



Central Valley Regional Water Quality Control Board

30 May 2024

Cicely Muldoon, Park Superintendent
Yosemite National Park
5083 Foresta Rd
El Portal, CA 95318

CERTIFIED MAIL
7020 2450 0000 6785 6792

NOTICE OF APPLICABILITY (NOA); STATE WATER RESOURCES CONTROL BOARD ORDER WQ-2014-0153-DWQ; GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS; UNITED STATES DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE, YOSEMITE NATIONAL PARK; YOSEMITE ENVIRONMENTAL EDUCATION CAMPUS NATURE BRIDGE ONSITE WASTEWATER TREATMENT SYSTEM; MARIPOSA COUNTY

On 15 February 2024, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) received a Report of Waste Discharge (February RWD) requesting coverage under State Water Resources Control Board Order WQ-2014-0153-DWQ, *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (Small Domestic General Order) for the Yosemite Environmental Education Campus Nature Bridge (Campus) Onsite Wastewater Treatment System (OWTS). The RWD was prepared by Zheng Teng (C68783), a registered professional civil engineer with Provost and Pritchard Consulting Group, and included a Form 200 signed by Yosemite National Park. Central Valley Water Board staff conducted a preliminary review of the February RWD and identified concerns that needed to be addressed prior to permitting the Facility. An updated RWD was submitted on 29 April 2024 which addressed staff's concerns.

According to the Form 200, the Facility, the OWTS, and land is owned by the United States Department of the Interior, National Park Service, Yosemite National Park (hereafter referred to as Discharger). The OWTS is operated by the Yosemite Institute Nature Bridge. The OWTS, while not currently in use, was constructed in 2014 as part of Phase 1A, and is located west of Highway 41, east of the Yosemite West development, and south of Henness Ridge Road, in Yosemite National Park (37.64801°, -119.70184°). The OWTS features an enhanced-septic tank system consisting of two anaerobic baffle reactor tanks and a subsurface leach field disposal system that is expected to handle the average daily flow of 5,400 gallons per day (gpd), and an estimated maximum daily flow of 10,000 gpd, from the Campus.

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

Based on the information provided in the RWD, the OWTS treats and disposes of less than 100,000 gpd of domestic wastewater and is therefore eligible for coverage under the general and specific conditions of the 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-R5415** for your system.

You should familiarize yourself with the entire General Order and its attachments enclosed with this letter, which describe mandatory discharge and monitoring 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-R5415**. This MRP was developed after consideration of your waste characterization and site conditions described in the attached memorandum.

DISCHARGE DESCRIPTION

The Campus and its OWTS are located about one mile east of Yosemite West in Mariposa County, as shown on **Attachment A**. Once completed, the Campus will house approximately 248 occupants. At full build-out, the Campus will have eight student cabins, one dining hall, one classroom building, two bathhouse buildings, one administrative office, four studio buildings, one maintenance building, and a fire station as shown in **Attachment B**. The leach field disposal areas are shown in **Attachment C**. The treatment and disposal systems are depicted in a process flow schematic presented as **Attachment D**.

Effluent from the enhanced septic system will be disposed of through one constructed leach field. Leach field one (LF-1) has a total area of 7,245 square feet. LF-1 leach lines were constructed in four sub-areas, each constructed with four to five leach lines at approximate lengths of 60 to 120 feet. Each sub-area has individual distribution valves to allow periodic switching of the sewage effluent loading. Additionally, the February RWD includes plans for a second leach field (LF-2). When constructed, LF-2 will provide 100% design redundancy to allow annual alternation of leach field areas.

Sewage from the Campus will be collected through a sewer main where the flow is measured by a flow meter installed in a 48-inch diameter manhole. The Discharger estimates that the OWTS will be at 25% capacity in the current construction phase. According to Nature Bridge staff it's unclear when construction of the campus will be completed due to insufficient funding. However, at full build-out it's expected that there will be 90% occupancy from September through June, and 50% occupancy in the summer. Wastewater generation rates were compared with water use records for a nearby existing facility known as Crane Flat. According to the RWD, average daily wastewater flows of 5,400 gpd and maximum day flow of approximately 10,000 gpd were used for the wastewater system design.

FACILITY SPECIFIC REQUIREMENTS AND EFFLUENT LIMITATIONS

The Discharger will maintain exclusive control over the discharge and shall comply with the terms and conditions of this NOA, General Order 2014-0153-DWQ, all attachments, and MRP No. 2014-0153-DWQ-R5415.

