22 January 2018

Chandra Johannesson
East Bay Municipal Utility District
375 11th Street
Oakland, CA 94607

CERTIFIED MAIL
91 7199 9991 7036 7006 7297

NOTICE OF APPLICABILITY

GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS ORDER WQ 2014-0153-DWQ

FOR

EAST BAY MUNICIPAL UTILITY DISTRICT PARDEE CENTER WASTEWATER TREATMENT PLANT CALAVERAS COUNTY

The East Bay Municipal Utility District (EBMUD, hereafter "Discharger") submitted a Report of Waste Discharge (RWD) dated 28 July 2017 describing the Pardee Center Wastewater Treatment Plant (WWTP) in Calaveras County. Based on the information provided, the wastewater treatment system and discharge is consistent with the requirements of the State Water Resources Control Board (State Water Board) *General Waste Discharge Requirements for Small Domestic Wastewater Treatment Systems,* Order WQ 2014-0153-DWQ (General Order). This Notice of Applicability (NOA) provides notice that the General Order is applicable to the site as described below. You are hereby assigned Order WQ 2014-0153-DWQ-R5255 for the discharge. A copy of the General Order is enclosed and also available at:

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

You should familiarize yourself with the entire General Order and its attachments, which describe mandatory discharge and monitoring requirements. The General Order contains operational and reporting requirements by wastewater system type. 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) 2014-0153-DWQ-R5255. The Discharger is responsible for all the applicable requirements that exist in the General Order and this NOA.

REGULATORY BACKGROUND

Wastewater discharge from the WWTP is currently regulated by Waste Discharge Requirements (WDRs) Order R5-2003-0119, which was adopted on 11 July 2003. WDRs Order R5-2003-0119 will be rescinded at an upcoming Central Valley Regional Water Board meeting. Effective upon rescission of Order R5-2003-0119, the discharge described in this NOA shall be regulated pursuant to the General Order.

FACILITY AND DISCHARGE DESCRIPTION

The Pardee Center WWTP is located at 3535 Sandretto Road, Valley Springs in Calaveras County as shown on Attachment A, which is attached hereto and is made part of this NOA by reference. The WWTP is on Assessor Parcel Number 16-001-01 in Section 35, T5N, R10E, MDB&M. The facility is located approximately three quarters of a mile southeast of Pardee Reservoir Dam.

The Discharger owns and operates the WWTP, which provides wastewater treatment for Pardee Center, the District's Upcountry headquarters. Pardee Center occupies 306 acres consisting administrative offices, a conference hall with a lodge that can accommodate up to 29 guests, five employee permanent residences, maintenance buildings, and warehouses. About 42 employees permanently work at this location. In addition, there is a constant flow of employees from other District facilities conducting work as needed in and around Pardee Center. From January 2016 through October 2017, the monthly average flow rates varied from approximately 220 to 2,490 gallons per day (gpd) with an average of approximately 900 gpd. Pardee Center's water supply is from Pardee Reservoir, which collects pristine water from the Mokelumne River with low salinity (TDS 30 mg/L).

The WWTP, built in 1970, consists of an activated sludge package plant, a 1,000-gallon septic tank, and an unlined evaporation/percolation pond. The package plant consists of a small inline comminutor, a 3,000-gallon aeration tank, and a 750-gallon clarifier. The evaporation/percolation pond has a surface area of 0.5 acres with a total depth of seven feet. The capacity of the evaporation/percolation pond is 1.4 acre-feet with two feet of freeboard. The water balance in the RWD shows the disposal capacity is 2,000 gpd as an average dry weather flow. The original pond installation included a spray field disposal system. The spray field disposal system was disconnected in 2003 and the Discharger has no plans to reactivate the system because the pond has adequate disposal capacity. The site plan is shown on Attachment B, which is attached hereto and is made part of this NOA by reference.

Wastewater is treated by the activated sludge process and then clarified, with further settling of suspended solids in the septic tank and then in the 2,900-gallon sump (wet well) at the lift station before then being discharged to the evaporation/percolation pond. A flow totalizer is located on the effluent line from the lift station to the evaporation/percolation pond. A Process Schematic is shown on Attachment C, which is attached hereto and is made part of this NOA by reference.

Minimum solids are generated in the package treatment plant and in the evaporation/percolation pond. The solids are removed from the WWTP on an as needed basis and hauled to a permitted facility in Amador County for additional treatment, dewatering, and disposal.
The Pond does not have observable solids accumulations and it has not been cleaned since it was constructed in the 1980s.

The table below is a summary of effluent quality starting in January 2016 through October 2017.

Effluent Quality Characterization [1]			
Constituent (mg/L)	Max	Min	Average
EC	960	420	575
TDS	740	240	441
Sodium	184	29	92
Chloride	56	16	32
Total Nitrogen	75	15	36
Nitrate as Nitrogen	71	11	34
BOD_5 [2]	18	1.8	7.1

Abbreviations: EC – Electrical Conductivity; TDS – Total Dissolved Solids;
BOD – biochemical oxygen demand

1. Except for BOD, effluent data were collectedly quarterly.
2. BOD data were collected monthly.

Three shallow groundwater monitoring wells MW-1, MW-2 and MW-3 were installed in 2004 near the percolation pond as shown on Attachment B. Based on measurements collected in July 2017, the depths to groundwater range from 29 to 34 feet below ground surface, and the groundwater flow direction was to the north-northwestly with an approximate horizontal gradient of 0.027 feet per foot. A summary of historical groundwater monitoring data is presented in the table below based on semi-annual data collected from July 2012 through July 2017.

Constituent	**MW-1**	**MW-2**	**MW-3**	**Concentration Protective of Beneficial Uses**
EC (µmhos/cm)	391 - 573	461 - 578	600 - 864	700 [1] to 2,200 [2]
TDS (mg/L)	280 - 380	330 - 380	360 - 540	450 [1] to 1,500 [2]
Nitrate Nitrogen (mg/L)	4.4 - 10	7.0 - 27	5.1 - 8.7	10 [3]

1 Lowest agricultural water quality goal.
2 Short-term Secondary Maximum Contaminant Level.
3 Primary Maximum Contaminant Level.

SITE-SPECIFIC REQUIREMENTS AND EFFLUENT LIMITS

The wastewater treatment operator must be familiar with the requirements contained in the General Order, this NOA, and the MRP.

Note that the General Order contains prohibitions and specifications that apply to all wastewater treatment systems as well as those that only apply to specific treatment and/or disposal systems. The specific requirements for your treatment system are summarized below.

Requirements by Wastewater System Type, Section B of General Order

A. Prohibitions

This section applies to all discharges.

B. Requirements by Wastewater System Type

B.1 All Wastewater Systems

B.1.a Treated wastewater discharged to the evaporation/percolation pond shall not exceed 2,000 gpd as an average dry weather flow defined as the total flow for the months of July through September divided by 92 days.

B.1.l Wastewater system setbacks.

Equipment or Activity	Domestic Well	Flowing Stream	Ephemeral Stream Drainage	Property Line	Lake or Reservoir
Septic Tank, Treatment System, & Collection System [1]	150 ft.	50 ft.	50 ft.	5 ft.	200 ft.
WASTEWATER STORAGE AND/OR TREATMENT PONDS					
Impoundment (undisinfected secondary recycled water)[2]	150 ft.	150 ft.	150 ft.	50 ft.	200 ft.

[1] Reference setbacks from "Septic Tank, Aerobic Treatment Unit, Treatment System, or Collection System" in Table 3 of General Order.
[2] Reference setbacks from "Wastewater Storage and/or Treatment Ponds" in Table 3 of General Order.

B.2 Septic Systems

The WWTP utilizes a septic tank; therefore this section applies in its entirety.

B.4 Activated Sludge Systems

The WWTP utilizes an activated sludge package plant; therefore this section applies in its entirety.

B.5 Pond Systems

The WWTP utilizes an evaporation/percolation pond; therefore this section applies in its entirety.

Effluent Limitations, Section D of General Order

This section applies in its entirety to the WWTP and shall include the following site specific limitations.

Effluent Limitations

The following limit apply to the effluent prior to discharge to the evaporation/percolation pond.

Constituent	Units	Limit
BOD	mg/L	30 (monthly average)

Effluent Limit Rationale
The activated sludge treatment system is subject to technology performance effluent limits for biochemical oxygen demand as specified in the General Order.

MONITORING AND REPORTING PROGRAM

The Discharger shall comply with MRP 2014-0153-DWQ-R5255, which is attached hereto and made part of this NOA by reference.

ENFORCEMENT

Please review this NOA carefully to ensure that it completely and accurately reflects the discharge. Discharge of wastes other than those described in this NOA is prohibited. Prior to allowing changes to the wastewater strength or generation rate, or to the method of waste disposal, you must contact the Central Valley Regional Water Board to determine if submittal of an RWD is required.

The Discharger generates the waste subject to the terms and conditions of the General Order and maintains exclusive control over the discharge. As such, the Discharger is primarily responsible for compliance with this NOA, MRP, and General Order, with all attachments. Failure to comply with the requirements in the General Order or this NOA could result in an enforcement action as authorized by provisions of the California Water Code.

ANNUAL FEES

Staff has determined the discharge is a threat to water quality and complexity rating of 3-B. The annual fee corresponding to a threat to water quality and complexity of 3-B is currently $4,699; however, because the permitted flow is less than 50,000 gpd, the discharge qualifies for the 50-percent fee discount. Therefore, the annual fee for this discharge is currently $2,350. The fee is due and payable on an annual basis until coverage under the General Order is formally rescinded. Please note that the annual fees are reviewed each year and may change. If the wastewater discharge ceases, you must provide written notice so that we can terminate coverage under the General Order and no longer bill you.

DOCUMENT SUBMITTAL

All monitoring reports and other correspondence should be converted to searchable Portable Document Format (PDF) and submitted electronically. Documents that are less than 50 MB should be emailed to:

centralvalleysacramento@waterboards.ca.gov.

To ensure that your submittal is routed to the appropriate staff person, the following information should be included in the body of the email or any documentation submitted to the mailing address for this office:

Facility Name: East Bay Municipal Utility District, Pardee Center Wastewater Treatment Plant, Calaveras County		
Program: Non-15 Compliance	Order: 2014-0153-DWQ-R5255	CIWQS Place ID: 222129

Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to:

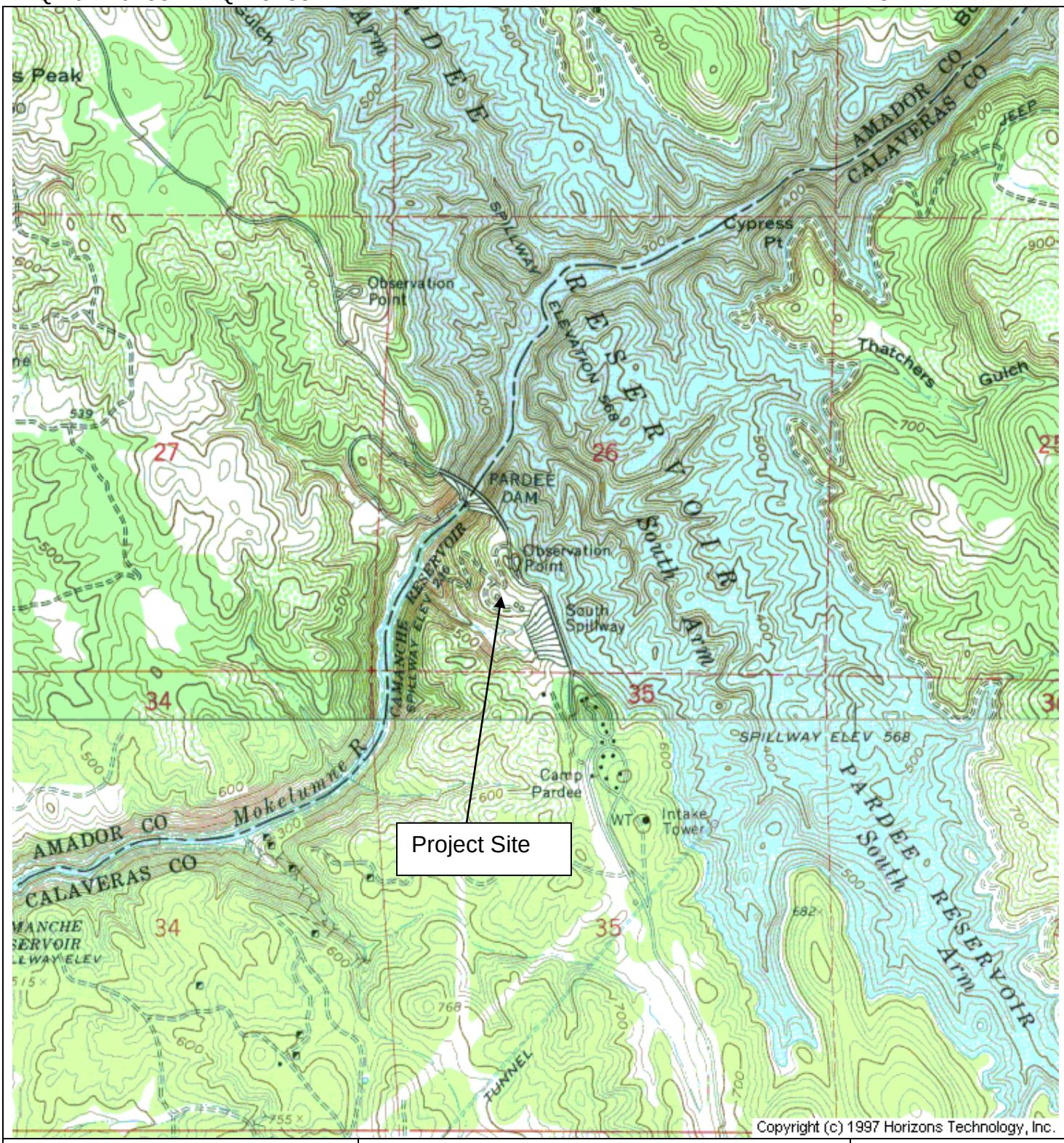
Central Valley Regional Water Quality Control Board
ECM Mailroom
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670

Now that the Notice of Applicability has been issued, the Board's Compliance and Enforcement section will take over management of your case. Kenny Croyle is your new point of contact for any questions about the General Order. If you find it necessary to make a change to your permitted operations, Kenny will direct you to the appropriate Permitting staff. You may contact Kenny at (916) 464-4676 or at kcroyle@waterboards.ca.gov.

