
Central Valley Regional Water Quality Control Board

16 July 2018

Mr. Steven C. Ramage, Director
The Protestant Episcopal Bishop of San Joaquin
Episcopal Conference Center Oakhurst
43805 Highway 41
Oakhurst, California 93644

NOTICE OF APPLICABILITY (NOA), STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2014-0153-DWQ-R5282, GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS, THE PROTESTANT EPISCOPAL BISHOP OF SAN JOAQUIN, EPISCOPAL CONFERENCE CENTER OAKHURST, MADERA COUNTY

On 15 December 2017 the Protestant Episcopal Bishop of San Joaquin (Discharger) submitted a Form 200 and a letter for the Episcopal Conference Center Oakhurst (ECCO) requesting coverage under the State Water Resources Control Board (State Water Board) Water Quality Order 2014-0153-DWQ *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order). Based on the information provided and a review of the available information, the system treats and disposes of less than 100,000 gallons of domestic wastewater per day, and is therefore eligible for coverage under the General Order. This letter serves as formal notice that the General Order is applicable to your system and the wastewater discharge described below upon the rescission of Waste Discharge Requirements Order 82-070. You are hereby assigned General Order **2014-0153-DWQ-R5282** 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-R5282. This MRP was developed after consideration of your waste characterization and site conditions described in the attached memorandum.

DISCHARGE DESCRIPTION

The Discharger owns the ECCO and the wastewater treatment facility (WWTF) that is about 2.5 miles north of Oakhurst in Madera County. The Discharger contracts the operation of the WWTF to Water and Wastewater Management, owned and operated by Jared Steely. The WWTF serves the ECCO that contains 138 beds for guests, and the 47 homes that make up a retirement community known as the Grove. The WWTF is regulated by Waste Discharge Requirements (WDRs) Order 82-070 that allow for an average dry-weather discharge of 0.025 million gallons per day (mgd) of secondary-treated domestic effluent. The WWTF has a design treatment capacity of 0.075 mgd, but the existing disposal capacity of the two effluent

retention ponds and the spray field limits the discharge to 25,000 gallons per day (gpd). The average discharge in 2017 was 10,661 gpd.

The wastewater gravity flows from ECCO and/or the Grove to two inline septic tanks to remove solids, and then to two 50,000-gallon concrete lined aeration basins. Due to the low volume of the flows, typically only one of the lined aeration basins is in use at one time. From the aeration basin, the wastewater flows into a wet well, from where it is pumped to an upper effluent retention pond, or it gravity flows to a lower effluent retention pond.

During the summer months, Order 82-070 allows discharge to an approximately 2-acre spray field area. The effluent stored in the effluent retention ponds is not disinfected, but the effluent is chlorinated prior to discharge to the spray field. A crop is not harvested from the spray field and the Discharger will restrict access to the area, so a Title 22 Engineering Report is not required at this time.

The WWTF has two flow meters, but the Discharger indicates either one or both are not working correctly. One measures the discharge from ECCO and the other from the Grove retirement homes. Most of the estimated discharge values are less than 15,000 gallons per day, but there are random spikes that vary dramatically both up and down from the average that don't seem to correlate to usage at the ECCO or rainfall events. This Notice of Applicability (NOA) requires the Discharger to evaluate and correct the apparent issues with its metering/measuring of its discharge and requires the Discharger to measure and record the volume of wastewater sent to the WWTF (influent) and the volume of wastewater sent to the effluent retention ponds and/or the spray field.

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-R5282, with all attachments, and MRP No. 2014-0153-DWQ-R5282. The average discharge from the WWTF to the lined aeration basins and to the effluent storage ponds in 2017 was 10,661 gpd. In accordance with the requirements of the General Order, discharges without shallow groundwater and flow rates less than 20,000 gpd are not required to meet a nitrogen effluent limitation.