In accordance with Section B.1.a of the General Order, the combined monthly average discharge from the septic tanks to the leach fields **shall not exceed 5,400 gpd**.

The General Order states in Section B.1 that the Discharger shall comply with the setbacks described in Table 3 of the General Order, which 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 1 below:

Table 1 – 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
Leach Field	100	100	50	5	200

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

1. Section B.2. - Septic Systems
2. Section B.6 - Subsurface Disposal Systems
3. Section B.8 - Sludge/Solids/Biosolids Disposal
4. Section C.1 - Groundwater and Surface Water Limitations

Provision E.1 of the General Order requires dischargers enrolled under the General Order to prepare and implement the following reports **within 90 days** of issuance of the NOA:

- Spill Prevention and Emergency Response Plan
- Sampling and Analysis Plan

A copy of each of the plans listed above shall be maintained at the Facility and shall be presented to the Regional Water Board staff upon request.

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-R5415** could result in an enforcement action as authorized by provisions of the California Water Code. The 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. If wastewater flows to the Facility substantially increase and the peak flows approach or exceed 10,000 gpd, the Central Valley Water Board staff must be contacted to determine if further analysis is required.

The required annual fee specified in the annual billing invoices 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: 894593

Facility Name: Yosemite Environmental Education Campus Nature Bridge

Order: 2014-0153-DWQ-R5415

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 Cruz Romero. Mr. Romero can be reached at (559) 445-5036 or by email at Cruz.Romero@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 laws and regulations applicable to filing petitions](#) may be found on the internet at (https://www.waterboards.ca.gov/public_notices/petitions/water_quality) or will be provided upon request. If you have any questions regarding this matter, please contact Cruz Romero by phone at (559) 445-5036 or by email at Cruz.Romero@waterboards.ca.gov.

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](#) 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).

Original Signed by Christina Shupe
For Patrick Pulupa
Executive Officer

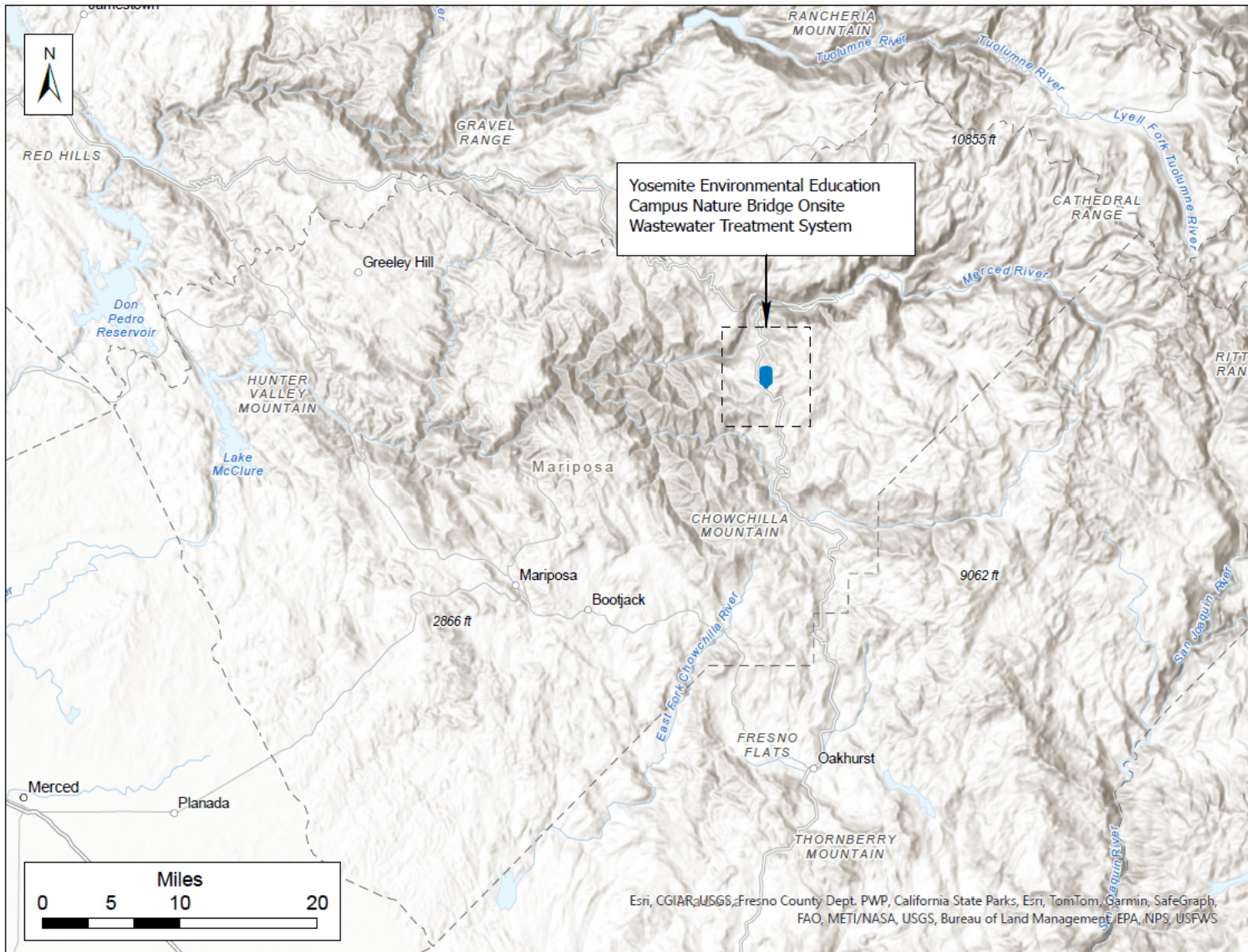
(See next page for attachments, enclosures and cc's)