For Andrew Altevogt
Pamela C. Creedon
Executive Officer

enc: Water Quality Order WQ 2014-0153-DWQ
Monitoring and Reporting Program 2014-0153-DWQ-R5255
Attachment A, Site Location Map
Attachment B, Site Plan
Attachment C, Process Schematic
MRP Transmittal Sheet

cc w/out enc: Timothy O'Brien, State Water Resources Control Board, Sacramento
Brian Moss, Calaveras County Environmental Health Department, San Andreas



Drawing Reference:

U.S.G.S TOPOGRAPHIC MAP
7.5 MINUTE QUADRANGLE

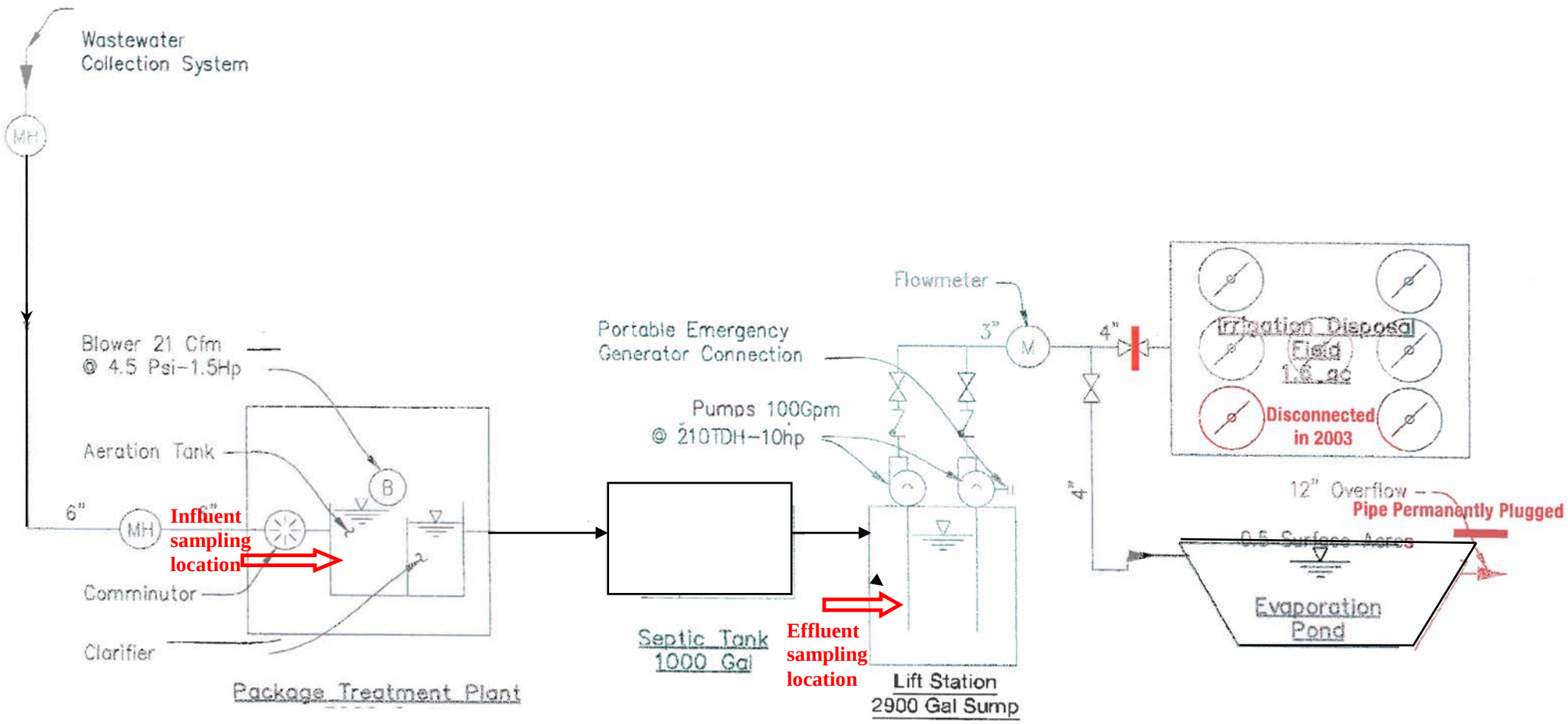
SITE LOCATION MAP

EAST BAY MUNICIPAL UTILITY DISTRICT
PARDEE CENTER WASTEWATER
TREATMENT PLANT
CALAVERAS COUNTY

N
W E
S

approx. scale
1 in.= 24,000 ft.

Drawing Reference: Google Maps Dec 2017	**SITE PLAN** EAST BAY MUNICIPAL UTILITY DISTRICT PARDEE CENTER WASTEWATER TREATMENT PLANT CALAVERAS COUNTY	N W E S approx. scale 1 in.= 80 ft.



Drawing Reference: RWD, July 2017	PROCESS SCHEMATIC EAST BAY MUNICIPAL UTILITY DISTRICT PARDEE CENTER WASTEWATER TREATMENT PLANT CALAVERAS COUNTY

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM WQ 2014-0153-DWQ-R5255

FOR
EAST BAY MUNICIPAL UTILITY DISTRICT
PARDEE CENTER WASTEWATER TREATMENT PLANT
CALAVERAS COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring influent, effluent, pond, groundwater, solid waste and sludge, and water supply. This MRP is issued pursuant to Water Code Section 13267. The East Bay Municipal Utility District (Discharger) shall not implement any changes to this MRP unless and until a revised MRP is issued by the 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) 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 operates the wastewater system that is subject to the Notice of Applicability (NOA) of Water Quality Order 2014-0153-DWQ-R5255. 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 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.

INFLUENT MONITORING

Samples shall be collected at approximately the same time as effluent samples and shall be representative of the influent. Influent monitoring shall include the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
BOD_5 [1]	mg/L	Grab	Monthly	Monthly

[1] 5-day biochemical oxygen demand.

EFFLUENT MONITORING

Samples of effluent shall be collected from the pump station downstream of the wastewater treatment plant prior to discharge to the evaporation/percolation pond. At a minimum, effluent monitoring shall consist of the following:

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Flow [1]	gpd	Meter	Daily	Monthly
BOD_5	mg/L	Grab	Monthly	Monthly
pH	Standard	Grab	Monthly	Monthly
Total Dissolved Solids	mg/L	Grab	Quarterly	Semi-annually
Nitrate as Nitrogen	mg/L	Grab	Quarterly	Semi-annually

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Total Nitrogen	mg/L	Grab	Quarterly	Semi-annually
Standard Minerals [2]	mg/L	Grab	Annually	Annually

1. Flow shall be monitored from the pump station that conveys effluent into evaporation/percolation pond.
2. Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, chloride, magnesium, potassium, sodium, sulfate, total alkalinity (including alkalinity series), and hardness.

POND MONITORING

The evaporation/percolation pond shall be monitored as follows. If the pond is empty on the scheduled monitoring date, the Discharger may report the freeboard monitoring result as “dry”.

Constituent	Units	Type of Sample	Sampling Frequency	Reporting Frequency
Dissolved Oxygen [1, 2]	mg/L	Grab	Weekly	Monthly
Freeboard	0.1 feet	Measurement	Weekly	Monthly
Odors	--	Observation	Weekly	Monthly
Berm condition [3]	--	Observation	Weekly	Monthly

1 If the pond depth exceeds one foot, samples shall be collected at a depth of one foot from each pond in use, opposite the inlet. If the water depth is less than one foot, surface sampling is acceptable.
2 Record any upset conditions that could effect monitoring interpretation, such as less than one foot of wastewater in pond.
3 Berm shall be observed for signs of seepage or surfacing water along the exterior toe of the berm. If surfacing water is found, then a sample shall be collected and tested for total coliform organisms and total dissolved solids.

GROUNDWATER MONITORING

Groundwater samples shall be collected from each groundwater monitoring well in accordance with an approved groundwater sampling plan. Prior to sampling, depth to groundwater shall be measured to the nearest 0.01 feet. Water table elevations shall be calculated and used to determine groundwater gradient and flow direction. Samples shall be collected and analyzed using approved EPA methods or other methods approved by the Central Valley Water Board. Semi-annual groundwater monitoring shall occur in January and July. Groundwater monitoring shall include, at a minimum, the following:

Constituents	Units	Type of Sample	Sampling and Reporting Frequency
Depth to Groundwater	0.01 feet	Measurement	Semi-annually
Groundwater Elevation [1]	0.01 feet	Calculated	Semi-annually
Gradient Magnitude	feet/feet	Calculated	Semi-annually
Gradient Direction	degrees	Calculated	Semi-annually
Electrical Conductivity	mg/L	Grab	Semi-annually
Total Dissolved Solids	mg/L	Grab	Semi-annually
Nitrate as Nitrogen	mg/L	Grab	Semi-annually
pH	pH units	Grab	Semi-annually

Constituents	Units	Type of Sample	Sampling and Reporting Frequency
Total Coliform Organisms	MPN/100 mL	Grab	Semi-annually
Standard Minerals [2]	mg/L	Grab	Annually

[1] Groundwater elevation shall be determined based on depth-to-water measurements using a surveyed measuring point elevation on the well and a surveyed reference elevation.
[2] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, dissolved iron, dissolved manganese, calcium, magnesium, potassium, sulfate, sodium, chloride, total alkalinity (including alkalinity series), and hardness.

SOLID WASTE AND SLUDGE MONITORING

A log shall be kept of solid waste (grits and screenings) and sludge quantities generated and of handling and disposal activities, and shall be submitted as part of the monthly monitoring reports.

WATER SUPPLY MONITORING

A sampling station shall be established where a representative sample of the municipal water supply can be obtained. Water supply monitoring shall include at least the following for each water source used during the previous year:

Constituents	Units	Sampling Frequency
Electrical Conductivity	mg/L	Annually
Total Dissolved Solids	mg/L	Annually
pH	pH units	Annually
Standard Minerals [1]	mg/L	Annually

[1] Standard Minerals shall include, at a minimum, the following elements/compounds: boron, calcium, magnesium, sodium, potassium, chloride, nitrogen, sulfate, total alkalinity (including alkalinity series), and hardness.

REPORTING

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:
centralvalleysacramento@waterboards.ca.gov
Documents that are 50 MB or larger should be transferred to a CD, DVD, or flash drive and mailed to the following address:

Central Valley Regional Water Quality Control Board
ECM Mailroom
11020 Sun Center Drive, Suite 200
Rancho Cordova, California 95670
To ensure that your submittals are routed to the appropriate staff, the following information block should be included in any correspondence used to transmit documents to this office:

Facility Name: East Bay Municipal Utility District, Pardee Center Wastewater Treatment Plant, Calaveras County		
Program: Non-15 Compliance	Order:2014-0153-DWQ-R5255	CIWQS Place ID: 222129

In reporting monitoring data, the Discharger shall arrange the data in tabular form so that the date, sample type (e.g., effluent, pond, etc.), and reported analytical result for each sample are readily discernible. The data shall be summarized in such a manner to clearly illustrate compliance with waste discharge requirements and spatial or temporal trends, 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 scheduled monitoring report.

As required by the California Business and Professions Code Sections 6735, 7835, and 7835.1, all Groundwater Monitoring Reports shall be prepared under the direct supervision of a California Registered Engineer or Geologist and signed by the registered professional.

A. Monthly Monitoring Reports

Monthly monitoring reports shall be submitted to the Central Valley Water Board by the **1st day of the second month** following the end of the reporting period (e.g., the January monthly report is due by 1 March). At a minimum, the reports shall include:

1. Results of the influent, effluent, pond, solid waste and sludge monitoring;
2. A comparison of the monitoring data to the discharge specifications and an explanation of any violation of those requirements;
3. If requested by staff, copies of laboratory analytical report(s), and
4. A calibration log verifying calibration of all monitoring instruments and devices used to fulfill the prescribed monitoring program.

B. Semi-Annual Monitoring Reports

In addition to the monthly monitoring reports, the Discharger shall establish a semi-annual sampling schedule for groundwater monitoring such that samples are obtained approximately every six months. Semi-Annual Monitoring Reports shall be submitted to the Central Valley Water Board by the **1st day of March and September.** The Semi-Annual Monitoring Reports shall include the following:

see email from Kenny Croyle - reporting schedule changed to February 1st and August 1st, similar to other three WWPs

1. Results of the quarterly effluent monitoring;
2. Results of groundwater monitoring;
3. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring. The narrative shall be sufficiently detailed to verify compliance with the WDR, this revised MRP, and the Standard Provisions and Reporting Requirements. The narrative shall be supported by field logs for each well documenting depth to groundwater and method of sampling;
4. Calculation of groundwater elevations, an assessment of groundwater flow direction and

gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends if any;

5. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal tends, with reference to summary data tables, graphs, and appended analytical reports (as applicable);
6. Summary data tables of historical and current water table elevations and analytical results;
7. A comparison of monitoring data to the groundwater limitations and an explanation of any violation of those requirements;
8. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum; and
9. Copies of laboratory analytical report(s) for groundwater monitoring.

C. Annual Report

In addition to the monthly and semi-annual monitoring reports, an Annual Report shall be prepared. The Annual Report shall be submitted to the Central Valley Water Board by **1 February** each year. The Annual Report shall include the following:

1. The results from annual monitoring of the effluent, groundwater, and water supply;
2. If requested by staff, tabular and graphical summaries of all data collected during the year;
3. An evaluation of the groundwater quality beneath the wastewater treatment facility;
4. A discussion of compliance and the corrective actions taken, as well as any planned or proposed actions needed to bring the discharge into full compliance with the waste discharge requirements;
5. A discussion of any data gaps and potential deficiencies/redundancies in the monitoring system or reporting program;
6. A copy of the certification for each certified wastewater treatment plant operator working at the facility and a statement about whether the Discharger is in compliance with Title 23, CCR, Division 3, Chapter 26.
7. The results from any sludge monitoring required by the disposal facility;
8. Equipment maintenance and calibration records, as described in Standard Provision No. C.4;
9. A forecast of influent flows, as described in Standard Provision No. E.4; and
10. The results to date of the Upcountry Wastewater Collection System Condition Assessment.

A letter transmitting the self-monitoring reports shall accompany each report. The letter shall

include a discussion of requirement violations found during the reporting period, and actions taken or planned for correcting noted violations, such as operation or facility modifications. If the Discharger has previously submitted a report describing corrective actions and/or a time schedule for implementing the corrective actions, reference to the previous correspondence will be satisfactory. The transmittal letter shall contain the penalty of perjury statement by the Discharger, or the Discharger's authorized agent, as described in the Standard Provisions General Reporting Requirements Section B.3.

The Discharger shall implement the above monitoring program on the first day of the month following issuance of this revised MRP.