In accordance with Section B.1 of the General Order, treated wastewater discharged to the Facility's effluent retention pond system **shall not exceed 20,000 gpd as a monthly average**. 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. This table 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 the following table:

Site-Specific Applicable Setback Requirements				
Equipment or Activity	Domestic Well	Flowing Stream¹	Ephemeral Stream Drainage²	Property Line
Septic Tank, Treatment System, or Collection System ³	150 ft ⁴	50 ft. ⁵	50 ft.	5 ft. ⁵
Recycled Water Requirements (Landscape Irrigation)				
Land Application Area (disinfected secondary-2.2 or secondary-23 recycled water) ⁶	100 ft ⁷	50 ft	50 ft	100 ft ⁸
Spray Irrigation ⁹	No spray irrigation of any recycled water, other than disinfected tertiary recycled water, shall take place within 100 feet of a residence or a place where public exposure could be similar to that of a park, playground, or school yard.			
Wastewater Storage Requirements				
Impoundment (undisinfected secondary treated wastewater) ¹⁰	150 ft ¹¹	150 ft	150 ft	50 ft

1. A flowing stream shall be measured from the ordinary high-water mark established by fluctuations of water elevation and indicated by characteristics such as shelving, changes in soil character, vegetation type, presence of litter or debris, or other appropriate means.
2. Ephemeral Stream Drainage denotes a surface water drainage feature that flows only after rain or snow-melt and does not have sufficient groundwater seepage (baseflow) to maintain a condition of flowing surface water. The drainage shall be measured from a line that defines the limit of the ordinary high water mark (described in "a" above). Irrigation canals are not considered ephemeral streams drainage
3. Septic Tank, Treatment System, or Collection System addresses equipment located below ground or that impedes leak detection by routine visual inspection
4. Setback established by Onsite Wastewater Treatment System Policy, section 7.5.6.
5. Setback established by California Plumbing Code, Table K-1.
6. Disinfected secondary-2.2 recycled water is defined in California Code of Regulations, title 22, section 60301.220. Disinfected secondary-23 recycled water is defined in California Code of Regulations, title 22, section 60301.225.
7. Setback established by California Code of Regulations, title 22, section 60310(c).
8. Setback established by California Code of Regulations, title 22, section 60310(f).
9. Additional restrictions for spray irrigation of recycled water are contained in California Code of Regulations, title 22, section 60310(f).
10. Undisinfected secondary recycled water is defined in California Code of Regulations, title 22, section 60301.900.
11. Setback established by California Code of Regulations, title 22, section 60310(d).

The Discharger shall comply with the septic system requirements in Section B.2 of the General Order. The General Order states in Section B.2.d that septic tanks shall be pumped when any of the following conditions exist:

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

The Discharger shall comply with the pond system requirements specified in Section B.5 of the General Order. In addition, the Discharger shall comply with the land application requirements specified in Section B.7.

The General Order states in Section D.1.a that the discharge shall not exceed the effluent limitations as described in Table 4. This table summarizes effluent limitations for wastewater ponds. The Discharger shall comply with the applicable effluent limitations, as summarized in the following table:

Effluent Limitations Based on Technology Performance		
Wastewater Pond or Trickling Filter ¹		
Constituent	Units	Monthly Average ²
Biochemical Oxygen Demand	Milligrams per liter	90

1. The limit included in this table applies to treated effluent discharged to the effluent retention ponds.

2. The monthly average concentration is the arithmetic mean of measurements recorded during a calendar month. If only one sample is collected in a calendar month, then that is the monthly average concentration.

As described previously, flow measurements to and from the WWTF have been inconsistent and the current metering/measuring system does not appear to be accurately measuring/recording the flow to the WWTF and to the effluent retention ponds. **By 16 January 2019** the Discharger shall submit a Work Plan that evaluates the existing wastewater metering/measuring system, and recommends methods to accurately measure the volume of wastewater discharged to:

- a. The septic tanks;
- b. The effluent retention ponds; and
- c. The spray fields.

By 16 July 2019 the Discharger shall submit a report documenting the improvements made to the WWTF's flow metering/measuring system(s).

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 the issuance of the NOA (**by 15 October 2018**):

- 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)

The General Order requires the Sludge Management Plan to be submitted to the Central Valley Water Board within 90 days of issuance of this NOA (**by 15 October 2018**). A copy of the Spill Prevention and Emergency Response Plan, the Sampling and Analysis Plan, and the Sludge Management Plan shall be maintained at the treatment facility and shall be presented to the Regional Water Board staff upon request.

Failure to comply with the requirements in this NOA, General Order 2014-0153-DWQ-R5282, with all attachments, and MRP No. 2014-0153-DWQ-R5282 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 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. These programs, once effective, could change how the Central Valley Water Board permits discharges of salt and nitrate.

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.

The Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) has gone to a Paperless Office System. 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 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, WDID: 5C201011001,
Facility Name: Episcopal Conference Center Oakhurst WWTF,
Order-2014-0153-DWQ-R5282.