- Attachments:
- Attachment A – Site Location Map
 - Attachment B – Site Layout
 - Attachment C – Leach Field Layout
 - Attachment D – Process Flow Diagram

- Enclosures:
- Monitoring and Reporting Program 2014-0153-DWQ-R5415
 - Staff Review Memorandum for Nature Bridge OWTS
 - State Water Resources Control Board Order WQ 2014-0153-DWQ (Discharger only)

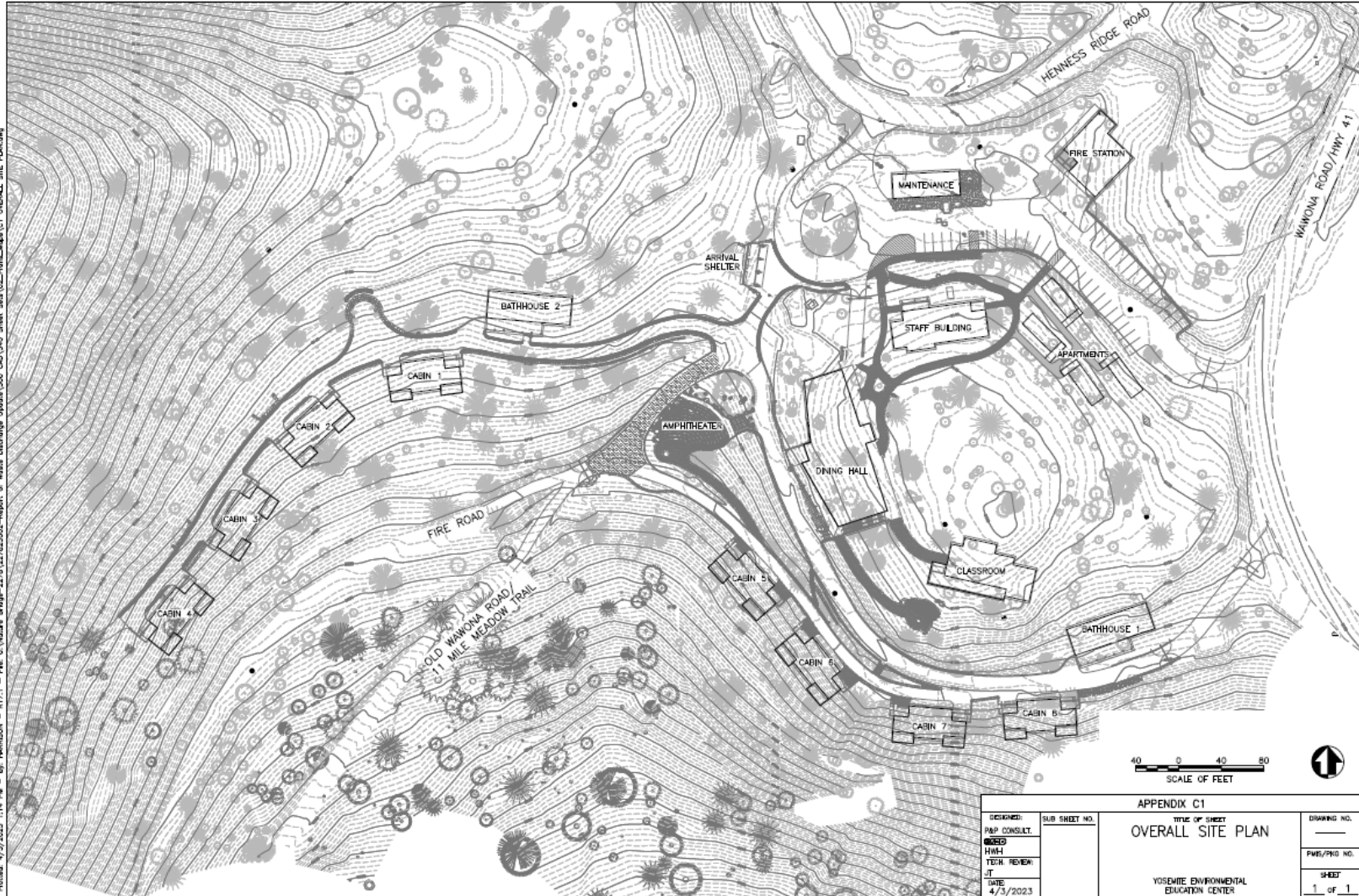
cc's

- Kennedy Knight, State Water Resources Control Board, OCC, Sacramento (via email)
- Laurel Warddrip, State Water Resources Control Board, DWQ, Sacramento (via email)
- Omar Mostafa, Central Valley Water Board, Fresno (via email)
- Tricia Wathen, State Water Resources Control Board, DDW, (via email)
- Mariposa County Environmental Health Division, (via email)
- Jim Allen, National Park Service, El Portal (via email)
- Moshe Calm, National Park Service, El Portal (via email)
- Zheng Teng, Provost and Pritchard Consulting Group, Clovis (via email)



**ATTACHMENT A – SITE LOCATION MAP
NOTICE OF APPLICABILITY 2014-0153-DWQ-R5415**

Plotted: 4/23/2023 1:14 PM - By: HARBEDON - R17.1 - File: C:\Users\Bridger-2279\227923000-report of waste discharge Update_300 CAD_340 Sheet Sp4\02_Plan_Map\01 OVERALL SITE PLAN.dwg



DESIGNED:		SUB SHEET NO.		APPENDIX C1		DRAWING NO.	
P&P CONSULT:				TITLE OF SHEET		OVERALL SITE PLAN	
DRAWS:				PWS/PHD NO.			
YEMM:				SHEET		1 OF 1	
TECH. REVIEW:				Yosemite Environmental Education Center			
JT							
DATE:							
4/3/2023							

Original from February 2024 Report of Waste Discharge.