Ordered by: Andrew Altwoogt
For PAMELA C. CREEDON, Executive Officer

22 January 2018
(Date)

STATE WATER RESOURCES CONTROL BOARD
ORDER WQ 2014-0153-DWQ

GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS

September 23, 2014

CALIFORNIA
Water Boards
STATE WATER RESOURCES CONTROL BOARD
REGIONAL WATER QUALITY CONTROL BOARDS

THIS PAGE INTENTIONALLY LEFT BLANK

STATE WATER RESOURCES CONTROL BOARD
ORDER WQ 20140-0153-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS

Contents

ACRONYMS AND ABBREVIATIONS i
BACKGROUND INFORMATION 1
WASTEWATER DISPERSAL 5
APPLICATION PROCESS 8
ANTIDEGRADATION ANALYSIS 8
TITLE 27 EXEMPTION 11
CALIFORNIA ENVIRONMENTAL QUALITY ACT 12
OTHER REGULATORY ISSUES 13
IT IS HEREBY ORDERED 15
A. Prohibitions 15
B. Requirements by Wastewater System Type 16
1. All Wastewater Systems 16
2. Septic Systems 20
3. Aerobic Treatment Units 21
4. Activated Sludge Systems 23
5. Pond Systems 23
6. Subsurface Disposal Systems 24
7. Land Application and/or Recycled Water Systems 26
8. Sludge/Solids/Biosolids Disposal 26
C. Groundwater and Surface Water Limitations: 27
D. Effluent Limitations: 27
E. Provisions 28
1. Technical Report Preparation Requirements 28
2. For All Wastewater Systems: 30
3. General Reporting Requirements: 34
4. Monitoring Requirements 35
5. Definitions 37
CERTIFICATION 38

List of Tables

Table 1: Summary of Domestic Wastewater Characteristics 2
Table 2: Summary of Wastewater System and California Code of Regulations, Title 27 Exemptions 12
Table 3: Summary of Wastewater System Setbacks 19
Table 4: Effluent Limitations for Wastewater Treatment Systems 28
Table 5: Minimum Depth to Groundwater and Minimum Soil Depth from the Bottom of Dispersal System…… .1-3

General Order Attachment

Document	Number	Attachment Title	
Attachment	1	Nitrogen Effluent Limit Evaluation	…..… 1-1

Information Sheet Attachments

Document	Number	Attachment Title	
Information Sheet		Information Sheet Summary	.. INFO-1
Information Sheet	A	Generalized Permit Application Process Summary	…..... A-1
Information Sheet	B1	Recommended Report of Waste Discharge Format	…... B1-1
Information Sheet	B2	Safe Wastewater Disposal for Recreational Vehicles	…... B2-1
Information Sheet	C	Model Monitoring and Reporting Program	……. C-1

ACRONYMS AND ABBREVIATIONS	
afy	acre feet per year
AGR	Agricultural Supply
Antidegradation Policy	State Water Board Resolution 68-16
APMP	Advanced Protection Management Program
AQUA	Aquaculture
Basin Plan	Water Quality Control Plan
BOD	Biochemical Oxygen Demand
BPTC	Best Practicable Treatment or Control
CalOES	California Office of Emergency Services
CDPH	California Department of Public Health
CEC	Constituents of Emerging Concern
CEQA	California Environmental Quality Act
C.F.R.	Code of Federal Regulations
DDW	State Water Board, Division of Drinking Water
E. coli	Escherichia coli
e.g.	Latin *exempli gratia* (for example)
FDS	Fixed Dissolved Solids
FEMA	Federal Emergency Management Agency
FRESH	Fresh Water Replenishment
General Order	General Waste Discharge Requirements Order
gpd	gallons per day
GWR	Groundwater Recharge
I/I	Inflow and Infiltration
IND	Industrial Service Supply
LAA	Land Application Area
MBR	Membrane Biological Reactor
MCL	Maximum Contaminant Level
mg/L	Milligrams per liter
MPI	Minutes Per Inch
MPN	Most Probable Number
MRP	Monitoring and Reporting Program
MUN	Municipal Supply
N	Nitrogen
NOA	Notice of Applicability
NPDES	National Pollutant Discharge Elimination System
NTU	Nephelometric Turbidity Unit
OWTS Policy	Onsite Wastewater Treatment System Policy
P	Phosphorus
pdf	Portable Document Format
Perc Rate	Percolation Rate
PROC	Industrial Process Supply
REC-1	Water Contact Recreation
Regional Water Board	Regional Water Quality Control Board

ACRONYMS AND ABBREVIATIONS	
RV	Recreational Vehicle
ROWD	Report of Waste Discharge
SAP	Sampling and Analysis Plan
SNMP	Salt and Nutrient Management Plan
State Water Board	State Water Resources Control Board
TBD	To Be Determined
TDS	Total Dissolved Solids
TKN	Total Kjeldahl Nitrogen
TMDL	Total Maximum Daily Load
TSS	Total Suspended Solids
USEPA	United States Environmental Protection Agency
Wat. Code	Water Code
WILD	Wildlife Habitat
WDRs	Waste Discharge Requirements
WQO 97-10-DWQ	Water Quality Order 97-10 Division of Water Quality
§ or §§	Section or Sections

STATE WATER RESOURCES CONTROL BOARD
ORDER WQ 2014-0153-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS

BACKGROUND INFORMATION

Findings:
The State Water Resources Control Board (State Water Board) finds that:

1. Water Code section 13260(a) requires that any person discharging waste or proposing to discharge waste within any region, other than to a community sewer system, that could affect the quality of the waters of the state, file a Report of Waste Discharge (ROWD) to obtain coverage under Waste Discharge Requirements (WDRs) or a waiver of WDRs. "Waste" is defined in Water Code section 13050(d).

2. Discharges to land from Small Domestic Wastewater Treatment Systems (hereafter Small Domestic Systems) have certain common characteristics, such as similar constituents, concentrations of constituents, disposal techniques, flow ranges, and they require the same or similar treatment standards. These types of discharges are appropriately regulated under a General Waste Discharge Requirements Order (General Order). State Water Board Water Quality Order 97-10-DWQ (WQO 97-10-DWQ) is a 1997 General Order addressing Small Domestic Systems. Once effective, this General Order will supersede WQO 97-10-DWQ which will no longer be available for additional enrollees.

3. For the purposes of this General Order, the term "wastewater system" shall mean the collection system, treatment equipment, pumping stations, treatment ponds, clarifiers, sand/media filters, disinfection systems, recycled water systems (including distribution systems), storage ponds, land application areas, and other systems associated with the collection, treatment, storage, and disposal of wastewater.

4. Only Small Domestic Systems, with a monthly average flow rate of 100,000 gallons per day (gpd) or less, that discharge to land are eligible for coverage under this General Order. Small Domestic Systems are typically located at individual residences, rural parks, schools, campgrounds, mobile home parks, roadside rest stops, small commercial or residential subdivisions, restaurants, resort hotels/lodges, small correctional facilities, temporary fire-fighting camps, and recreational vehicle (RV) dump locations, including RV parks. An owner and/or operator of such a wastewater system is hereafter referred to as Discharger in this General Order. A Small Domestic System that uses subsurface disposal may be regulated by a local agency rather than a Regional Water Board, consistent with the Water Quality Control Policy for Siting, Design, Operation, and Maintenance of Onsite Wastewater Treatment Systems Policy (OWTS Policy). Wastewater systems regulated by local agencies may continue that coverage unless directed by the local agency or the Regional Water Board Executive Officer to seek WDRs from the Regional Water Board.

5. Wastewater treatment technologies evolve over time. Septic tanks and gravity fed leach fields provide the lowest level of acceptable treatment. Other treatment may include aerobic treatment systems, sand/media filters, package treatment plants, constructed wetlands, activated sludge, membrane biological reactors, and disinfection systems. Similarly, other dispersal options for the treated effluent may include pressure dosing, drip irrigation, land application, mound/at grade systems, or

evapotranspiration systems. The level of treatment shall be based upon the wastewater quality and the receiving water quality at the wastewater disposal location. For flow rates that exceed 20,000 gallons per day (gpd), Attachment 1, *Nitrogen Effluent Limit Evaluation*, provides direction in evaluating a discharge and determining when nitrogen control is required. Seepage pits may be considered part of the disposal system if inadequate land exists for a leach field dispersal system, other site conditions require the use of seepage pits, and site conditions are favorable for the use of seepage pits (groundwater quality shall be maintained consistent with this General Order). The discussion of treatment and disposal alternatives is not intended to limit the selection of alternatives available to the wastewater system designer.

6. All WDRs must implement the applicable Regional Water Quality Control Board's (Regional Water Board's) Water Quality Control Plan (Basin Plan) for the region in which the discharge occurs; therefore this General Order requires Dischargers to comply with all applicable Basin Plan requirements, including any prohibitions and/or water quality objectives, governing the discharge. The Discharger must comply with any more stringent standards in the applicable Basin Plan. In the event of a conflict between the requirements of this General Order and the Basin Plan, the more stringent requirement prevails.

7. This General Order allows the production and use of recycled water (as defined in Water Code section 13050(n)) and requires all recycled water use to comply with the applicable requirements described in California Code of Regulations, title 22, division 4, chapter 3, (hereafter title 22). Compliance with title 22 water recycling criteria and title 17 sanitation requirements shall be determined by the State Water Board Division of Drinking Water (DDW) (formerly California Department of Public Health), which reviews title 22 Engineering Reports. This General Order also allows for the application of treated wastewater to land that does not meet the definition of beneficial use, and is therefore not subject to the title 22 requirements.

8. Wastewater and treated wastewater quality vary depending upon source water quality, the activities generating the wastewater, water conservation efforts, inflow and infiltration (I/I), and treatment technology. Typical domestic wastewater and treated wastewater characteristics are presented in Table 1. Published wastewater textbooks and/or United States Environmental Protection Agency (USEPA) wastewater publications may also be used to characterize wastewater characteristics.

Table 1: Summary of Domestic Wastewater Characteristics

Constituent	Units[a]	Typical Domestic Wastewater	Septic Tank Influent	Septic Tank Effluent	Secondary Treatment Effluent	Equivalent to Secondary Treatment Effluent
Biochemical Oxygen Demand	mg/L	200-290 [b]	155-286 [c]	140-200 [d]	30-45 [e]	65 percent reduction [f]
Total Suspended Solids	mg/L	200-290 [b]	155-330 [c]	50-100 [d]	30-45 [e]	[p]
Ammonia (as N)	mg/L	6-18 [b]	4-13 [c]	--[g,o]	-- [g,h]	-- [g,h,i]
Total Nitrogen	mg/L	35-100 [b]	26-75 [c]	40-100 [d]	50% [m]	43-80% [k,h,i]

Constituent	Units[a]	Typical Domestic Wastewater	Septic Tank Influent	Septic Tank Effluent	Secondary Treatment Effluent	Equivalent to Secondary Treatment Effluent
Nitrite and Nitrate (as N)	mg/L	<1 [b]	<1 [c]	--[g,o]	--[g,h]	-- [g,h,i]
Total Phosphorus (as P)	mg/L	6-12 [b]	6-12 [c]	5-15 [d]	51% [m]	50% [k,h,i]

a. mg/L denotes milligrams per liter.
b. Data from Table 4-3, USEPA Wastewater Treatment/Disposal for Small Communities, Manual, September 1992, EPA/625/R-92/005.
c. Data from Table 3-7, USEPA Onsite Wastewater Treatment System Manual, June 2005, EPA/625/R-00/008.
d. Data from Table 3-19, USEPA Onsite Wastewater Treatment Systems Manual, June 2005, EPA/625/R-00/008.
e. Data from Exhibit 5-6, USEPA NPDES Permit Writers' Manual, December 1996, EPA-833-B-96-003.
f. Data from Section 5.2.2, USEPA NPDES Permit Writers' Manual, December 1996, EPA-833-B-96-003.
g. "--" denotes data not available.
h. Value highly variable depending upon treatment technology.
i. No technology based limit established by USEPA.
k. Percent reduction from influent, wastewater pond treatment. USEPA webpage <http://www.epa.gov/ caddis/ssr_urb_ww1.html>, accessed August 29, 2014.
m. Percent reduction from influent wastewater, activated sludge treatment. USEPA webpage <http://www.epa.gov/ caddis/ssr_urb_ww1.html>, accessed August 29, 2014.
o. Insignificant change expected in treatment.
p. TSS limit not appropriate for land discharge.

9. Discharges from RV holding tanks or portable toilets may contain chemicals that can pollute groundwater quality. Some commercially available products used to control holding tank/portable toilet odors may contain harmful chemicals such as formaldehyde, zinc, or phenol. The harmful chemicals can kill the bacteria in the wastewater treatment system and cause wastewater to be inadequately treated. Inadequately treated wastewater may cause additional problems such as leachfield/ seepage pit failure, surfacing wastewater, and potential exposure and health risks. Discharge of the harmful chemicals to groundwater that creates pollution may result in enforcement activities requiring groundwater remediation. The best and least expensive method to prevent groundwater pollution is to not use harmful chemicals by educating RV owners about the pollution hazard.

10. Total dissolved solids (TDS) consists of both volatile (organic) and fixed (inorganic) fractions. A varying concentration of volatile dissolved solids will exist in wastewater effluent depending upon the wastewater source and treatment technology. In a properly operated land application system, volatile dissolved solids in percolate are generally reduced to negligible concentrations (less than 2 mg/L) by filtration and biological degradation following percolation through five feet of soil.[1] However, fixed

[1] USEPA, Process Design Manual, Land Treatment of Municipal Wastewater, Section 4.2.1, 1981.

dissolved solids (FDS) do not degrade biologically. Elevated concentrations of FDS in land applied effluent can change soil chemistry and degrade groundwater quality.

11. Wastewater discharged to land in close proximity to a surface water body may impact surface water quality. Additional monitoring may be required by a Regional Water Board's Executive Officer to determine if the discharge has degraded surface water quality. The USEPA recommends *Escherichia coli* (E. coli) and enterococci bacteria, which exist in fecal material from humans and other warm-blooded animals, as the best indicators of health risk from water contact.[2] Because both bacteria are present in domestic wastewater, there is no need to monitor separately for them in wastewater effluent. The effectiveness of disinfection procedures are similar for bacteria, therefore total coliform organisms, which is a less expensive analysis, is appropriate to determine if wastewater effluent is effectively disinfected. Total coliform monitoring is required for recycled water use consistent with title 22.

12. Use of recycled water in lieu of potable water is encouraged by the State Water Board as described below:

    a. The State Water Board's Strategic Plan Update 2008-2012 includes a priority to increase sustainable local water supplies available for meeting existing and future beneficial uses by 1,725,000 acre-feet per year (afy) in excess of 2002 levels by 2015.

    b. The State Water Board's Policy for Water Quality Control for Recycled Water states the following goals (in part): 1) Increase the use of recycled water over the 2002 level by at least 1 million afy by 2020 and by at least 2 million afy by 2030. 2) Increase the amount of water conserved in urban and industrial uses by 20 percent compared to 2007. 3) Substitute as much recycled water for potable water as possible by 2030.