In order to conserve paper and reduce mailing costs, a paper copy of the General Order has been sent only to the Discharger. Others are advised that the General Order is available on the State Water Board's web site at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2014/wqo2014_0153_dwq.pdf

Mr. Steven Ramage
Episcopal Conference Center Oakhurst
Wastewater Treatment Facility

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16 July 2018

If you have any questions regarding this matter, please contact Jeff Pyle by phone at (559) 445-5145, by email at jpyle@waterboards.ca.gov.



for Patrick Pulupa
Executive Officer

Please note that WDRs Order 82-070 is proposed to be rescinded at the **4/5 October 2018** meeting of the Central Valley Water Board. Upon rescission of your individual WDRs, coverage for your facility under the General Order shall become applicable subject to this Notice of Applicability.

Attachments: Attachment A – Site Location Map
Attachment B – Wastewater Flow Schematic
State Water Resources Control Board Order WQ 2014-0153-DWQ
(Discharger Only)
Monitoring and Reporting Program No. 2014-0153-DWQ-R5282
Technical Memorandum for Protestant Episcopal Bishop of the San Joaquin,
ECCO WWTF

cc: Kassy Chauhan, Division of Drinking Water, District 11 (Merced), 265 W. Bullard
Avenue, Fresno, California, 93704
Madera County Department of Public Works, Municipal Services Division,
200 W. 4th Street, Madera, California 93637

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM NO. 2014-0153-DWQ-R5282

FOR

THE PROTESTANT EPISCOPAL BISHOP OF SAN JOAQUIN
EPISCOPAL CONFERENCE CENTER OAKHURST WWTF
MADERA 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 Protestant Episcopal Bishop of San Joaquin (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.

Water Code section 13267 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.”

Water Code section 13268 states, in part:

“(a)(1) 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 any 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 wastewater treatment and disposal systems and subcontracts the operation of the wastewater treatment facility at the Episcopal Conference Center Oakhurst that is subject to the Notice of Applicability (NOA) of Water Quality Order 2014-0153-DWQ-R5282. The reports 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.

If monitoring consistently shows no significant variation in magnitude of a constituent concentration or parameter after at least 12 months of monitoring, the Discharger may request this MRP be revised to reduce monitoring frequency. The proposal must include adequate technical justification for reduction in monitoring frequency.

SEPTIC TANK MONITORING

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

<u>Parameter</u>	<u>Units</u>	<u>Measurement Type</u>	<u>Inspection/Reporting Frequency</u>
Sludge depth and scum thickness in each compartment of each tank	Feet	Staff Gauge	Annually
Distance between bottom of scum layer and bottom of outlet device	Inches	Staff Gauge	Annually
Distance between top of sludge layer and bottom of outlet device	Inches	Staff Gauge	Annually
Effluent filter condition (if equipped, clean as needed)	NA ¹	NA ¹	Annually

¹. NA = not applicable

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.

POND SYSTEM MONITORING

Influent Monitoring

Influent samples shall be taken from a location that provides representative samples of the wastewater and flow rate. At a minimum, influent monitoring shall consist of the following:

<u>Constituent</u>	<u>Units¹</u>	<u>Sample Type</u>	<u>Sample Frequency</u>	<u>Reporting Frequency</u>
Flow Rate ²	gpd	Meter	Continuous	Quarterly

1. gpd = gallons per day.

2. At a minimum, the total flow shall be measured monthly to calculate the average daily flow for the month

Wastewater Pond Monitoring

All wastewater and treated wastewater storage ponds (lined and unlined) shall be monitored as specified below:

<u>Constituent</u>	<u>Units¹</u>	<u>Sample Type</u>	<u>Sample Frequency</u>	<u>Reporting Frequency</u>
Dissolved Oxygen	mg/L	Grab	Monthly	Quarterly
Freeboard	0.1 feet	Measurement	Monthly	Quarterly
Odors	--	Observation	Monthly	Quarterly
Berm condition	--	Observation	Monthly	Quarterly

1. mg/L = milligrams per liter.