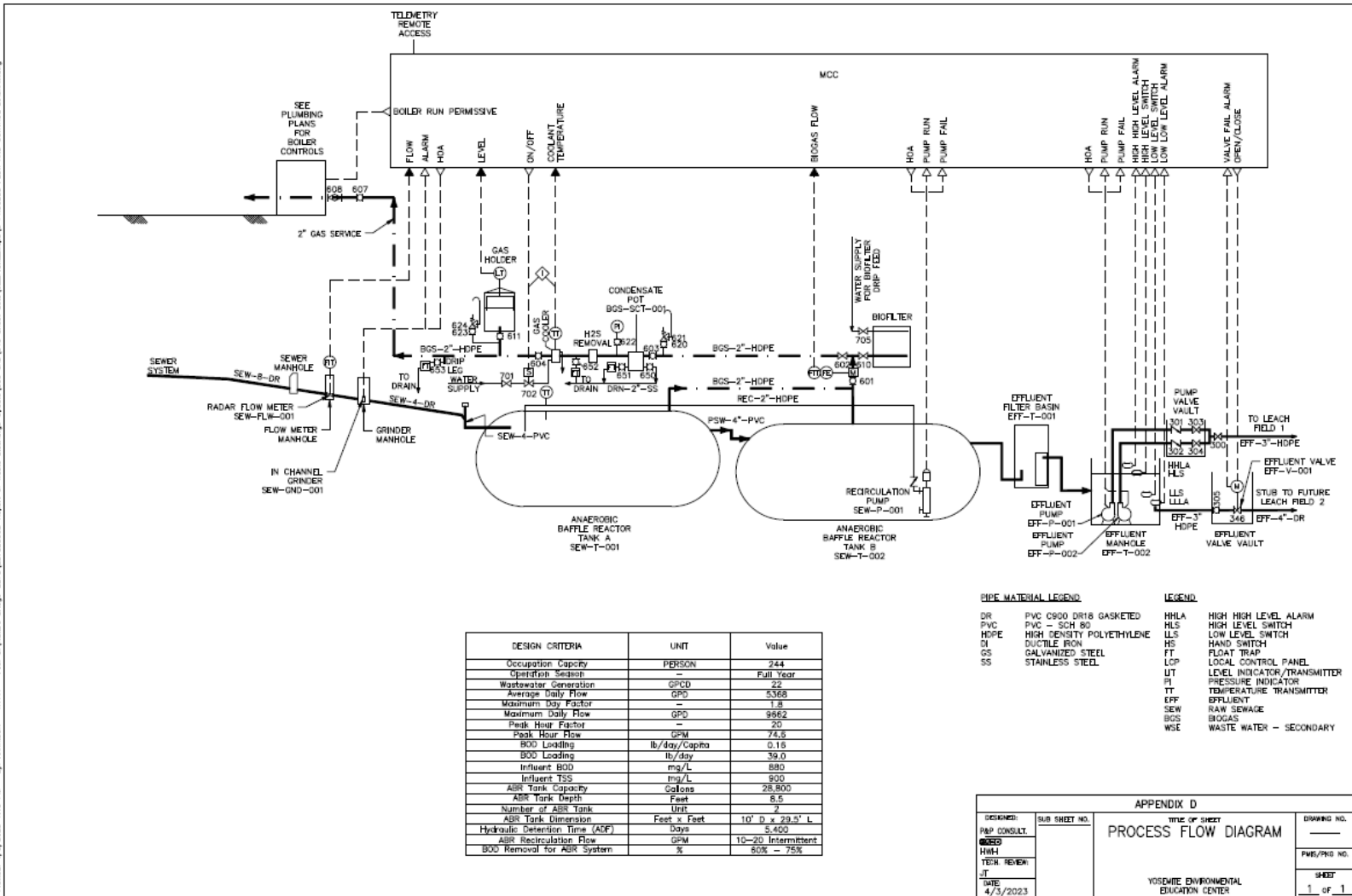
ATTACHMENT B – SITE LAYOUT
NOTICE OF APPLICABILITY 2014-0153-DWQ-R5415



REVISION:	SUB SHEET NO.	TITLE OF SHEET	DRAWING NO.
P&P CONSULT		APPENDIX E	
DESIGN		TEST PIT LOCATION MAP	PNB/PBO NO.
FIELD REVIEW			
DATE		Yosemite Institute Environmental Education Campus	SHEET
6/7/23			1 of 1

Original from February 2024 Report of Waste Discharge
ATTACHMENT C – LEACH FIELDS LAYOUT
NOTICE OF APPLICABILITY 2014-0153-DWQ-R5415

Project: 4/2/2023 11:15 PM - By: HARRISON - R17.1 - File: C:\Users\Bjorge-2270\Documents\Yema\300_GD\DWQ_Sheet_545(VOL_Rev_1)01_PROCESS_FLOW_AND_CONTROL_DIAGRAM.dwg



Original from February 2024 Report of Waste Discharge

**ATTACHMENT D – PROCESS FLOW DIAGRAM
NOTICE OF APPLICABILITY 2014-0153-DWQ-R5415**

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

**MONITORING AND REPORTING PROGRAM NO. 2014-0153-DWQ-R5415
FOR
UNITED STATES DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE,
YOSEMITE NATIONAL PARK
YOSEMITE ENVIRONMENTAL EDUCATION CAMPUS NATURE BRIDGE ONSITE
WASTEWATER TREATMENT SYSTEM
MARIPOSA COUNTY**

