month during non-consecutive weeks.
Monthly	Once per calendar month.
Quarterly	Once per calendar quarter.
Semiannually	Once every six calendar months (i.e., two times per year) during non-consecutive quarters.
Annually	Once per year.
mg/L	Milligrams per liter
mg/kg	Milligrams per kilogram
mL/L	Milliliters [of solids] per liter
µg/L	Micrograms per liter
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
gal/acre/mo	Gallons per acre per month
mgd or MGD	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters
NA	Denotes not applicable
NTU	Nephelometric Turbidity Units
UV	Ultraviolet
mJ/cm ²	Millijoules/cm ²
SU	Standard pH units



Central Valley Regional Water Quality Control Board

TO: Alexander S. Mushegan
Supervising Water Resource Control Engineer

FROM: Jeff Robins
Water Resource Control Engineer
RCE 94056

DATE: 31 October 2023

APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2014-0153-DWQ; GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS; CAMP SIERRA IMPROVEMENT ASSOCIATION AND THE UNITED STATES FOREST SERVICE; CAMP SIERRA WASTEWATER TREATMENT FACILITY; FRESNO COUNTY

On 29 April 2022, Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff received a Report of Waste Discharge (RWD) prepared by McMillan Mountain Services/Zaninovich Engineering, signed and stamped by Lui N. Zaninovich (RCE 57769) on behalf of the Camp Sierra Improvement Association and the United States Forest Service (landowner) (collectively referred to as the Discharger). The RWD was submitted for the Camp Sierra Wastewater Treatment Facility (Facility or WWTF). The Facility is currently regulated under Waste Discharge Requirements (WDRs) Order No. 5-00-199.

This memorandum provides a summary of Central Valley Water Board's review of the April 2022 RWD and subsequent materials and the applicability of this discharge to be covered under State Water Resources Control Board's Order WQ 2014-0153-DWQ, *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order).

BACKGROUND INFORMATION

The WWTF provides sewage treatment and disposal for a summer church camp (referred to as Camp or Camp Sierra) and 67 site-holder cabins adjacent to the Camp, which are owned by the members of the Camp Sierra Improvement Association. The Camp and WWTF are about two miles southwest of the community of Big Creek at an elevation of about 4,500 feet above mean sea level in Section 32, T8S, R25E, MDB&M

(37.193° N, 119.260° W). The Camp has about 40 camp cabins and a large mess hall. Its facilities consist of 46 toilets, 66 sinks, and 34 showers. The Camp has a peak summer occupation of about 250 but is nearly empty during the winter. The site-holder cabins receive some use throughout the year. Monthly average flows from 2017 to the present range from 100 gallons per day (gpd) (low flows are typically in the off-season) to 6,000 gpd.

The WWTF, built in 1964, is an extended aeration activated sludge plant with a reported design capacity of 30,000 gpd. The Discharger agreed to have the Notice of Applicability specify a monthly average flow limit of 20,000 gpd since flows are low at the WWTF and no nitrogen effluent limit evaluation has been completed for the Facility. The current WDRs, Order 5-00-199, recognized that flows during the winter were minimal and that the Facility had limited disposal capacity during the winter months. Therefore, the NOA (2014-0153-DWQ-R5387) specifies a reduced monthly flow limitation during the winter months (10,000 gpd) to ensure that the flows during the winter months do not significantly increase. The WWTF consists of a comminutor, serpentine-style aeration, final clarifier/Return Activated Sludge (RAS) pump trench, effluent wet well (2,500-gallon high-density polyethylene [HDPE] tank installed in 2023 to replace the original concrete effluent wet well tank), an aerated sludge storage tank (3,000-gallon HDPE tank installed in 2023 to allow slower, more controlled wasting of sludge – Waste Activated Sludge removed from the RAS line – Attachment C), a sprayfield, a back-up power supply, and a flow meter (added in September 2023). The WWTF is on sloping terrain and has a levee on its downhill side that, together with the WWTF, forms a containment area that is intended to contain effluent during an overflow at the plant. Both the effluent wet well and the aerated sludge storage tank are within the containment area of the levee.