13. The Recycled Water Policy calls on local water and wastewater entities together with other stakeholders who contribute salt and nutrients to a groundwater basin or sub-basin, to fund and develop Salt and Nutrient Management Plans (SNMPs) to comprehensively address all sources of salts and nutrients. The State Water Board herein reasserts the need for comprehensive salt and nutrient management planning and directs that salinity and nutrient increases should be managed in a manner consistent with the Recycled Water Policy. It is the intent of the Recycled Water Policy that every groundwater basin/sub-basin in California ultimately has a consistent Salt and Nutrient Management Plan. The appropriate way to address salt and nutrient issues is through the development of regional or subregional SNMPs. Dischargers may be directed to perform or participate in SNMP planning activities as described in the Provisions of this General Order.

---

[2] USEPA Internet page accessed June 10, 2014 <http://water.epa.gov/type/rsl/monitoring/vms511.cfm>.

14. The Recycled Water Policy includes monitoring requirements for Constituents of Emerging Concern[3] for the use of recycled water for groundwater recharge by surface and subsurface application methods. The monitoring requirements and criteria for evaluating monitoring results in the Recycled Water Policy are based on recommendations from a Science Advisory Panel.[4] Because this General Order is limited to non-potable uses and does not authorize groundwater replenishment activities, monitoring for Constituents of Emerging Concern is not required.

15. The Recycled Water Policy requires permits for landscape irrigation with recycled water to include priority pollutant monitoring at the recycled water production facility. Annual monitoring is required for design production flows greater than one million gallons per day; a five year monitoring frequency is required for flows less than one million gallons per day. Priority pollutants are listed in Appendix A of 40 Code of Federal Regulations (C.F.R.) Part 423.

16. Beneficial uses for groundwater are determined by each Regional Water Board and are listed in their respective Basin Plans. Beneficial uses for groundwater are: municipal supply (MUN), industrial service supply (IND), industrial process supply (PROC), fresh water replenishment (FRESH), aquaculture (AQUA), wildlife habitat (WILD), water contact recreation (REC-1), agricultural supply (AGR), and groundwater recharge (GWR). Some beneficial uses only apply to certain geographic areas within regions.

17. Basin Plans establish groundwater quality objectives to protect beneficial uses. The objectives may be narrative, numerical, or both. This General Order requires the Discharger to comply with those objectives in receiving groundwater.

WASTEWATER DISPERSAL

18. Wastewater dispersal will occur by different methods. It may be percolated from ponds; applied to the surface by spray, flood, or drip methods; or discharged to a subsurface dispersal area such as a leachfield or seepage pit. The choice of disposal method will depend upon the amount of wastewater generated, the value of the wastewater for irrigation, and the receiving environment.

    a. Wastewater discharged to a pond for treatment and/or storage can result in groundwater degradation or nuisance odors. Ponds can also be vulnerable to damage caused by burrowing animals.

---

[3] For this order, Constituents of Emerging Concern are defined to be chemicals in personal care products, pharmaceuticals including antibiotics, antimicrobials; industrial, agricultural, and household chemicals; hormones; food additives; transformation products, inorganic constituents; and nanomaterials.

[4] The Science Advisory Panel was convened in accordance with provision 10.b of the Recycled Water Policy. The panel's recommendations were presented in the report; *Monitoring Strategies for Chemicals of Emerging Concern in Recycled Water - Recommendations of a Science Advisory Panel*, dated June 25, 2010.

Wastewater percolated from a pond to the subsurface has the potential to degrade groundwater quality to an unacceptable extent. Reducing the amount of wastewater percolated by lining a pond with a synthetic or low permeability liner can control the percolation rate, but an alternative method of wastewater disposal may be required. Land application (discussed below) is often selected as the method to dispose of the wastewater from lined ponds.

Overloading a wastewater pond with Biochemical Oxygen Demand (BOD) constituents can result in nuisance odor generation. Source control of BOD constituents, additional pretreatment prior to discharge to the pond, or mechanical aeration of wastewater in the pond are typically used to prevent a pond from generating nuisance odors.

Burrowing animals can result in rapid failure of a containment berm. The population of such animals should be promptly controlled and repairs to the containment completed as soon as possible.

b. When land application of wastewater is selected as a disposal method, adequate acreage must be available to allow application rates that will not create nuisance conditions (e.g. vectors, nuisance odors, off-site discharge) or degrade groundwater quality to an unacceptable extent.

Crops are often grown and harvested from a land application area (LAA) to take up wastewater constituents such as nitrogen and dissolved solids, as well as maintain roots which promote wastewater infiltration rates. When climatic conditions are favorable, double cropping an LAA can increase the uptake of wastewater constituents.

Hydraulic loading of an LAA must be controlled to prevent off-site wastewater discharge; if wastewater is not disinfected prior to land application, storm water that falls on the LAA must be contained to prevent the potential migration off-site of pathogenic organisms. LAAs are sometimes equipped with a tailwater control system that allows for reapplication of wastewater to the LAA or returning tailwater to a wastewater pond.

c. Subsurface disposal areas may be constructed as leachfields or when conditions allow, seepage pits. If seepage pits are employed, they are often located at the end of a leachfield distribution pipe to maximize shallow distribution of wastewater.

If conditions are not favorable for traditional leachfield construction, an at-grade, or an above grade (mound) system may be used. Typically, at-grade and above grade systems are dosed using a dosing pump and pump controller. Dosed systems use relatively small diameter pipe to distribute the wastewater to zones within the dispersal area. Even in well operated systems, some suspended solids will be pumped into the distribution piping. Cleanouts or a flushing system on the distribution piping are required to remove the solids that will accumulate if the emitters are small enough diameter to prevent suspended solids from passing through the distribution equipment. Gravelless trench systems which do not use gravel, typically use distribution piping and a dosing

system, and should be constructed with cleanouts or a flushing system similar to at-grade and/or above grade systems when needed.

Subsurface disposal areas should be planted with shallow rooted plants to prevent erosion and provide for uptake of wastewater nutrients; trees and shrubs should be removed to prevent roots from damaging the leachfield. Similarly, burrowing animals can damage an at-grade or above grade (mound) disposal system and result in leakage. Burrowing animals should be promptly controlled and repairs to the disposal system completed as soon as possible.

19. Setbacks from wastewater treatment areas, dispersal areas, and/or LAAs from domestic wells, flowing and/or ephemeral streams, lakes/reservoirs, and property lines are provided in this General Order. Setbacks are included as a means of reducing pathogenic risks by coupling pathogen inactivation rates with groundwater travel time to a well or other potential exposure route (e.g. water contact activities). In general, a substantial unsaturated zone reduces pathogen survival compared to saturated soil conditions. Fine grained (silt or clay) soil particles reduce the rate of groundwater transport and therefore are generally less likely to transport pathogens; coarse grained soil particles or fracture flow groundwater conditions may be more likely to transport pathogens. Setbacks also provide attenuation of other wastewater constituents through physical, chemical, and biological processes. The setbacks provided in this General Order are based on the title 22 water recycling criteria, the California Well Standards, the OWTS Policy, the California Plumbing Code, and commonly imposed setbacks by regulatory agencies.

20. The OWTS Policy identified wastewater disposal as a potential contributing source of pathogens or nitrogen to an impaired surface water body.[5] OWTS Policy Tier 3 addresses impaired surface water bodies and describes an Advanced Protection Management Program (APMP) as the minimum management program for wastewater systems subject to the OWTS Policy. In general, wastewater systems located within the geographic area[6] of an APMP are not eligible for coverage under this General Order unless the Regional Water Board's Executive Officer determines the discharge is acceptable based on site-specific conditions, the level of wastewater treatment, and/or total maximum daily load (TMDL) implementation plan requirements.

---

[5] Impaired surface water bodies are those identified on a list approved first by the State Water Board and then approved by USEPA pursuant to Section 303(d) of the Federal Clean Water Act.

[6] The geographic area of an APMP is established (in order of hierarchy) by an approved TMDL, an approved local agency defined APMP, or 600 feet from the water body.

APPLICATION PROCESS

21. Dischargers seeking coverage under this General Order shall file an ROWD with the appropriate Regional Water Board. The application process is summarized in Attachment A. Some Regional Water Boards may provide procedures for electronic submittal of application documents. An ROWD consists of:

    a. A completed Form 200, which is available at: http://www.waterboards.ca.gov/publications_forms/forms/docs/form200.pdf .

    b. An application fee that serves as the first annual fee. Fees are based on threat and complexity ratings, and the treatment technology employed. Threat and complexity ratings are defined in the fee schedule listed in California Code of Regulations, title 23, section 2200 and also available at: <http://www.waterboards.ca.gov/resources/fees/docs/ fy1112fee_schdl_wdr.pdf>.

    c. A technical report that describes the wastewater generation, treatment, storage, and disposal. Submittal of the report in the recommended format provided in Attachment B1 will allow for an expedited review by Regional Water Board staff. (Some Regional Water Boards' staff may have different or additional technical report requirements in addition to Attachment B1. An applicant is advised to inquire with the Regional Water Board staff before performing investigations and/or preparing the technical report.)

    Upon review of the ROWD, Regional Water Board staff will determine if coverage under this General Order is appropriate. The Regional Water Board's Executive Officer will issue a Notice of Applicability (NOA) when coverage under this General Order has been authorized. The NOA will contain the necessary site-specific monitoring and reporting requirements.

22. Dischargers covered by WQO 97-10-DWQ or another administrative mechanism may continue discharging under that authority until notified of the need to update their coverage by the State Water Board or Regional Water Board.

23. Although a Discharger may be eligible for coverage under this General Order, the appropriate Regional Water Board Executive Officer may determine that the discharge would be better regulated by a waiver of WDRs, individual WDRs, a different general order, an enforcement order, or a National Pollutant Discharge Elimination System (NPDES) Permit.

ANTIDEGRADATION ANALYSIS

24. State Water Board Resolution 68-16, the *Statement of Policy with Respect to Maintaining High Quality of Waters in California* (hereafter the Antidegradation Policy) requires that disposal of waste into the waters of the state be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the state. The quality of some waters is higher than established by adopted policies and that higher quality water shall be maintained to the maximum extent possible consistent with the Antidegradation Policy. The Antidegradation Policy requires the following:

a. Higher quality water will be maintained until it has been demonstrated to the state that any change will be consistent with the maximum benefit to the people of the state, will not unreasonably affect present and anticipated beneficial use of the water, and will not result in water quality less than that prescribed in the policies.

b. Any activity that produces a waste and discharges to existing high quality waters will be required to meet WDRs that will result in the Best Practicable Treatment or Control (BPTC) of the discharge necessary to assure pollution or nuisance will not occur, and the highest water quality consistent with the maximum benefit to the people of the state will be maintained.

25. The Antidegradation Policy requires maintenance of high quality of waters of the state unless limited degradation is consistent with the maximum benefit to the people of the state. When issuing NOAs under this General Order, Executive Officers must assure that Dischargers implement BPTC as necessary to maintain the highest water quality consistent with the maximum benefit to the people of the state.

26. This General Order allows discharges to numerous groundwater bodies, each with its own chemical characteristics. There are not sufficient data to determine which receiving waters are high quality waters. To the extent a discharge covered under this General Order may be to high quality waters, this General Order authorizes limited degradation consistent with the Antidegradation Policy as described in the findings below.

27. This General Order limits a discharge flow rate to 100,000 gpd; therefore, only small Dischargers will be eligible for coverage. Wastewater systems with a flow rate greater than 20,000 gpd must evaluate the discharge with the method presented in Attachment 1 to determine if nitrogen effluent limits are appropriate. Discharge of domestic wastewater at lower flow rates inherently has less potential to significantly degrade water quality.

28. Limited degradation of groundwater by some waste constituents associated with domestic wastewater effluent, after effective source control, treatment, and control measures are implemented, is consistent with the maximum benefit to the people of the state. The technology, energy, water recycling, and waste management advantages of centralized wastewater treatment systems far exceed any benefits derived from reliance on numerous, concentrated individual wastewater systems, and the cumulative impact on water quality will be substantially less. The economic prosperity of communities and associated industry is of maximum benefit to the people of the state and provides sufficient justification for allowing the limited groundwater degradation that may occur pursuant to this General Order provided the terms of the applicable Basin Plan, and other applicable State Water Board and Regional Water Board policies are consistently met. The State Water Board recognizes variability in a small community's ability to construct wastewater treatment systems based on financial resources.

29. Constituents of concern that have the potential to degrade groundwater include salinity, nutrients, and pathogens (represented by coliform bacteria). In addition, excessive BOD loading of ponds or LAAs may result in nuisance odors or anaerobic

conditions, which are not favorable biological treatment conditions. This General Order includes effluent limits for nitrogen and BOD, and a process to determine how to apply the limits. Implementation of the process to determine the effluent limit that applies will result in the BPTC for the wastewater constituents. In addition, this General Order provides guidance on preparing a monitoring program that ensures the treatment is effective. Each of the wastewater constituents of concern are discussed below:

a. Salinity is a measure of dissolved solids in water. Excessive salinity can reduce the beneficial uses of water. Salinity can be affected by the discharge of wastewater with elevated concentrations of TDS. TDS consists of both volatile (organic) and fixed (inorganic) fractions. In a well-operated land application system, volatile dissolved solids in percolate will be reduced to negligible concentrations. The best approach for addressing salinity is through source control activities. This General Order allows an Executive Officer to require participation in salt and nutrient management planning processes.

b. Nitrogen is a nutrient normally present in domestic wastewater at a concentration that can degrade groundwater quality. The potential for degradation depends upon the wastewater treatment method and the environment into which the wastewater effluent is discharged. Nitrogen concentration reduction is not required in every situation, such as when wastewater treatment and application is performed in a way that is protective of the beneficial uses of water.

   When needed, nitrogen concentrations can be reduced in a number of ways, such as nitrification, denitrification, and/or crop uptake and removal. However, the General Order requires that the effluent limit for nitrogen be determined based on procedures in Attachment 1, which provides additional criteria to determine when and how much nitrogen control is required. Effluent limits are determined based on the threat to groundwater quality. If nitrogen control is needed, a minimum of 50-percent reduction is required. In cases where a higher threat to groundwater exists, a total nitrogen concentration limit of 10 mg/L is required. By imposing the total nitrogen limit of 10 mg/L, the wastewater derived nitrogen cannot exceed the maximum contaminant level (MCL) for groundwater. Because natural systems are rarely 100-percent efficient, the nitrogen concentration limit will be protective of the existing and/or potential beneficial use of groundwater. Effluent limitations for nitrogen are contained in this General Order. To ensure the nitrogen control is effective, the model Monitoring and Reporting Program (MRP) provided as Information Sheet Attachment C includes monitoring that can be implemented to verify compliance with effluent limits.

c. Pathogens and other microorganisms are present in domestic wastewater. Wastewater treatment processes will reduce the concentration of pathogens but disinfection is required to significantly reduce their presence. Coliform bacteria are used as a surrogate (indicator) because they are excreted by warm-blooded animals, are present in high numbers, survive in the environment similar to

pathogenic bacteria, and are easy to detect and quantify. Disinfection of wastewater is not required in every situation, such as when the wastewater application is performed in such a way that public contact is minimized through physical controls and/or notification.