This Monitoring and Reporting Program (MRP) describes requirements for the Yosemite Environmental Education Campus Nature Bridge (Campus) Onsite Wastewater Treatment System (OWTS). This MRP is issued pursuant to Water Code section 13267. The United States Department of the Interior, National Park Service, Yosemite National Park (hereafter referred to as Discharger) shall not implement any changes to this MRP unless and until a revised MRP is issued by the Central Valley Regional Water Quality Control Board (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 Discharger owns the Campus OWTS that is subject to the Notice of Applicability (NOA) 2014-0153-DWQ-R5415, which enrolls the OWTS under State Water Resources Control Board Order WQ 2014-0153-DWQ, *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order). 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
4. Field calibration reports are maintained and available for at least three years

SEPTIC TANK EFFLUENT AND INSPECTION MONITORING

Septic Tank Inspections/Monitoring

All septic tanks shall be inspected and/or pumped at least as frequently as described below. Inspection of sludge and scum depth are not required if the tanks are pumped at least annually.

Table 1 - Septic Tank Monitoring

Parameter	Units	Measurement Type	Sampling Frequency	Reporting Frequency
Flow (see 1 below)	gpd	Metered	Continuous	Quarterly
Biochemical Oxygen Demand (BOD)	mg/L	Grab Sample	Once/Quarter	Quarterly

Parameter	Units	Measurement Type	Sampling Frequency	Reporting Frequency
Total Suspended Solids (TSS)	mg/L	Grab Sample	Once/Quarter	Quarterly
Sludge depth and scum thickness in one compartment of each tank	Feet	Staff Gauge	Annually	Annual
Distance between bottom of scum layer and bottom of outlet device	Inches	Staff Gauge	Annually	Annual
Distance between top of sludge layer and bottom of outlet device	Inches	Staff Gauge	Annually	Annual
Effluent filter condition (if equipped, clean as needed)	Not Applicable	Not Applicable	Annually	Annual

1. Flow shall be measured at the influent meter.

Septic tanks shall be pumped when any one of the following conditions exists:

1. The combined thickness of sludge and scum exceeds one-third of the tank depth of the first compartment.
2. The scum layer is within 3 inches of the outlet device.
3. The sludge layer is within 8 inches of the outlet device.

If a septic tank is pumped during the year, the pumping report shall be submitted with the annual report. All pumping reports shall be submitted with the next regularly scheduled monitoring report. At a minimum, the record shall include the date, nature of service, service company name, and service company license number.

SUBSURFACE DISPOSAL AREA INSPECTION MONITORING

Leach Field Inspection/Monitoring

In general, monitoring shall be sufficient to determine if wastewater is evenly applied, the disposal area is not saturated, burrowing animals and/or deep-rooted plants are not present, and odors are not present. Inspection of dosing pump controllers, automatic distribution valves, etc. is required to maintain optimum treatment in the disposal area

(and any sand or media filter, if present). Monitoring of the leach field systems shall, at a minimum, include the monitoring specified in Table 3.

Table 3 - Subsurface Disposal Monitoring

Parameter	Inspection Frequency	Reporting Frequency
Pump Controllers, Automatic Valves, etc.	Quarterly	Quarterly
Nuisance Odor Condition	Quarterly	Quarterly
Saturated Soil Conditions	Quarterly	Quarterly
Plant Growth	Quarterly	Quarterly
Vectors or Animal Burrowing	Quarterly	Quarterly

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: 894593

Facility Name: Yosemite Environmental Education Campus Nature Bridge
Order: 2014-0153-DWQ-R5415

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 March 1st following the monitoring year**. The Annual Report shall include the following:

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. Tabular and graphical summaries of all monitoring data collected during the year.
4. A copy of the logs from the wastewater collection system observations conducted during the year. The Discharger shall note if any repairs were conducted or need to be conducted.
5. 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.
6. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program.
7. The name and contact information for the wastewater operator responsible for operation, maintenance, and system monitoring.

A letter transmitting the monitoring reports shall accompany each report. The letter shall report violations found during the reporting period, and actions taken or planned to correct the violations and prevent future violations. The transmittal letter shall contain the following penalty of perjury statement and shall be signed by the Discharger or the Discharger's authorized agent:

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

The Discharger shall begin implementing the above monitoring program on **30 May 2024**.