Treated effluent is discharged to the sprayfield on a forested hillside having a mild slope. The sprayfield has a berm to prevent runoff on the downhill side of the sprayfield. The sprayfield system has one, two-inch diameter pipe with five, three-quarter inch riser pipes with sprinklers. Site access is limited by signs that state, "WARNING Septic Sprayfield Do Not Enter," which are placed every 100 feet around the perimeter of the sprayfield. The operator estimated the dimensions of the sprayfield are approximately 25 yards by 50 yards.

Wastewater flows are conveyed by a gravity sewer system and two lift stations to the WWTF. The sewer collection system consists of asbestos cement pipes ranging from four to six inches in diameter. The collection system was installed in 1964. According to the RWD, the pipe is in good condition and has enough capacity to meet current flows. The collection system was inspected and tested (they flushed water through it with no interference) after the 2020 Creek fire. There were no reports of blockages.

POTENTIAL THREAT TO WATER QUALITY

Flow rate data for over the past six years is summarized in Table 1 below. No data was reported for September 2020 through January 2021 due to The Creek Fire. The first half

of 2017 was a wet year. January 2023 through March 2023 was an extremely wet period with heavy snowfall.

Table 1 – Wastewater Flow (Monthly Average)

	2017 (gpd)	2018 (gpd)	2019 (gpd)	2020 (gpd)	2021 (gpd)	2022 (gpd)	2023 (gpd)
Jan	4,006	1,200	700	1,000		800	5,500
Feb	5,300	700	3,500	100	100	600	
Mar	2,000	2,000	4,000	200	500	400	6,000
Apr	2,300	500	800	800	500	400	800
May	2,200	600	800	200	500	600	6,000
Jun	3,300	2,500	1,900	1,700	800	1,100	1,300
Jul	3,500	2,900	2,600	2,900	900	3,700	3,300
Aug	2,700	2,400	2,700	1,800	400	4,400	
Sep	1,800	700	1,100		300	3,000	
Oct	800	800	100		300	1,300	
Nov	400	200	100		1,100	400	
Dec	700	300	200		900	1,400	
average	2,500	1,200	1,500	1,100	600	1,500	3,500
max	5,300	2,900	4,000	2,900	1,100	4,400	6,000
min	400	200	100	100	100	400	800
count	12	12	12	8	11	12	6

The effluent limitations specified in WDRs Order 5-00-199 are listed in Table 2 below.

Table 2 - Current Effluent Limits Under 5-00-199

Constituent	Units	Monthly Average	Daily Maximum
BOD ₅	mg/L	50	80
TSS	mg/L	50	80
Settleable Solids	mL/L	0.2	0.5

General Order WQ 2014-0153-DWQ specifies the following effluent limitations for activated sludge treatment systems.

Table 3 - Effluent Limits Under WQ 2014-0153-DWQ

Constituents	Units	Monthly Average	7 Day Average
BOD ₅	mg/L	30	45
TSS	mg/L	30	45

Table 4 below summarizes monthly average influent and effluent data for BOD and TSS. The monthly average value is presented in each cell of the table and the range of monthly average values for the year is presented in parentheses. Monthly average effluent BOD exceeded the WDRs Order 5-00-199 limit one time in 2023 (May 2023).

Monthly average effluent TSS exceeded the effluent WDRs Order 5-00-199 limit twice in 2023 (May 2023 and June 2023) and one time in 2022 (July 2022). Monthly average effluent Settleable Solids (not shown in Table 4) exceeded the WDRs Order 5-00-199 effluent limit twice in 2023 (June 2023 and July 2023) and twice in 2022 (July 2022 and August 2022).