When needed, disinfection can be performed in a number of ways. The title 22 water recycling criteria lists disinfection requirements for specific activities. To ensure the disinfection is effective, the model MRP provided as Information Sheet Attachment C includes monitoring that can be implemented to verify compliance with effluent limits.

30. Compliance with the General Order, the NOA, DDW requirements, and any mitigation measures will ensure compliance with the applicable Basin Plan.

TITLE 27 EXEMPTION

31. The wastewater treatment, storage, and disposal activities described in this General Order are exempt from the requirements of *Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste* in California Code of Regulations, title 27, division 2, Subdivision 1, section 20005, et seq. The activities are exempt from the requirements of title 27 so long as the activity meets, and continues to meet, all preconditions listed below. (Cal. Code Regs., tit. 27, § 20090.)

    a. Sewage—Discharges of domestic sewage or treated effluent which are regulated by WDRs issued pursuant to California Code of Regulations, title 23, division 3, chapter 9, or for which WDRs have been waived, and which are consistent with applicable water quality objectives, and treatment or storage facilities associated with municipal wastewater treatment plants, provided that residual sludge or solid waste from wastewater treatment facilities shall be discharged only in accordance with the applicable State Water Board promulgated provisions of this division. (Cal. Code Regs., tit. 27, § 20090(a).)

    b. Wastewater—Discharges of wastewater to land, including but not limited to evaporation ponds, percolation ponds, or subsurface leach fields if the following conditions are met:

        (1) the applicable Regional Water Board has issued WDRs, reclamation requirements, or waived such issuance;

        (2) the discharge is in compliance with the applicable water quality control plan; and

        (3) the wastewater does not need to be managed according to, California Code of Regulations, title 22, division 4.5, chapter 11, as a hazardous waste. (Cal. Code Regs., tit. 27, § 20090(b).)

    c. Underground Injection—Discharges of waste to wells by injection pursuant to the Underground Injection Control Program established by the USEPA under the Safe Drinking Water Act, 42 US Code section 300(h), see Code of Federal Regulations title 40, Parts 144 to 146. (Cal. Code Regs., tit. 27, § 20090(c).)

d. Soil Amendments—Use of nonhazardous decomposable waste as a soil amendment pursuant to applicable best management practices, provided that Regional Water Boards may issue waste discharge or reclamation requirements for such use. (Cal. Code Regs., tit. 27, § 20090(f).)

e. Fully Enclosed Units—Waste treatment in fully enclosed facilities, such as tanks, or in concrete lined facilities of limited areal extent, such as oil water separators designed, constructed, and operated according to American Petroleum Institute specifications. (Cal. Code Regs., tit. 27, § 20090(i).)

Table 2: Summary of Wastewater System and California Code of Regulations, Title 27 Exemptions

Example of Wastewater System Element/ Activity	Potentially Applicable Exemption(s)
Wastewater collection, treatment, storage, and disposal systems.	Section 20090 (a) Sewage, domestic wastewater, and treated effluent
Applying wastewater to evaporation ponds, storage ponds, percolation ponds, rapid infiltration basins, leach fields, seepage pits, land application areas, spray fields, etc.	Section 20090 (b) Wastewater discharges to land
Disposal of wastewater in injection wells or seepage pits.	Section 20090 (c) Underground injection
Application of treated wastewater containing suspended solids to a land application area.	Section 20090 (f) Soil amendments, nonhazardous decomposable waste
Wastewater collection, flow equalization, and treatment in a septic tank, Imhoff tank, sand/media filter, package treatment tank, aeration basin, clarifier, sludge holding/thickening tank, pumping sumps, lined sludge drying beds, etc.	Section 20090 (i) Waste treatment in fully enclosed facilities.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

32. This General Order is intended to cover both new and existing Small Domestic Systems.

    a. The adoption of this General Order for existing Small Domestic Systems is categorically exempt from the California Environmental Quality Act (CEQA) pursuant to California Code of Regulations, title 14, section 15301 (ongoing or existing projects), section 15302 (replacement or reconstruction of existing utility systems), and section 15303 (new construction or conversion of small structures).

b. For new or expanding Small Domestic Systems, the State Water Board considered the environmental impacts associated with the adoption of this General Order and prepared an Initial Study in accordance with California Code of Regulations, title 14 section 15063. Analysis in the Initial Study and early consultation with responsible and trustee agencies did not identify any significant impacts on the environment. Therefore, a Negative Declaration was prepared. The State Water Board adopted the Negative Declaration (Resolution 2014-0054) on September 23, 2014.

c. New or expanding systems are subject to further CEQA evaluation on a site-specific basis by local agencies performing CEQA evaluations of proposed projects. The potential significant environmental impacts from discharges of domestic wastewater can be mitigated to less than significant impacts by compliance with this General Order, the NOA, and any mitigation measures adopted by local agencies.

OTHER REGULATORY ISSUES

33. Dischargers that meet the criteria for coverage under State Water Board Order No. 2006-0003-DWQ, *Statewide General Waste Discharge Requirements for Sanitary Sewer Systems,* or updated order, are required to obtain coverage.

34. Consistent with Water Code section 13241, the State Water Board, in establishing the requirements contained herein, considered factors including, but not limited to, the following:

    a. Past, present, and probable future beneficial uses of water.

    b. Environmental characteristics of the hydrographic unit under consideration, including the quality of water available thereto.

    c. Water quality conditions that could reasonably be achieved through the coordinated control of all factors which affect water quality in the area.

    d. Economic considerations.

    e. The need for developing housing within the region(s).

    f. The need to develop and use recycled water.

35. Water Code section 13263(i) states, The State Water Board or a Regional Water Board may prescribe general WDRs for a category of discharges if the State Water Board or that Regional Water Board finds or determines that all of the following criteria apply to the discharges in that category:

    1) The discharges are produced by the same or similar operations.

    2) The discharges involve the same or similar types of waste.

    3) The discharges require the same or similar treatment standards.

    4) The discharges are more appropriately regulated under general WDRs than individual WDRs.

Small Domestic Systems that will be regulated under this General Order are consistent with the criteria listed above and therefore a general order is appropriate. All discharges regulated under this order will be from similar operations and will be consistent with the description of domestic wastewater as defined in Finding 8. The discharges will use similar treatment methods (e.g. screening, settling, biological treatment, clarification, and application to land). Individual WDRs are not necessary because the discharges are similar and discharge requirements would be similar if individual WDRs were issued.

36. Technical and monitoring reports specified in this General Order are required. (Wat. Code, § 13267.) Failing to furnish the reports by the due date or falsifying information in the reports, are misdemeanors that may result in assessment of civil liabilities against the Discharger. 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."

    The technical reports required by this General Order, the NOA, and the MRP are necessary to assure compliance with this General Order. The burden and cost of preparing the reports is reasonable and consistent with the interest of the state in maintaining water quality.

37. The BOD and Total Suspended Solids (TSS) effluent limitations contained in this General Order are technology based. USEPA has developed technology based effluent limits for secondary treatment for use in NPDES permits. However, pond treatment systems often cannot comply with the limits that apply to activated sludge treatment systems due to algae growth in the pond. In response, USEPA developed an equivalent to secondary treatment definition for alternative biological treatment technologies such as a trickling filter or waste stabilization pond. (40 C.F.R. §133.05). Although this General Order only authorizes discharges to land, some of the secondary treatment standards are appropriate to demonstrate that wastewater is adequately treated. For pond and/or trickling filter wastewater systems, the total suspended solids limit is not appropriate because application of algal solids to land is not a concern.

38. This General Order does not preempt or supersede the authority of municipalities, flood control agencies, or other local agencies to prohibit, restrict, or control discharges of waste subject to their jurisdiction.
39. The State Water Board has notified potential Dischargers and all other known interested parties of the intent to prescribe WDRs as described in this General Order.
40. The State Water Board, in a public meeting, has heard and considered all comments pertaining to the proposed discharge.

IT IS HEREBY ORDERED

IT IS HEREBY ORDERED that upon adoption of this General Order, WQO 97-10-DWQ is classified as in effect, but inactive for future Discharger enrollment.

Pursuant to Water Code section 13263 and 13267, the Discharger, its agents, successors, and assigns, in order to meet the provisions contained in division 7 of the Water Code and regulations adopted hereunder, shall comply with the following:

A. Prohibitions

1. The direct or indirect discharge of any wastewater to surface waters or surface water drainage courses is prohibited.
2. The use of cesspools, an excavation or device that allows wastewater infiltration into the soil without treatment, is prohibited.
3. The treatment, storage, and/or disposal of waste in or at the wastewater system shall not cause or contribute to a condition of pollution, contamination, or nuisance as defined in Water Code section 13050.
4. The discharge of wastewater other than domestic wastewater is prohibited.
5. Bypass or overflow of treated or untreated waste is prohibited.
6. The discharge of waste to land not owned, operated, or controlled by the Discharger is prohibited. An exception to this prohibition is when recycled water is used as described in a title 22 Engineering Report approved by DDW.
7. The discharge of waste classified as hazardous (Cal. Code Regs., tit. 23, § 2521(a)), or designated (Wat. Code, § 13173) is prohibited.
8. The discharge of waste in violation of, or not consistent with, the applicable Regional Water Board's Basin Plan is prohibited.
9. A physical connection between a recycled water system and a potable water system is prohibited.
10. The use of recycled water in a manner different than described in the DDW approved title 22 engineering report is prohibited.
11. Use of equipment used to convey recycled water (e.g. tanks, piping, valves,) also used for potable water supply, is prohibited.

B. Requirements by Wastewater System Type

1. All Wastewater Systems

a. The Discharger shall not discharge wastewater in excess of the flow limit(s) specified in the NOA. In no case shall the flow rate of wastewater discharged to the headworks exceed 100,000 gpd as a monthly average. Headworks are defined as the facilities where wastewater enters a wastewater treatment plant. Headworks may include bar screens, comminutors, a wet well, and pumps. Dischargers that store wastewater and apply it to an LAA during irrigation season may land apply more than 100,000 gallons per day of treated wastewater to an LAA during the irrigation season as allowed by the NOA.

b. Treatment and disposal of wastewater must demonstrate BPTC for domestic wastewater. BPTC shall be demonstrated by compliance with all of the following:

   i. Compliance with this General Order.

   ii. Compliance with effluent limitations included in this General Order.

   iii. Compliance with the NOA, which will specify the following (at a minimum):

      1. Site-specific flow limit(s).

      2. Site-specific wastewater system treatment and disposal methods provided in Section B.2 through B.8 of this General Order.

      3. Applicable Basin Plan groundwater and/or surface water limitations in addition to those provided in Section C of this General Order.

      4. Applicable effluent limitations from Section D of this General Order. For flow rates greater than 20,000 gpd, the discharge must be evaluated as described in Attachment 1 to determine if nitrogen effluent limits are required.

      5. Requirements for operation of the wastewater treatment system and disinfection requirements provided by the DDW approved title 22 Engineering Report.

      6. Water quality related mitigation measures from an approved site-specific CEQA document (if one is prepared).

c. Wastewater systems located within the geographic area[7] of an APMP are not eligible for coverage under this General Order unless the Regional Water Board's Executive Officer determines the discharge is acceptable based on site-specific conditions, the level of wastewater treatment, and/or TMDL implementation plan requirements.

---

[7] The geographic area of an APMP is established (in order of hierarchy) by an approved TMDL, an approved local agency defined APMP, or 600 feet from the water bodies listed on Table 5 or Table 6 of OWTS Policy Attachment 2.

d. The siting, design, construction, operation, maintenance, and monitoring of the wastewater system shall comply with the requirements of the applicable Regional Water Board's Basin Plan.

e. Nuisance odors shall not be perceivable beyond the property line of the wastewater treatment facility.

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

g. For systems with a design flow rate greater than 3,500 gpd, the technical report required as part of the ROWD shall be prepared by a California licensed professional civil engineer. For systems with a design flow rate less than 3,500 gpd, the technical report shall be prepared by a California licensed professional engineer or other appropriately licensed professional (e.g., a California licensed professional geologist or California registered environmental health specialist).

h. For new or expanding Small Domestic Systems within or nearby the boundaries of a centralized wastewater district or regional service area, the Discharger must demonstrate a good faith effort to connect to the centralized system when feasible and practicable, and provide evidence that connection to the system was not approved.

i. A Regional Water Board Executive Officer may require additional investigations or monitoring to demonstrate beneficial uses of water are protected and antidegradation requirements are satisfied. Acceptable methods may include, but not be limited to, evaluation of the wastewater system's treatment performance, groundwater monitoring, or additional sampling to characterize the wastewater discharge.

j. The Discharger shall comply with any water quality related mitigation measures adopted in a CEQA document addressing the facility.

k. When producing or using recycled water, the Discharger shall comply with the provisions of the DDW approved title 22 Engineering Report.

l. The Discharger shall comply with the setbacks described in Table 3. However, some existing sites may not comply with the setbacks provided herein. Such noncomplying sites may be permitted under this General Order if nuisance conditions do not result from the noncompliance. Expansion of a noncomplying wastewater system shall trigger further evaluation of the setbacks. In some cases, more than one setback standard exists. The following procedure shall be implemented when determining the appropriate setback:

    i. When the setback requirement comes from title 22, approval of a variance must be obtained from DDW.

ii. When the setback comes from the California Well Standards, a reduced setback may be allowed based on site-specific conditions; review the California Well Standards for clarification.

iii. When the setback comes from the OWTS Policy, the Regional Water Board Executive Officer may allow a reduced setback based upon site-specific conditions (e.g. annular seal in a well, groundwater flow direction near water bodies, treatment/disinfection level of wastewater, etc.).

iv. When the setback comes from the California Plumbing Code, the Regional Water Board Executive Officer may not reduce the setback.

v. Setbacks that are not referenced to a requirement listed above are based on professional judgment and may be revised by the Regional Water Board Executive Officer based on site-specific conditions.