Effluent Monitoring

Effluent samples shall be taken from a location that provides representative samples of the wastewater after treatment in the aeration basins, but prior to discharge into the effluent retention ponds. At a minimum, effluent monitoring shall consist of the following:

<u>Constituent</u>	<u>Units¹</u>	<u>Sample Type</u>	<u>Sample Frequency</u>	<u>Reporting Frequency</u>
Flow Rate	gpd	Meter	Continuous	Quarterly
Electrical Conductivity	umhos/cm	Grab	Monthly	Quarterly
pH	s.u.	Grab	Monthly	Quarterly
Biochemical Oxygen Demand	mg/L	Grab	Monthly	Quarterly
Total Suspended Solids	mg/L	Grab	Monthly	Quarterly
Total Nitrogen	mg/L	Grab	Quarterly	Quarterly

1. gpd = gallons per day. umhos/cm = micromhos per centimeter. s.u. = standard pH units. mg/L = milligrams per liter.

LAND APPLICATION AREA MONITORING

The Discharger shall monitor land application areas when wastewater and/or supplemental irrigation water is applied. If wastewater/supplemental irrigation water is not applied during a reporting period, the monitoring report shall state so. Land application area (spray field) monitoring shall include the following:

Constituent	Units¹	Sample Type	Sampling Frequency	Reporting Frequency
Wastewater Flow ²	gpd	Meter ²	Monthly	Quarterly
Application Rate	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
Discharge Off-Site	--	observation	Monthly	Quarterly

¹ gpd = gallons per day. Gal/acre/mo = gallons per acre per month.

² Meter requires meter reading, a pump run time meter, or other approved method.

SOLIDS DISPOSAL MONITORING

The Discharger shall report the handling and disposal of all solids (e.g., screenings, grit, sludge, biosolids, etc.) generated at the wastewater system. 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 discernible. 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.

The Central Valley Water Board has gone to a Paperless Office System. 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, WDID: 5C201011001, Facility Name: The Protestant Episcopal Bishop of San Joaquin, Episcopal Conference Center Oakhurst WWTF, Order-2014-0153-DWQ-R5282.

A. Quarterly Monitoring Reports

Quarterly reports shall be submitted to the Central Valley 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 a minimum, the quarterly reports shall include:

1. Results of all required monitoring.
2. A comparison of monitoring data to the discharge specifications, biochemical oxygen demand effluent limits, 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. If requested by staff, copies of laboratory analytical report(s) and chain of custody form(s).

B. Annual Report

Annual Reports shall be submitted to the Central Valley Water Board by **March 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 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.
3. If requested by staff, copies of laboratory analytical report(s) and chain of custody form(s).
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.

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 implement the above monitoring program upon rescission of WDRs Order 82-070.

Ordered by:

Clay L. Rodgers
for _____
PATRICK PULUPA, Executive Officer

7/16/18
DATE

Central Valley Regional Water Quality Control Board

TO: Scott J. Hatton 
Supervising Water Resource Control Engineer
RCE 67889

FROM: Alexander S. Mushegan 
Senior Water Resource Control Engineer
RCE 84208

Jeffrey S. Pyle
Engineering Geologist
PG 7375



DATE: 16 July 2018

SUBJECT: **APPLICABILITY OF COVERAGE UNDER STATE WATER RESOURCES CONTROL BOARD ORDER WQ 2014-0153-DWQ-R5282; GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS; THE PROTESTANT EPISCOPAL BISHOP OF SAN JOAQUIN: EPISCOPAL CONFERENCE CENTER OAKHURST; MADERA COUNTY**

On 15 December 2017 the Protestant Episcopal Bishop of San Joaquin (Discharger) submitted a Form 200 and a letter for the Episcopal Conference Center in Oakhurst (ECCO) requesting coverage under the State Water Resources Control Board (State Water Board) Water Quality Order 2014-0153-DWQ *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems* (General Order). This memorandum provides a summary of Central Valley Water Board's review of the self-monitoring reports and supplemental information provided by the Discharger to determine the applicability of this discharge to be covered under the General Order. Central Valley Water Board staff (Jeff Pyle) conducted an inspection of the wastewater treatment facility (WWTF) on 18 March 2018 to observe the setting and condition of the WWTF. Mr. Pyle was accompanied by Mr. Steven Ramage, Director of ECCO, and Mr. Jared Steely, the operator of the WWTF.

BACKGROUND INFORMATION

The Discharger owns and operates the ECCO and owns the associated wastewater treatment facility (WWTF) and the associated disposal systems (effluent retention ponds and spray field) that is about 2.5 miles north of Oakhurst in Madera County. The Discharger subcontracts the operation of the WWTF to Water and Wastewater Management, which is owned and operated by Mr. Jared Steely. The WWTF serves the Conference Center that contains 138 beds for guests, and 47 homes that make up a retirement community known as the Grove.