Table 4 - Monthly Average Influent and Effluent Data

Date [# samples]	Monthly Ave. Influent BOD	Monthly Ave. Effluent BOD	Monthly Percent BOD Removal	Monthly Ave. Influent TSS	Monthly Ave. Effluent TSS	Monthly Percent TSS Removal
Units	mg/L	mg/L	%	mg/L	mg/L	%
2021 [11]	225 (34-840)	14 (8-21)	88 (74-99)	405 (139-1027)	24 (10-42)	90 (77-99)
2022 [12]	129 (41-445)	17 (8-34)	79 (40-97)	327 (47-190)	35 (16-53)	75 (32-96)
2023 [7]	51 (11-220)	25 (9-63)	-16 (-136-87.7)	35 (10-110)	36 (9-73)	-109 (-630-65)

The 2022 contract operator went out of business and is not available to explain the issues that caused the 2022 violations. In February 2023 a new contract operator was hired on short notice. Due to massive snowstorms in early 2023, the new contract operator could not get to access the plant and there was no data submitted for February 2023.

In 2023 the violations were likely a result of the new operators getting used to operating this facility. Some of the issues that the new operators faced included: learning how to adjust to the significant increase in flows that occur during the summer compared to the winter, learning how to adjust the RAS flow rates, and learning how to moderate the removal of waste activated sludge (their first attempt the contract hauler filled his truck removing virtually all the solids from the system).

The 2023 data for BOD and TSS influent values and percent removals are unusual (e.g. negative percent removals and low influent values), perhaps related to high precipitation, inflow and infiltration, and the operators learning the details of a system that was new to them.

The new contract operator believes the Facility can comply with more stringent requirements of WQ-2014-0153-DWQ by making operational changes and repairs. During the 2023 summer season they installed new PVC piping to replace the PVC piping of the spray irrigation system that had melted during the 2020 Creek fire. They cleared vegetation from the spray field and built-up berms at the edges to prevent

runoff. They installed a new 2,500-gallon HDPE effluent storage tank to replace the leaking concrete effluent storage tank. They installed a new 3,000-gallon HDPE-lined aerated sludge storage tank to allow them to control and moderate the removal of waste activated sludge. Next year they are planning to seed the plant with sludge before the dramatic rise in summer flows so the wastewater plant can handle the sudden increase in wastewater flow.

The WWTF was designed to provide 75% removal capability for BOD and suspended solids. For the data shown in Table 4 above, the WWTF achieved either 75% BOD₅ removal or met the BOD₅ effluent limit of the General Order for every month except two (November 2022 and May 2023). For the data shown in Table 4 above, the WWTF achieved either 75% TSS removal or met the TSS limit of the General Order for every month except six (May 2022, October 2022, November 2022, May 2023, June 2023, and July 2023). For four of the six months (May 2022, October 2022, November 2022, and July 2023) that did not meet the effluent monthly average TSS limit of the General Order, the effluent monthly average TSS levels were in compliance with WDRs Order No. 5-00-199.

The source of drinking water at Camp Sierra is Balsam Creek. Camp Sierra also has a treatment facility for drinking water (Attachment B). The most recent sample results for raw water from Balsam Creek are shown in Table 5.

Table 5 - Raw Water Quality from Balsam Brook (Source Water)

Analyte	Concentration	Date Sampled
Nitrate (mg/L)	<0.23	4/7/22
Nitrite (mg/L)	< 0.4	5/28/21
Conductivity (µmhos/cm)	22	2/18/15
pH	7.2 S.U.	5/27/11
Alkalinity (mg/L as CaCO ₃)	11	5/27/11
Hardness (mg/L as CaCO ₃)	6.1	5/27/11
Calcium (mg/L)	1.9	5/27/11
Iron (µg/L)	<100	5/27/11
Manganese (µg/L)	<20	5/27/11
Magnesium (mg/L)	0.3	5/27/11