Table 3: Summary of Wastewater System Setbacks

Equipment or Activity	Domestic Well	Flowing Stream [a]	Ephemeral Stream Drainage [b]	Property Line	Lake or Reservoir [d]
Septic Tank, Aerobic Treatment Unit, Treatment System, or Collection System [e]	150 ft. [y] 100 ft.[o] 50 ft.[c]	50 ft.[c]	50 ft.	5 ft.[c]	200 ft.[w] 50 ft.[c]
Leach Field [f]	100 ft.[o,c]	100 ft.[c]	50 ft.	5 ft.[c]	200 ft.[w] 100 ft.[c]
Seepage Pit	150 ft.[o,c]	150 ft.[c]	50 ft.	8 ft.[c]	200 ft.[w] 150 ft.[c]
LAND APPLICATION AREA REQUIREMENTS					
LAA (disinfected tertiary recycled water) [g]	50 ft.[m]	25 ft.	50 ft.	25 ft.	200 ft.
LAA (disinfected sec-2.2 or sec-23 recycled water) [h]	100 ft.[r]	50 ft.	50 ft.	100 ft.[x] 50 ft.[p]	200 ft.
LAA (undisinfected secondary recycled water) [i]	150 ft.[s]	100 ft.	100 ft.	100 ft.[x] 50 ft.[p]	200 ft.
Spray Irrigation (disinfected tertiary recycled water) [k]	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 AND/OR TREATMENT PONDS					
Impoundment (disinfected tertiary recycled water) [g]	100 ft.[t]	100 ft.	100 ft.	50 ft.	200 ft.
Impoundment (disinfected sec-2.2 or sec-23 recycled water) [h]	100 ft.[r]	100 ft.	100 ft.	50 ft.	200 ft.
Impoundment (undisinfected secondary recycled water) [i]	150 ft.[s]	150 ft.	150 ft.	50 ft.	200 ft.

LAA denotes Land Application Area. Sec denotes secondary.

[a] 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.

[b] 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

features. The ephemeral stream shall be a "losing stream" (discharging surface water to groundwater) at the proposed wastewater system site.

[c] Setback established by California Plumbing Code, Table K-1.

[d] Lake or reservoir boundary measured from the high water line.

[e] Septic Tank, Aerobic Treatment Unit, Treatment System, or Collection System addresses equipment located below ground or that impedes leak detection by routine visual inspection.

[f] Leach Field includes all subsurface dispersal systems, including mound systems except seepage pits.

[g] Disinfected tertiary recycled water is defined in California Code of Regulations, title 22, section 60301.230.

[h] 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.

[i] Undisinfected secondary recycled water is defined in California Code of Regulations, title 22, section 60301.900.

[k] Additional restrictions for spray irrigation of recycled water are contained in California Code of Regulations, title 22, section 60310(f)

[m] Setback established by California Code of Regulations, title 22, section 60310(a). A reduced setback is allowed as described in California Code of Regulations, title 22, section 60310(a) if all the conditions in the section are met and compliance is documented in the ROWD and NOA.

[o] California Well Standards, part II, section 8. Site-specific conditions may allow reduced setback or require an increased setback. See discussion in Well Standards.

[p] Setback for drip or flood application methods. Spray irrigation is subject to additional setbacks and restrictions. (See footnote k.)

[r] Setback established by California Code of Regulations, title 22, section 60310(c).

[s] Setback established by California Code of Regulations, title 22, section 60310(d).

[t] Setback established by California Code of Regulations, title 22, section 60310(b).

[w] Setback established by the Onsite Wastewater Treatment System Policy, section 7.5.5.

[x] Setback established by California Code of Regulations, title 22, section 60310(f).

[y] Setback established by Onsite Wastewater Treatment System Policy, section 7.5.6.

2. Septic Systems

a. Gauging and limited repairs may be performed by homeowners or contractors as allowed by the Business and Professions Code (Bus. & Prof. Code, section 7044 and/or section 7048). With certain exceptions, anyone performing construction work in California must be licensed by the California Contractors' State License Board. Septic tank and/or leach field service (repairs, pumping, etc.) shall be performed only by a California licensed General Engineering (A), Plumbing (C-36), or Sanitation System (C-42) contractor. The Discharger shall maintain a record of all septic service activities for a minimum of five years. At a minimum, the record shall include the date, nature of service, service company name, and service company state contractor license number.

   Health and Safety Code sections 117400 - 117450 require septic tank pumping to be registered by the jurisdiction where work is performed. Such service providers may be exempt from the state contractor's licensing requirements if meeting the exceptions described in the Business & Professions Code section 7044 and/or 7048.

b. Owners and/or operators of wastewater systems that accept wastes from RVs or other mobile waste systems must ensure that such wastes do not deleteriously affect the wastewater system or adversely affect beneficial uses of groundwater

with holding tank additives that may contain, among other chemicals, formaldehyde, zinc, and/or phenol.

Use of holding tank chemicals shall be discouraged by the wastewater system owner/operator. Education of visitors can be accomplished by providing an information sheet upon check-in. Information on holding tank chemicals is provided in Attachment B2. The sale or provision of such additives by the Discharger to operators of RVs served by the Discharger's wastewater facility may be determined to be evidence of noncompliance with this section.

c. To the maximum extent possible, RV, portable toilet, or similar wastes shall not be discharged to a septic tank or functionally equivalent system (e.g. Imhoff tank) without subsequent additional treatment (e.g., aerated pond, recirculating sand filter, etc.) prior to disposal.

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

   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.

e. Septage is the liquid, solid, and semisolid material that results from wastewater treatment in a septic tank, which must be pumped, hauled, treated, and disposed of properly. (40 C.F.R. § 503.) Septage disposal shall only be to a legal disposal site that has been issued WDRs by a Regional Water Board allowing septage disposal. Septage shall be handled in such a manner as to prevent its reaching surface waters or watercourses.

3. Aerobic Treatment Units

a. Within **90 days** of the issuance of an NOA, the Discharger shall submit a Sludge Management Plan consistent with the requirements of Provision E.1.c of this General Order. The Discharger must obtain written approval from the Regional Water Board's Executive Officer prior to any disposal of sludge. The Executive Officer shall be notified of any changes in an approved Sludge Management Plan at least **90 days** in advance of the proposed change.

b. Modifications to a Sludge Management Plan deemed part of an emergency action shall be noticed to the Regional Water Board Executive Officer within **five days** of disposal with a rationale for the emergency modification.

c. Gauging and limited repairs may be performed by homeowners or contractors as allowed by the Business and Professions Code (Bus. & Prof. Code, §§ 7044, 7048). With certain exceptions, anyone performing construction work in California must be licensed by the California Contractors' State License Board. Septic tank, aerobic treatment unit, and/or leach field service (repairs, pumping, etc.) shall be performed only by a California licensed General Engineering (A), Plumbing (C-36), or Sanitation System (C-42) contractor. The Discharger shall maintain a record of all service activities for a minimum of five years. At a minimum, the record shall

include the date, nature of service, service company name, and service company state contractor license number.

Health and Safety Code sections 117400 - 117450 require septic tank pumping to be registered by the jurisdiction where work is performed. Such service providers may be exempt from the state contractor's licensing requirements if meeting the exceptions described in the Business & Professions Code section 7044 and/or 7048.

d. Owners and/or operators of wastewater systems that accept wastes from RVs or other mobile waste systems must ensure that such wastes do not deleteriously affect the wastewater system or adversely affect beneficial uses of groundwater with holding tank additives that may contain, among other chemicals, formaldehyde, zinc, and/or phenol.

   Use of holding tank chemicals shall be discouraged by the wastewater system owner/operator. Education of visitors can be accomplished by providing an information sheet upon check-in. Information on holding tank chemicals is provided in Attachment B2. The sale or provision of such additives by the Discharger to operators of RVs served by the Discharger's wastewater facility may be determined to be evidence of noncompliance with this section.

e. Aerobic treatment units shall be pumped when any one of the following conditions exists :

   i. The combined thickness of sludge and scum exceeds one-third of the tank depth of the final settling tank or interferes with the operation of the system (mixed liquor[8] aerator solids shall not exceed the manufacturer's recommendation).

   ii. The scum layer is within 3 inches of the outlet device.

   iii. The sludge layer is within 8 inches of the outlet device.

f. Septic tanks (a septic tank may be used as a pretreatment step to minimize the amount of solids discharged to an aerobic treatment unit) shall be pumped when any one of the following conditions exists:

   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.

g. Septage is the liquid, solid, and semisolid material that results from wastewater treatment in a septic tank, which must be pumped, hauled, treated, and disposed

[8] When the activated sludge in an aeration tank is mixed with primary effluent or raw wastewater and return sludge, this mixture is referred to as mixed liquor when it is in the aeration tank.

of properly. (40 C.F.R. § 503.) Septage disposal shall only be to a legal disposal site that has been issued WDRs by a Regional Water Board allowing septage disposal. Septage shall be handled in such a manner as to prevent its reaching surface waters or watercourses.

4. Activated Sludge Systems

a. Within **90 days** of the issuance of an NOA, the Discharger shall submit a Sludge Management Plan consistent with the requirements of Provision E.1.c of this General Order. The Discharger must obtain written approval from the Regional Water Board's Executive Officer prior to any disposal of sludge. The Executive Officer shall be notified of any changes in an approved Sludge Management Plan at least **90 days** in advance of the proposed change.

b. Modifications to a Sludge Management Plan deemed part of an emergency action shall be noticed to the Regional Water Board's Executive Officer within **five days** of disposal with a rationale for the emergency modification.

5. Pond Systems

a. Sufficient freeboard shall be maintained at all times in ponds to provide adequate storage capacity and prevent wastewater spills. Freeboard shall be measured vertically from the lowest elevation of the pond berm to the pond water surface. If freeboard is less than one foot, the discharger shall immediately implement the contingency plan contained in the *Spill Prevention and Emergency Response Plan* (Provision E.1.a).

b. Pond systems shall have sufficient capacity to accommodate wastewater, design seasonal precipitation, ancillary I/I, and wind driven waves. Design seasonal precipitation shall be based on the following precipitation criteria:

i. If wastewater spills do not occur, existing pond systems may continue to operate at their present size if they are covered under individual WDRs, a general order issued by a Regional Water Board, or by WQO 97-10-DWQ. If wastewater spills do occur, the Executive Officer may require the pond size requirement to be consistent with the specification defined in Pond Systems 5.b.ii (below).

ii. For new or expanding pond systems covered under this General Order, seasonal precipitation used in the pond sizing water balance calculations shall be based on the following:

a. The 100-year return annual total precipitation value distributed monthly in accordance with average (mean) precipitation values. The calculations shall demonstrate adequate capacity to maintain two feet of freeboard in the pond(s).

b. The Executive Officer may allow a lower standard for the return annual total precipitation value, with approval of a technical report describing how operation of the wastewater system will not result in wastewater spills. In no case shall the Executive Officer allow less than a 50-year

return annual total precipitation value. If the Discharger seeks relief from the 100-year return annual total precipitation value, the Discharger shall certify that the *Spill Prevention and Emergency Response Plan* (Provision E.1.a) has been prepared, and is adequate to respond to forecast conditions using the 100-year return annual total precipitation value distributed monthly in accordance with average (mean) precipitation values. The calculations shall demonstrate adequate capacity to maintain two feet of freeboard in the pond(s).

c. All ponds shall be managed to mitigate breeding of mosquitoes including, but not limited to the following:

   i. An erosion control program shall be implemented to ensure that small coves and irregularities are not created around the perimeter of the water surface.

   ii. Weeds shall be minimized through control of water depth, a shoreline synthetic liner, harvesting, or herbicides.

   iii. Dead algae, vegetation, and debris shall be removed from the water surface.

   iv. Coordination with the local mosquito abatement or vector control district to supplement the measures described above in cases where other methods are infeasible.

d. Objectionable odors shall not create nuisance conditions beyond the limits of the wastewater treatment facility. A dissolved oxygen concentration less than 1.0 mg/L in the upper one foot of any wastewater pond shall be evidence of the potential to generate objectionable odors.

e. Burrowing animals active in areas that may compromise the integrity of a pond containment shall be promptly controlled and repairs to the containment completed as soon as possible.

f. Prior to any removal, drying, treatment, or disposal of sludge for pond maintenance, the Discharger shall submit a Sludge Management Plan consistent with the requirements of Provision E.1.c and obtain written approval from the Regional Water Board's Executive Officer. The Executive Officer shall be notified of any changes in an approved Sludge Management Plan at least **90 days** in advance of the proposed change.

6. Subsurface Disposal Systems

a. Wastewater shall not surface in any location of the disposal area.

b. Subsurface disposal systems shall hold in reserve sufficient land area for possible future 100-percent replacement of the subsurface disposal system, or establish an equivalent contingency that is approved by the Regional Water Board's Executive Officer and described in the NOA. If less than 100-percent replacement area was previously permitted under existing individual WDRs, WQO 97-10-DWQ, or a local agency permit, the minimum reserve area previously permitted shall be maintained.

c. No part of the disposal system(s) shall extend to a depth where waste may pollute groundwater.

d. All new or rehabilitated disposal areas associated with effluent pressure distribution systems (pressure-dosed systems) shall be equipped with cleanouts or a flushing system to allow solids to be removed from distribution pipes and orifices when needed.

e. Deep rooted plants such as trees or shrubs shall be removed as needed from a subsurface disposal system area to prevent damage to the dispersal system by roots.

f. Burrowing animals active in areas that may result in wastewater leakage from an at-grade or above grade (mound) disposal system shall be promptly controlled and repairs to the disposal system completed as soon as possible.

g. Subsurface disposal systems including leach fields and seepage pits, must comply with USEPA Underground Injection Control requirements when classified as a Class V well. Subsurface disposal systems with at least one of the following characteristics are classified as Class V wells:

   i. The system has the capacity to serve 20 or more persons per day.

   ii. The system receives wastewater other than domestic wastewater such as that generated by manufacturing, chemical processing, industrial fluid disposal, automotive repair, or recycling.

   iii. The system receives sewage containing biological agents (such as wastewater from recreational vehicles or portable toilets).

   Disposal systems that are classified as Class V wells must be registered with USEPA either by completing the online form at: http://www.epa.gov/region09/water/groundwater/injection-wells-register.html , or by completing and submitting Form 7520-16: Inventory of Injection Wells. Form 7520-16 is available at: http://epa.gov/region09/water/groundwater/uic-pdfs/7520-16.pdf .

h. Limited repairs may be performed by homeowners or contractors as allowed by the Business and Professions Code (Bus. & Prof. Code, §§ 7044, 7048). With certain exceptions, anyone performing construction work in California must be licensed by the California Contractors' State License Board. Leach field repairs shall be performed only by a California licensed General Engineering (A), Plumbing (C-36), or Sanitation System (C-42) contractor. The Discharger shall maintain a record of all repair activities for a minimum of five years. At a minimum, the record shall include the date, nature of repair, service company name, and service company state contractor license number.