Ordered by:

Original Signed by Christina Shupe
For PATRICK PULUPA,
Executive Officer

5/30/2024
(Date)

GLOSSARY

BOD ₅	Five-day biochemical oxygen demand
DO	Dissolved oxygen
EC	Electrical conductivity at 25° C
OWTS	Onsite wastewater treatment system
TDS	Total dissolved solids
TSS	Total suspended solids
Continuous	The specified parameter shall be measured by a meter continuously.
Quarterly	Once per calendar quarter.
Annually	Once per year.
Mg/L	Milligrams per liter
Mpi	Minutes per inch
µmhos/cm	Micromhos per centimeter
gpd	Gallons per day
mgd	Million gallons per day
NA	Denotes not applicable
SU	Standard pH units



Central Valley Regional Water Quality Control Board

TO: Alexander S. Mushegan
Supervising Water Resource Control Engineer

FROM: Bryan Rock
Senior Engineering Geologist

Cruz Romero
Water Resource Control Engineer

DATE: 30 May 2024

APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2014-0153-DWQ; GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS; UNITED STATES DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE, YOSEMITE NATIONAL PARK; YOSEMITE ENVIRONMENTAL EDUCATION CAMPUS NATURE BRIDGE ONSITE WASTEWATER TREATMENT SYSTEM; MARIPOSA COUNTY

On 15 February 2024, Zheng Teng (C68783) with Provost and Pritchard Consulting Group submitted a Report of Waste Discharge (RWD) for the Yosemite Environmental Education Campus Nature Bridge (Campus) Onsite Wastewater Treatment System (OWTS) on behalf of the United States Department of the Interior, National Park Service, Yosemite National Park (Discharger). The RWD requested coverage under State Water Resources Control Board's WQ Order 2014-0153-DWQ, *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order) for the OWTS. The Campus is a new campus to replace the current Crane Flat Environmental Education Center. The Campus and land is owned by the Discharger, while the OWTS is operated by the Yosemite Nature Bridge Institute.

This memorandum provides a summary of Central Valley Water Board staff's review of the RWD, and other provided documents, and the applicability of the OWTS discharge to be covered under the General Order.

BACKGROUND INFORMATION

The Campus is located in Mariposa County (37.64801°, -119.70184°) one mile east of Yosemite West, and just south of Henness Ridge Road in Yosemite National Park, California (as shown in Attachment A of the Notice of Applicability [NOA]). Nature Bridge will consist of 19 buildings arranged in a campus setting once construction is complete. According to the RWD, at full build-out the campus will house 244 students and four full-time staff members. The wastewater treatment and effluent disposal system were constructed in Phase 1A, during 2014. Phase 1B of the project consisted of the construction of five buildings and was completed in 2015 leading to a current capacity to support 25% occupancy of the camp. According to the RWD, average daily flows will be approximately 5,400 gallons per day (gpd), with a maximum day flow of 10,000 gpd. At full build-out, the Campus will be at 50% occupancy during summer months. However, during the rest of the year (September through June), the Campus will be at 90% occupancy.

DESCRIPTION OF DISCHARGE

The OWTS features two enhanced-septic tanks, which are 15,000-gallon fiberglass reinforced plastic tanks with baffles, also referred to as the anaerobic baffle reactors. The tanks are operated in series, and each tank is 10 feet in diameter and 29 feet long. Effluent from the septic tanks will be discharged via gravity flow to an effluent sump, prior to final disposal at one of two leach field areas. Septic tank A is separated into two chambers by a baffle. The first chamber provides settling and storage. Septic tank B is separated into three chambers, which are all equipped with overflow pipes to allow overflow into the bottom of the next chamber to retain solids, provide mixing, and reduce short circuiting. Each chamber includes a sampling port for monitoring. A submersible pump was installed in the last chamber to pump settled solids back to the first chamber to provide more circulation and mixing. Each septic tank requires periodic pumping to remove accumulated solids. Sludge will be pumped using a conventional septic vacuum truck and will be transported to a regional biosolids facility for disposal. A wet well was constructed with a set of high head duplex pumps to discharge treated effluent to leach field one. The RWD includes plans for a second leach field that will provide 100% design redundancy and allow effluent disposal to alternate between the two leach fields; however, the second leach field has not yet been constructed.

Leach field one is in the eastern portion of the Campus. A percolation rate of 45 minutes per inch (mpi) was used for leach field area one. Leach field one has a total area of 7,245 square feet. Leach field trenches were generally constructed two feet wide and six feet deep with a leach pipe invert of 2 feet deep, where the ground slope allowed.