The Information Sheet for Order No. 5-00-199 noted that underlying the soils at the sprayfield is granitic bedrock and groundwater is found in bedrock fractures. To determine underlying groundwater quality, Central Valley Water Board staff reviewed available well data for nearby wells using the [National Water Quality Monitoring Council' Water Quality Data Portal](https://www.waterqualitydata.us/portal) (<https://www.waterqualitydata.us/portal>). Three wells were located within 13 miles of the discharge location (Well #1 = 009S024E35G001M, Well #2 = 008S023E33C001M, and Well #3 = 008S023E20F001M). Select data is summarized in Table 6 below and are for the most recent sample date for the particular well. If there were two sample results from a single day, the results were averaged, and the number of test results is shown in parentheses next to the average result. For pH values, the pH of the average hydrogen ion concentration was used to calculate the average pH.

Table 6 - Groundwater Quality From Nearby Wells

Constituent/Parameter	Well #1	Well #2	Well #3
Date Sampled	9/10/2018	5/22/2006	5/22/2006
Well Hole Depth (ft bgs)	120	900	900
EC (µmhos/cm @ 25°C)	202 (2)	219 (2)	255 (2)
TDS (mg/L)	146	134 (2)	168 (2)
Nitrate (as N) (mg/L)	0.499	<0.06	<0.06
pH (s.u.)	6.29 (2)	9.3	7.8
Hardness, Ca, Mg (mg/L as CaCO ₃)	53.3	7.49	78
Sodium (mg/L)	19.2	44.1	26.0
Potassium (mg/L)	2.10	0.21	0.71
Chloride (mg/L)	24.3	11.4	3.78
Sulfate (mg/L)	3.26	2.70	2.50
Alkalinity (mg/L as CaCO ₃)	57.8	76.5	123
Calcium (mg/L)	17	2.93	28.6
Magnesium (mg/L)	2.56	0.043	1.62
Iron (µg/L)	< 10	<6	<6
Manganese (µg/L)	0.57	0.31	3.02
Arsenic(µg/L)	<0.1	3.0	17.6

NITROGEN LIMIT EVALUATION

The General Order requires that wastewater systems with a flow rate greater than 20,000 gallons per day be evaluated to determine if nitrogen effluent limits are required, as described in Attachment 1 of the General Order. As discussed above, the Discharger has requested to be permitted at 20,000 gpd. Therefore, a Nitrogen Effluent Limit Evaluation is not required for the Facility.

MONITORING REQUIREMENTS

Monitoring requirements included in the following sections from Attachment C of the General Order are appropriate for this discharge:

- Activated Sludge Monitoring,
- Land Application Monitoring, and
- Solids Disposal Monitoring.

SALT AND NITRATE CONTROL PROGRAMS

The Central Valley Water Board adopted Basin Plan amendments incorporating new programs for addressing ongoing salt and nitrate accumulation in the Central Valley at its 31 May 2018 Board Meeting (Resolution R5-2018-0034). The Basin Plan amendments became effective on 17 January 2020 and were revised by the Central Valley Water Board in 2020 with [Resolution R5-2020-0057](https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/re) (https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/re

solutions/r5-2020-0057_res.pdf). Pursuant to the Basin Plan amendments, the Discharger was sent a Notice to Comply (**CV SALTS ID: 1860**) on 5 January 2021 with instructions and obligations for the Salt Control Program. The Discharger submitted a Notice of Intent (NOI) on 13 July 2021 selecting Option 2 (Alternative Option for Salt Permitting) and is participating in the Prioritization and Optimization (P&O) Study.

For the Nitrate Control Program, the Facility and sprayfield are not within a groundwater basin. For dischargers outside a groundwater basin, a Notice to Comply may be issued if the Central Valley Water Board Executive Officer determines it is necessary to protect water quality. [More information on the Salt and Nitrate Control Program](https://www.cvsalinity.org/public-info) may be found on the Internet. (<https://www.cvsalinity.org/public-info>).