7. Land Application and/or Recycled Water Systems

a. Wastewater shall not be applied to an LAA within 24 hours of forecasted precipitation with a greater than 50-percent probability of occurring, during precipitation events, or when the LAA surface soil is saturated.

b. Spray irrigation with treated wastewater is prohibited when wind speed (including gusts) exceeds 30 miles per hour. Wind speed may be measured onsite or at a nearby weather station operated by a governmental organization.

c. Discharge of wastewater from an LAA is prohibited.

d. If undisinfected wastewater is applied to an LAA, storm water runoff from the LAA is prohibited.

e. If storm water is allowed to runoff from an LAA (during the time of year wastewater is not applied), all applied wastewater shall meet disinfection requirements at a level equivalent to disinfected secondary-23 recycled water. (Cal. Code Regs., title 22, § 60301.225.) Land application of more highly treated water is acceptable. Alternatively, a Discharger may submit a technical report, for Executive Officer approval, describing how the LAA will be operated to prevent pathogens from migrating off the LAA with stormwater.

f. If recycled water is applied, it shall comply with the title 22 water recycling criteria, this General Order, the NOA, a title 22 Engineering Report, and any DDW approval conditions.

g. Public contact with wastewater/recycled water shall be precluded through use of fences, signs, and/or other appropriate means. All public use areas where recycled water is used shall be posted with signs that are visible, in a size no less than 4 inches by 8 inches and include the following wording, “Recycled Water – Do Not Drink.” (Cal. Code Regs., tit. 22, § 60310(g).)

h. Land application areas shall be managed to mitigate breeding of mosquitoes including, but not limited to the following:

   i. There shall be no standing water 48 hours after application of wastewater.

   ii. Tailwater ditches must be maintained essentially free of emergent, marginal, or floating vegetation.

   iii. Low-pressure and unpressurized pipelines and ditches accessible to mosquitoes shall not be used to store wastewater or recycled water.

   iv. Coordination with the local mosquito abatement or vector control district to supplement the measures described above in cases where other methods are infeasible.

8. Sludge/Solids/Biosolids Disposal

a. Sludge means the solid, semisolid, and liquid residues removed during primary, secondary, or other wastewater treatment processes. Solid waste refers to grit and screenings generated during preliminary treatment. Residual sludge means

sludge that will not be subject to further treatment at the wastewater system. Biosolids refers to sludge that has undergone sufficient treatment and testing to qualify for reuse pursuant to the USEPA Part 503 Biosolids Rule. (40 C.F.R. § 503.)

b. Sludge and solid waste shall be removed from screens, sumps, tanks, and ponds as needed to ensure optimal plant operation.

c. Treatment and storage of sludge shall be confined to the wastewater system property, and shall be conducted in a manner that precludes infiltration of waste constituents into soil in a mass or at concentrations that will violate the groundwater limitations of this General Order.

d. Any storage of residual sludge, solid waste, or biosolids at the wastewater system shall be temporary, and the waste shall be controlled and contained in a manner that minimizes leachate formation and precludes infiltration of waste constituents into soils in a mass or at concentrations that will violate the groundwater limitations of this General Order.

e. Residual sludge, and solid waste shall be disposed of in a manner approved by the appropriate Regional Water Board's Executive Officer and consistent with the Consolidated Requirements for Treatment, Storage, Processing, or Disposal of Solid Waste. (Cal. Code Regs., tit. 27 div. 2.) Removal for further treatment, disposal, or reuse at disposal sites operated in accordance with valid WDRs issued by the State Water Board or Regional Water Board will satisfy this specification.

f. Use and disposal of biosolids shall comply with the USEPA Part 503 Biosolids Rule. (40 C.F.R. § 503.)

C. Groundwater and Surface Water Limitations

1. The discharge shall not

a. Pollute groundwater or surface waters.

b. Adversely affect beneficial uses of groundwater or cause an exceedance of any applicable Basin Plan water quality objectives for groundwater or surface water.

D. Effluent Limitations

1. The discharge shall not:

a. Exceed any of the applicable effluent limitations presented in Table 4. Effluent limitation selection is a two-step process. Step one is based upon the treatment technology employed; step two applies only to systems with a flow rate greater than 20,000 gpd and is based upon an evaluation of the need for a nitrogen effluent limit (as described in Attachment 1). Low and high threat are defined in Attachment 1. The limits presented below are average monthly limits unless otherwise specified.

Table 4: Effluent Limitations for Wastewater Treatment Systems

Step 1 - Effluent Limitations Based on Technology Performance		
Activated Sludge, MBR, or similar (not including residential aerobic treatment units)		
Constituent	Units	Limit
BOD	mg/L	30 (monthly average), 45 (7-day average)
TSS	mg/L	30 (monthly average), 45 (7-day average)
Wastewater Pond or Trickling Filter [1] (not including residential recirculating sand filters)		
Constituent	Units	Limit
BOD	mg/L	90 [2]
TSS	--	Not Applicable

Step 2 - Effluent Limits Based on Low/High Threat Situation (flow rate >20,000 gpd)		
Constituent	Units	Limit
Total N	mg/L	--
Low Threat	mg/L	50 % [3]
High Threat	mg/L	10

BOD denotes biochemical oxygen demand; TSS denotes total suspended solids; MBR denotes membrane biological reactor. Residential denotes a single family home, property caretaker's home, a home with an associated residence (e.g. mother in law unit), or similar, with a flow rate less than 400 gpd. "—" denotes not applicable.

1. Limit applies when treated wastewater is applied to an LAA or to a subsurface disposal system.
2. The limit is based on a 65-percent reduction of incoming BOD. An incoming BOD of 250 mg/L was used to calculate the value.
3. The value represents the minimum percent reduction compared to the untreated wastewater value. Reduction shall be calculated on an annual basis. In no case shall the reduction result in an effluent limit lower than 10 mg/L total nitrogen.

E. Provisions

1. Technical Report Preparation Requirements

a. **Within 90 days** of the issuance of an NOA, aside from residential septic tanks serving four or fewer residences, the Discharger shall prepare and implement a *Spill Prevention and Emergency Response Plan* (Response Plan) that describes operation and maintenance activities to prevent accidental releases of wastewater, and to effectively respond to such releases, minimizing the environmental impact. At a minimum, the Response Plan shall address the following:

i. Operation and Control of Wastewater Treatment - A description of the wastewater treatment equipment, operational controls, flow measurement and calibration procedures, and treatment system schematic including valve/gate locations.

ii. Sludge Handling - A description of the sludge handling equipment, operational controls, and disposal procedures.

iii. Collection System Maintenance - A description of collection system cleaning and maintenance, equipment tests, and alarm functionality tests to minimize the potential for wastewater spills originating in the collection system or headworks. For collection systems subject to State Water Board Order No. 2006-0003-DWQ, reports prepared to comply with the State Water Board Order No. 2006-0003-DWQ satisfy this requirement.

iv. Emergency Response - A description of emergency response procedures including for emergencies such as power outage, severe weather, flooding, or inadequate freeboard (for systems with wastewater or recycled water ponds). An equipment and telephone list for contractors/consultants, emergency personnel, and equipment vendors.

v. Notification Procedures - Coordination procedures with fire, police, Governor's Office of Emergency Services (CalOES), Regional Water Board, and local county health department personnel.

The Response Plan shall be maintained at the treatment facility and shall be presented to the Regional Water Board staff upon request.

b. **Within 90 days** of the issuance of an NOA containing an MRP, the Discharger shall prepare and implement a written sampling and analysis plan (SAP) sufficient to assure compliance with the terms of this General Order and the NOA. Anyone performing sampling on behalf of the Discharger shall be familiar with the SAP. SAPs shall address the need for sample filtration and how filtration will be accomplished. When sampling groundwater or liquid waste, the chemical constituents available to migrate shall be considered. In general, dissolved waste constituents can migrate through soil to groundwater or surface water. In cases where the waste only threatens groundwater, samples shall be filtered prior to chemical preservation, digestion, or analysis for some analytes. If overland flow of liquid waste to surface water is possible, the total constituent concentrations may be available for movement and analyses shall be conducted on unfiltered samples.

At a minimum, the SAP shall describe the following:

i. Sample chain-of-custody procedures and documentation.

ii. Sampling locations.

iii. Sampling frequencies.

iv. Sample handling/preservation procedures.

v. Analytical methods.

vi. Sample containers, preservatives, and holding times.

vii. For groundwater monitoring, well purging and field methods.

The SAP shall be maintained at the treatment facility and shall be presented to the Regional Water Board staff upon request or as required by the NOA.

c. **Within 90 days** of the issuance of an NOA directing preparation, the Discharger shall submit and implement a Sludge Management Plan. At a minimum, the plan shall describe the following:

   i. Estimate the amount of sludge and scum that will be generated.

   ii. Describe how sludge, scum, and supernatant will be stored and disposed of to protect groundwater quality.

   iii. If sludge will be subject to further treatment, describe the treatment and storage requirements.

   iv. Describe cleaning of digesters or storage vessels and the treatment and disposal of the residuals. If drying of residuals is planned, describe how that will be performed to prevent nuisance odors, prevent vectors, and protect groundwater quality.

   The Sludge Management Plan shall be maintained at the treatment facility and shall be presented to the Regional Water Board staff upon request or as required by the NOA.

d. If directed by the Regional Water Board Executive Officer pursuant to Water Code section 13267, a discharger shall prepare and submit a Salt and Nutrient Management Plan, to ensure that the overall impact of treated wastewater and/or water recycling projects does not degrade groundwater resources. Unless otherwise directed by the Regional Water Board Executive Officer, in lieu of developing an individual Salt and Nutrient Management Plan the discharger shall participate in a Regional Water Board's existing salt and nutrient management planning effort to meet the requirements of this provision.

2. For All Wastewater Systems:

a. Bypass (the intentional diversion of waste streams from any portion of a treatment facility) is prohibited. The Regional Water Board and/or the Executive Officer may take enforcement action against the Discharger for bypass unless:

   i. Unavoidable and/or Unscheduled Bypass

      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage. (Severe property damage means substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production), and

2. There were no feasible alternatives to bypass, such as the use of auxiliary treatment facilities or retention of untreated waste. This condition is not satisfied if adequate backup equipment or wastewater storage facilities should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that would otherwise occur during normal periods of equipment downtime or preventive maintenance; or

ii. Scheduled Bypass

1. Bypass is required for essential maintenance to assure efficient operation,
2. Neither effluent nor groundwater limitations are exceeded,
3. The Discharger notifies the Regional Water Board's Executive Officer **10 days** in advance, and
4. The prohibition against discharge to surface water is not violated.

b. A Discharger that wishes to establish the affirmative defense of an upset (see definition in Provision E.5.a) in an action brought for noncompliance shall demonstrate, through properly signed, contemporaneous operating logs, or other evidence, that all of the following is true:

i. An upset occurred and the cause(s) can be identified.

ii. The permitted facility was being properly operated at the time of the upset.

iii. The Discharger submitted notice of the upset as required in Provision E.3.a.

iv. The Discharger complied with any remedial measures required by this General Order, the NOA, or direction from the Regional Water Board's Executive Officer. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof.

c. A Discharger whose wastewater flow rate has been increasing, or is projected to increase, shall estimate when the flow rate will reach hydraulic and treatment capacities of its treatment, collection, and disposal facilities. The projections shall be made in January, based on the last 3 years average dry weather flow rates, peak wet weather flow rates, and total annual flow rates, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in 4 years, the Discharger shall notify the Regional Water Board's Executive Officer by March 1st. Providing the notification in an annual report is acceptable.

d. The requirements prescribed herein do not authorize the commission of any act causing damage to the property of another, or protect the Discharger from liabilities under federal, state, or local laws. This General Order does not convey any property rights or exclusive privileges and does not create a vested right to continue to discharge wastewater.

e. This General Order does not relieve the Discharger from responsibility to obtain other necessary local, state, or federal permits to construct facilities necessary for compliance with this General Order, nor does this General Order prevent imposition of additional standards, requirements, or conditions by any other agency.

f. The prohibitions, requirements, limitations, and provisions of this General Order are severable. If any provision of this General Order is held invalid, the remainder of this General Order shall not be affected.

g. To the maximum extent possible, the wastewater system shall be sited and/or designed to prevent flood or surface water from inundating wastewater ponds or otherwise render the wastewater system inoperable. For design purposes, the most recent Federal Emergency Management Agency (FEMA) approved 100-year base flood elevations shall be used.

h. The Discharger shall ensure that all site operating personnel are familiar with the contents of the wastewater system NOA, this General Order, and the title 22 Engineering Report (for recycled water uses when applicable). A copy of this General Order, the NOA, and technical reports required by this General Order (not including previously submitted monitoring reports) shall be kept at the wastewater treatment facility for reference by operating personnel.

i. Access to the wastewater system shall be limited to authorized persons.

j. The Discharger shall comply with all of the conditions of this General Order. Any noncompliance with this General Order constitutes a violation of the Porter-Cologne Water Quality Control Act and/or appropriate Regional Water Board's Basin Plan and may be grounds for an enforcement action.

k. Wastewater facilities shall be supervised and operated by persons possessing a wastewater treatment operator certificate of the appropriate grade. (Cal. Code Regs., tit. 23, div. 3, ch. 26.) The definition of wastewater treatment plant in the wastewater treatment plant classification, operator certification, and contract operator registration regulations excludes treatment systems that use subsurface disposal.

l. The State Water Board will review this General Order periodically and will revise requirements when necessary.

m. After notice and opportunity for a hearing, coverage of this General Order may be terminated or modified for cause including, but not limited to, any of the following:

    i. Violation of any of the terms or conditions contained in this General Order.

    ii. Obtaining this General Order by misrepresentation, or failure to disclose fully all relevant facts.

    iii. A change in any condition that results in either a temporary or permanent need to reduce or eliminate the authorized discharge.

iv. A material change in the character, location, or volume of discharge.

n. Before making a material change in the character, location, or volume of discharge, the Discharger shall notify the Regional Water Board Executive Officer. A material change includes, but is not limited to, any of the following:

   i. An increase in area or depth used for waste disposal beyond that specified in the NOA.

   ii. A significant change in disposal method, location, or volume (e.g., change from land application to percolation pond).