The leach lines in leach field one were constructed in four sub-areas, each consisting of four to five leach lines, each leach line is 60 to 120 feet long. Each sub-area has distribution valves to allow periodic switching of the sewage effluent loading. The leach lines in each sub-area are evenly loaded by a distribution box.

The General Order states facilities discharging under 100,000 gpd are eligible for coverage. Furthermore, since the OWTS has flows under 20,000 gpd, no nitrogen evaluation is necessary at this time.

POTENTIAL THREAT TO WATER QUALITY

According to the RWD, Kleinfelder West, Inc. performed a geotechnical study in July 2008 with fourteen exploratory test borings, which extended to depths ranging from 8 to 31.5 feet below ground surface; groundwater was not encountered within the borings. In September 2009, Provost and Pritchard Consulting Group performed percolation tests in thirteen test pits with an excavation depth of up to twelve feet below ground surface and no groundwater nor the presence of groundwater was detected during quarterly measurements. As noted previously, percolation test results for leach fields one and two were 45 mpi and 85 mpi, respectively. According to *Table 5: Minimum Depth to Groundwater and Minimum Soil Depth from the Bottom of Dispersal System* of the General Order, the minimum depth to groundwater requirement for percolation rates between 30 mpi and 120 mpi is 5 feet below ground surface. Based on the percolation test results and information in the General Order, there is adequate separation between the bottom of the leach fields and groundwater.

There are no domestic wells onsite, and the closest drinking water well (Well 04), which also supplies water to the Campus, is approximately one mile west of the Campus. There are also no flowing streams, lakes, or rivers within the vicinity of the site. The Discharger stated that Kenneth D. Schmidt and Associates prepared a report, titled *Results of Fall 2019 Pump Tests of Yosemite West Wells for Kenneth Leblanc*, which details information of two new wells (Well 03 and Well 04).

According to the report, Well 03 was drilled in October 2005 to a depth of 950 feet, while Well 04 was drilled in July 2016 to a depth of 1,000 feet. Well 03 has a 6-5/8-inch diameter conductor casing extended to a depth of 61 feet and an annular seal extending from the surface to 55 feet in depth. Well 04 has the same size conductor extending to 53 feet deep and an annular seal extending from the surface to 50 feet in depth. Water quality samples collected during the pump test were used to provide general background groundwater quality data in the RWD. Both Well 03 and Well 04 were sampled on 3 October 2019 by Kenneth & Associates during pump testing, and the associated water quality data are summarized in **Table 1** below.

Table 1 – Water Supply Quality

Constituent/Parameter)	Units	Result
pH	Std. Units	7.3 – 7.9
Electrical Conductivity (EC)	µmhos/cm	160-165
Total Dissolved Solids	mg/L	109-124
Nitrate as Nitrogen	mg/L	Non-detect

MONITORING REQUIREMENTS

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

- Septic Tank Monitoring
- Subsurface Disposal
- Solids Disposal Monitoring

SALT AND NITRATE CONTROL PROGRAMS

As part of the Central Valley Salinity Alternatives for Long Term Sustainability (CVSALTS) initiative, 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). Pursuant to the Basin Plan amendments, dischargers were sent a Notice to Comply on 5 January 2021 with instructions and obligations for the Salt Control Program within one year of the effective date of the amendments. Upon receipt of the Notice to Comply, the Discharger was given until 15 July 2021 to inform the Central Valley Water Board of their choice between Option 1 (Conservative Option for Salt Permitting) or Option 2 (Alternative Option for Salt Permitting).

For the Nitrate Control Program, the OWTS and disposal area are not within a groundwater basin and, therefore, not subject to the Nitrate Control Program. Nevertheless, a Notice to Comply with the Nitrate Control Program may be issued at a later date if the Central Valley Water Board Executive Officer determines it is necessary to protect water quality. Under these circumstances, it may be necessary to modify this NOA to incorporate applicable Nitrate Control Program findings and requirements.

For the Salt Control Program, the Discharger (**CV-SALTS ID: 3663**) selected Pathway 2 (Alternative Salinity Permitting Approach). According to our records, the Discharger is in compliance with the Salt Control Program. In order to remain in compliance, all applicable fees must be paid.

More information on the Salt and Nitrate Control Programs can be found at the [CV-SALTS Website](https://www.cvsalinity.org/public-info) (https://www.cvsalinity.org/public-info).