The WWTF is regulated by Waste Discharge Requirements (WDRs) Order 82-070 that allows for an average dry-weather discharge of 0.025 million gallons per day (mgd) of secondary

treated domestic effluent. The treatment capacity of the WWTF is 0.075 mgd, but the existing disposal system can only provide disposal for up to 0.025 mgd. Order 82-070 included Discharge Specification B.3 that required the 30-day average daily dry weather discharge to be no more than 0.025 mgd, until the Discharger could provide additional disposal facilities for the discharge. The Discharger never submitted documentation to increase the flow limit, so it remains at 0.025 mgd. The average daily flow in 2017 was 10,661 gallons per day (gpd).

POTENTIAL THREAT TO WATER QUALITY

The WWTF consists of two inline septic tanks to remove solids, two 50,000-gallon concrete lined aeration basins (only one is typically in use at a time due to the low flows), and two unlined effluent retention ponds. Solids and residuals cleaned from the aeration basins are bagged and disposed of at the regional landfill. Sludge was reportedly last removed from the effluent retention ponds in 2007, and very little sludge was produced. The sludge was reportedly hauled off for reuse, but no documentation was in the file record. There was no information on file regarding the septic tanks. The Notice of Applicability (NOA) and the associated Monitoring and Reporting Program prepared as part of the General Order will require annual septic tank monitoring and the NOA requires the preparation and submittal of a Sludge Management Plan within 90 days of the issuance of the NOA.

From the septic tanks, the wastewater gravity flows into one of the two 50,000-gallon concrete lined aeration basins. From the aeration basin(s), the wastewater flows into a wet well, and from there it is pumped to an upper effluent retention pond, or gravity flows to a lower effluent retention pond. WDRs 82-070 allows a discharge to an approximately 2-acre spray field area. The effluent stored in the storage ponds is not disinfected, but the effluent is chlorinated prior to discharge to the spray field. Order 82-070 did not require the approval of a Title 22 Engineering Report, as the discharge is to a spray field that does not produce a crop. The Discharger is in the process of fencing the entire WWTF including the effluent retention ponds and the spray field.

The average flow in 2017 was 10,166 gpd, but it appears the flow meters are not accurately recording the flows with several spikes that are well above the average. October 2017 offers a good review of some of the noted spikes. The flow reported for Wednesday, 4 October 2017, was 8,812 gpd, but the reported flow increased significantly on Thursday, 5 October 2017, to 55,612 gpd and to 71,555 gpd on 6 October 2017. The flow returned to 15,746 gpd on 7 October 2017. However, an October Supply Well report provided by the Discharger indicated the total volume of potable water pumped (not just sewage generated) from the 5th through the 7th of October 2017 ranged from about 20,000 gpd to 25,000 gpd of groundwater supplied to both ECCO and the Grove retirement homes. In addition, rainfall data was reviewed for nearby Oakhurst and no rainfall was recorded for the first weeks of October 2017 with the first rainfall of the month recorded on 20 October 2017. It's highly unlikely that 55,000 to 70,000 gpd of effluent can be produced from 20,000 to 25,000 gpd of supply water. They do have two storage tanks that, combined, hold about 80,000 gallons of water, but the tanks were nearly full on the 5th through the 7th of October 2017. It appears that the current metering system is not accurately measuring the discharge. The Notice of Applicability should contain a requirement for the Discharger to evaluate and upgrade its flow metering/measuring system.

Surficial soils in the effluent retention ponds and the spray field are reported to consist of sandy and silty loams over weathered bedrock (decomposed granite) and range from 2.5 to 7 feet in thickness. Water is supplied by three onsite groundwater monitoring wells. Wells No.1 and No. 2 are near the ECCO, and the nearest portion of the WWTF to the wells is the septic tanks that

are approximately 1,250 feet to the southeast. Well No. 3 is about 1,100 feet northeast of the effluent storage ponds. These distances meet the setback requirements for septic tanks, impoundment (undisinfected secondary recycled water), and spray irrigation with disinfected secondary recycled water from *Table 3: Summary of Wastewater System Setbacks* of the General Order. The wells are set in fractured granitic bedrock and the groundwater is of good quality. The depth to water is unknown. A 2005 sample from the onsite supply well had an EC at 230 micromhos per centimeter (umhos/cm) and nitrate was not detected.

MONITORING REQUIREMENTS

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

- Septic Tank Monitoring,
- Pond System Monitoring,
- Land Application Area Monitoring, and
- Solids Disposal Monitoring.



SITE LOCATION MAP

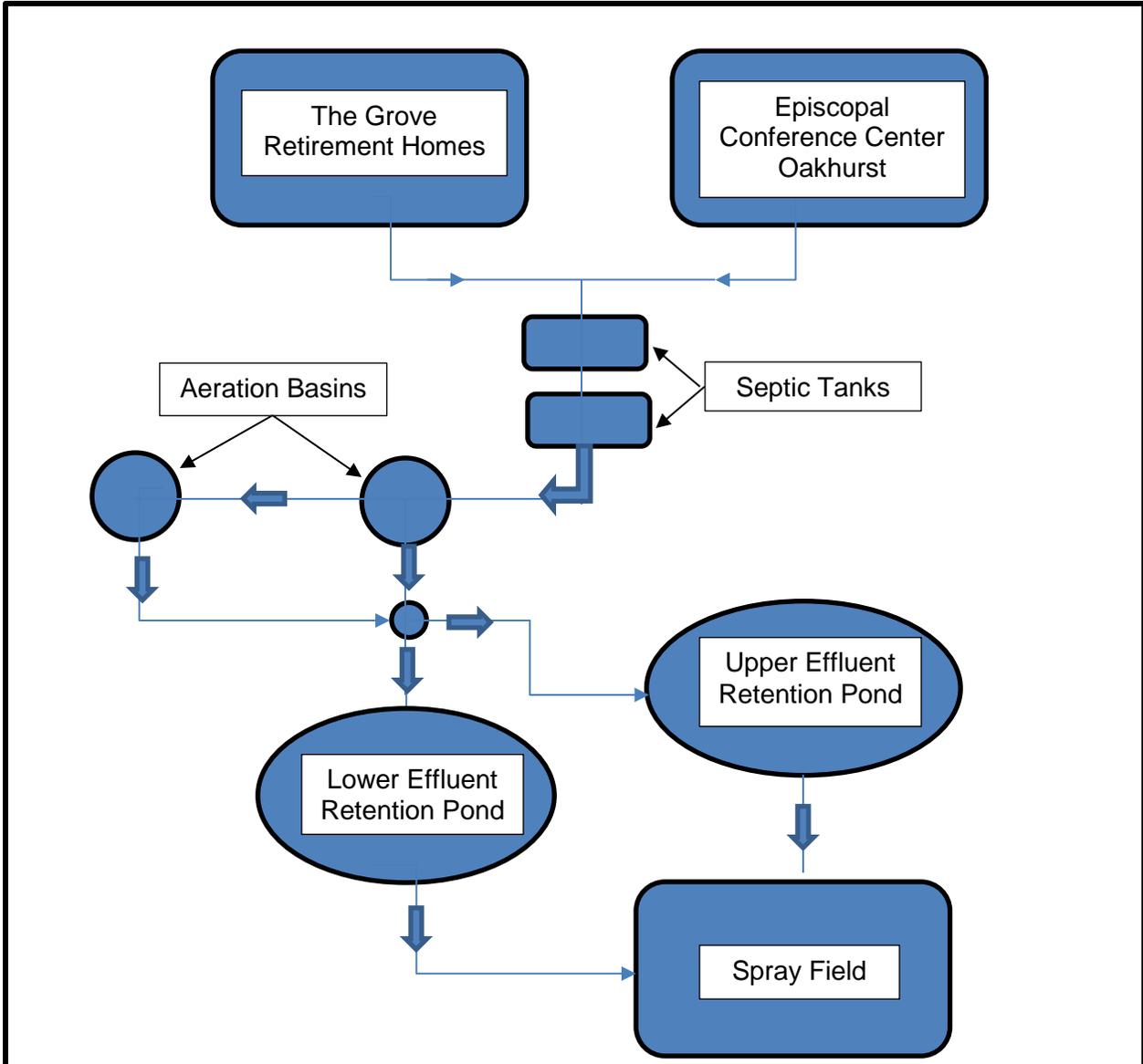
2014-0153-DWQ-R5282
 GENERAL WASTE DISCHARGE REQUIREMENTS
 FOR
 SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS
 THE PROTESTANT EPISCOPAL BISHOP OF SAN JOAQUIN
 EPISCOPAL CONFERENCE CENTER OAKHURST
 MADERA COUNTY



Approximate Scale in Miles



ATTACHMENT A



Flow Schematic

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 MADERA COUNTY
 (Not to Scale)