   The Regional Water Board's Executive Officer may require that an ROWD be submitted.

o. At least **90 days** prior to termination or expiration of any lease, contract, or agreement involving disposal or recycling areas or off-site reuse of effluent, used to justify the capacity authorized herein and assure compliance with this General Order, the Discharger shall notify the Regional Water Board's Executive Officer in writing of the situation and of what measures have been taken or are being taken to assure full compliance with this General Order and the NOA.

p. Except for material determined to be confidential in accordance with California law, all reports prepared in accordance with terms of this General Order shall be available for public inspection at the offices of the Regional Water Board. Data on waste discharges, water quality, geology, and hydrogeology are not confidential.

q. The Discharger shall take all reasonable steps to minimize any adverse impact to waters of the state resulting from noncompliance with this General Order. Such steps shall include accelerated or additional monitoring as necessary to determine the nature and impact of the noncompliance.

r. The Discharger shall maintain in good working order, and operate as efficiently as possible any facility, control system, or monitoring device installed to achieve compliance with this General Order and the NOA.

s. The Discharger shall permit representatives of the Regional Water Board and/or the State Water Board, upon presentation of credentials, to:

   i. Enter premises where wastes are treated, stored, or disposed of, and facilities in which any records are kept.

   ii. Copy any records required under terms and conditions of this General Order.

   iii. Inspect at reasonable hours, monitoring equipment required by this General Order.

   iv. Sample, photograph, and/or video record any discharge, waste material, waste treatment system, or monitoring device.

t. For any electrically operated equipment at the site, the failure of which would cause loss of control or containment of waste materials, or violation of this General Order, the Discharger shall employ safeguards to prevent loss of control over wastes. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means.

u. The fact that it would have been necessary to halt or reduce the permitted activity to maintain compliance with this General Order shall not be a defense for the Discharger's violations of the General Order.

v. The discharge shall remain within the disposal area designated in the NOA at all times. (With the exception of activities allowed in an approved title 22 Engineering Report.)

w. In the event of 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 Regional Water Board's Executive Officer.

x. The Discharger shall pay an annual fee to the State Water Board in accordance with the fee schedule for each fiscal year. (Cal. Code Regs., tit. 23, § 2200.) Fees are based on threat to water quality and complexity ratings, will be determined based on information in the ROWD, and are subject to revision by the State Water Board. Annual invoices are issued by the State Water Board for the state fiscal year (July 1 to June 30).

3. General Reporting Requirements:

a. If the Discharger does not comply, or will be unable to comply, with a limit related to effluent quality, pond freeboard, flow rate, the title 22 engineering report requirements, or bypass or overflow issues, the Discharger shall notify the Regional Water Board staff by telephone. Current phone numbers for Regional Water Board offices may be found on the NOA or on the Internet at:

http://www.waterboards.ca.gov/about_us/contact_us/docs/rwqcbs_directory.pdf

Notification shall occur as soon as the Discharger or its agents have knowledge of such noncompliance or potential for noncompliance, and the Discharger shall confirm this notification in writing within **10 days**. The written notification shall state the date, time, nature, cause of noncompliance, immediate response action, and a schedule for corrective actions.

b. In the event of a wastewater containment failure, the Discharger shall immediately notify CalOES. Notification shall be provided as soon as possible and when the notice can be provided without substantially impeding cleanup or other emergency measures. (Wat. Code, § 13271.) A written report to the Regional Water Board's Executive Officer shall be submitted within **10 days** of the failure describing the cause of the failure and how a recurrence will be prevented. Such a failure shall be promptly corrected in accordance with the requirements of this General Order.

c. All reports submitted in response to this General Order, including monitoring reports, shall be signed by a person identified below:

   i. For a private residence: by the property owner of the residence.

   ii. For a corporation: by a principal executive officer of at least the level of senior vice-president.

   iii. For a partnership or sole proprietorship: by a general partner or the proprietor.

   iv. For a municipality, state, federal, or other public agency: by either a principal executive officer or ranking elected or appointed official.

   v. A duly authorized representative of a person described above if all of the following are completed:

      1) The authorization is made in writing by a person described above.

      2) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a waste management unit, superintendent, or position of equivalent responsibility. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)

      3) The written authorization is submitted to the Regional Water Board.

   Any person signing a document under this section shall make the following certification:

   > "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."

d. The Discharger shall mail a copy of each monitoring report and any other reports required by this General Order to the appropriate Regional Water Board or provide electronic submittals of reports or data as specified by the Regional Water Board. Contact and mail address information is available on the NOA or at:

   http://www.waterboards.ca.gov/about_us/contact_us/docs/rwqcbs_directory.pdf

4. Monitoring Requirements

a. The Discharger shall comply with the MRP issued with the NOA, and any future revisions, as specified by the appropriate Regional Water Board's Executive Officer. A model MRP is provided as Attachment C. However, the Executive Officer may modify or replace the MRP for site-specific treatment and disposal conditions when issuing the NOA, or revise the MRP when deemed necessary.

b. Unless otherwise approved by the Regional Water Board's Executive Officer, all analyses shall be conducted at a laboratory certified for the analyses by the DDW Environmental Laboratory Accreditation Program. If a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided an acceptable Quality Assurance/Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance/Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

c. The results of any monitoring done more frequently than required by an MRP shall be reported in the next regularly scheduled monitoring report. Values obtained through additional monitoring shall be used in calculations as appropriate.

d. Treated wastewater samples shall be collected downstream of all treatment works where a sample representative of the discharge can be obtained prior to disposal. In some cases, it may be necessary to collect samples for different analyses from different sampling locations (e.g. immediately downstream of a disinfection system for pathogens).

e. The Discharger shall furnish, within a reasonable time, any information the Regional Water Board's staff may request to determine whether cause exists for modifying, revoking, reissuing, or terminating the Discharger's coverage under this General Order. The Discharger shall also furnish to the Regional Water Board's staff upon request, copies of records required to be kept by this General Order.

f. All noncompliance issues shall be reported with the next regularly scheduled monitoring report in addition to any other reporting requirements.

g. The Discharger shall retain records of all monitoring information, including all calibration and maintenance records, all original strip chart recordings of continuous monitoring instrumentation, copies of all reports required by this General Order, and records of all data used to complete the application for this General Order. Records shall be maintained for a minimum of **3 years** from the date of the sample, measurement, report, or application. This period may be extended during the course of any unresolved litigation regarding this discharge or when requested by the Regional Water Board's Executive Officer.

h. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed MRP shall be properly maintained and calibrated as recommended by the manufacturer to ensure their continued accuracy.

i. The Discharger shall construct all groundwater monitoring wells to meet or exceed the standards stated in Department of Water Resources' Bulletins 74-81, 74-90, and subsequent revisions unless deviation is approved by the Regional Water Board's staff or local well construction enforcing agency, and shall comply with the reporting provisions for wells. (Wat. Code, § 13751.)

5. Definitions

a. Upset means an exceptional incident in which there is unintentional and temporary noncompliance with effluent limitations because of factors beyond the reasonable control of the Discharger. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper action.

b. The monthly average flow rate is the total discharge by volume during a calendar month divided by the number of days in the month that the facility was discharging. This number shall be reported in gpd or million gallons per day.

c. 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 sample measurement is the monthly average concentration.

d. The daily maximum concentration is the highest measurement recorded for any grab or composite sample collected during a day in a calendar month.

e. The 7-day median total coliform organism value shall be calculated as the median concentration of the results for the last 7 calendar days. If only one sample is collected within a 7-day period, then that one sample becomes the 7-day median value.

f. A grab sample is an individual sample collected in less than 15 minutes.

g. Unless otherwise specified, a composite sample is a combination of individual samples collected over the specified sampling period. The method of compositing shall be reported with the results.

h. A time-weighted sample is collected at equal time intervals, with a maximum interval of one hour.

i. A flow-weighted sample is collected at varying time intervals (average interval one hour or less) so that each sample represents an equal portion of the cumulative flow. The duration of the sampling period shall be specified in the MRP.

j. A day is the mean solar day of 24 hours beginning at mean midnight. All references to day in this General Order are calendar days.

CERTIFICATION

I, Jeanine Townsend, Clerk to the Board, do hereby certify that this General Order with all attachments is a full, true, and correct copy of a General Order adopted by the State Water Board, on September 23, 2014.

AYE:	Chair Felicia Marcus Vice Chair Frances Spivy-Weber Board Member Tam M. Doduc Board Member Steven Moore Board Member Dorene D'Adamo
NAY:	None
ABSENT:	None
ABSTAIN:	None

Jeanine Townsend
Clerk to the Board

ATTACHMENT 1
NITROGEN EFFLUENT LIMIT EVALUATION
ORDER WQ 2014-0153-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS

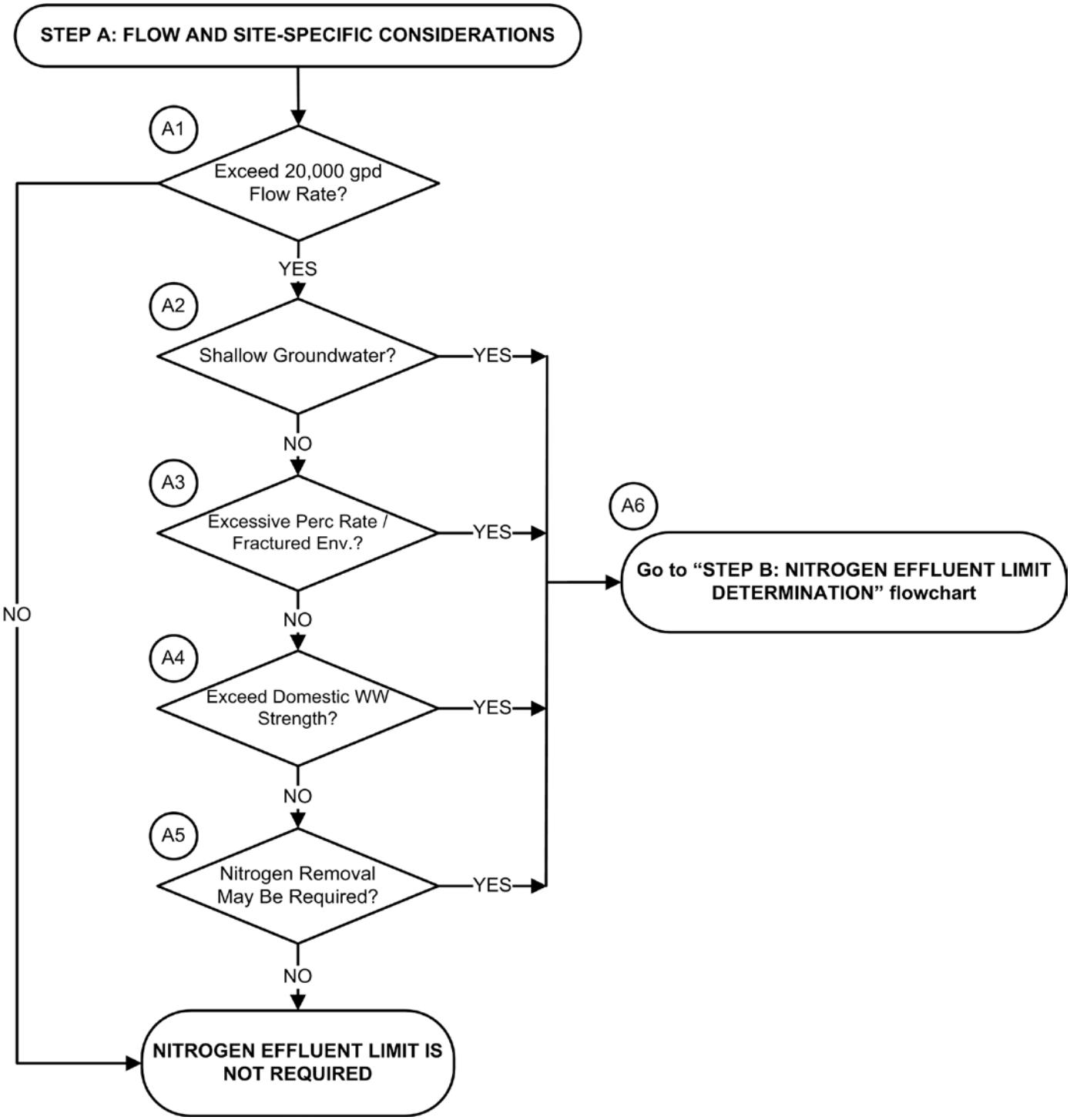
Introduction

The nitrogen effluent limit will only be imposed where required to protect beneficial uses of groundwater and surface water and shall not be selected as a default to add water quality protection where the added expense of nitrogen control is not required. It is the discharger's responsibility to provide adequate information to allow the evaluation of the need for additional treatment.

Each of the five site-specific considerations listed below shall be considered when evaluating a discharge and the need for nitrogen control. The site-specific conditions are further discussed on the explanation sheets. If each of the site-specific considerations is favorable (as discussed individually below), the facility is not required to meet an effluent limit for nitrogen.

The attached flow charts provide a method to evaluate the discharge and the receiving environment to determine the applicability of a nitrogen effluent limit. Evaluation of the need for a nitrogen effluent limit is a two-step process. In the first step, applicability of a nitrogen effluent limit is determined based on the flow rate and site-specific characteristics of the receiving environment; in the second step effluent limits are selected based on further evaluation of level of threat related to the site-specific characteristics of the discharge and the receiving environment.

To begin the evaluation start at "Step A: Flow and Site-Specific Considerations," on the following page.


STEP A: FLOW AND SITE-SPECIFIC CONSIDERATIONS
A1
Exceed 20,000 gpd Flow Rate?
YES
NO
A2
Shallow Groundwater?
YES
NO
A3
Excessive Perc Rate / Fractured Env.?
YES
NO
A4
Exceed Domestic WW Strength?
YES
NO
A5
Nitrogen Removal May Be Required?
YES
NO
A6
Go to "STEP B: NITROGEN EFFLUENT LIMIT DETERMINATION" flowchart
NITROGEN EFFLUENT LIMIT IS NOT REQUIRED

Step A – Flow and Site-Specific Considerations

The following considerations shall be evaluated to determine if a nitrogen effluent limit is appropriate.

A1 *Exceed 20,000 gpd Flow Rate?* The General Order allows a flow rate up to 100,000 gpd. However, discharges with flow rates less than 20,000 gpd are not required to meet a nitrogen effluent limit.

A2 Shallow Groundwater? Shallow groundwater conditions are defined by the OWTS Policy Table 2, *Minimum Depth to Groundwater and Minimum Soil Depth from the Bottom of the Dispersal System* (reproduced as Table 5 below).

Table 5: Minimum Depth to Groundwater and Minimum Soil Depth from the Bottom of Dispersal System

Percolation Rate [a]	Depth to Groundwater [b]
Perc Rate ≤ 1 MPI	Additional Treatment Required
1 MPI ≤ Perc Rate ≤ 5 MPI	20 Feet
5 MPI ≤ Perc Rate ≤ 30 MPI	8 Feet
30 MPI ≤ Perc Rate ≤ 120 MPI	5 Feet
Perc Rate ≥ 120 MPI	Engineered Disposal Required

a. Perc Rate denotes percolation rate. MPI denotes minutes per inch.
b. The minimum depth to groundwater is measured from the base of the infiltration surface to the seasonally high groundwater table or first saturated interval.

A3 *Excessive Percolation Rate / Fractured Environment?* An excessive percolation rate is defined as a combination of percolation rate and depth to groundwater that does not comply with the conditions presented in Table 5.

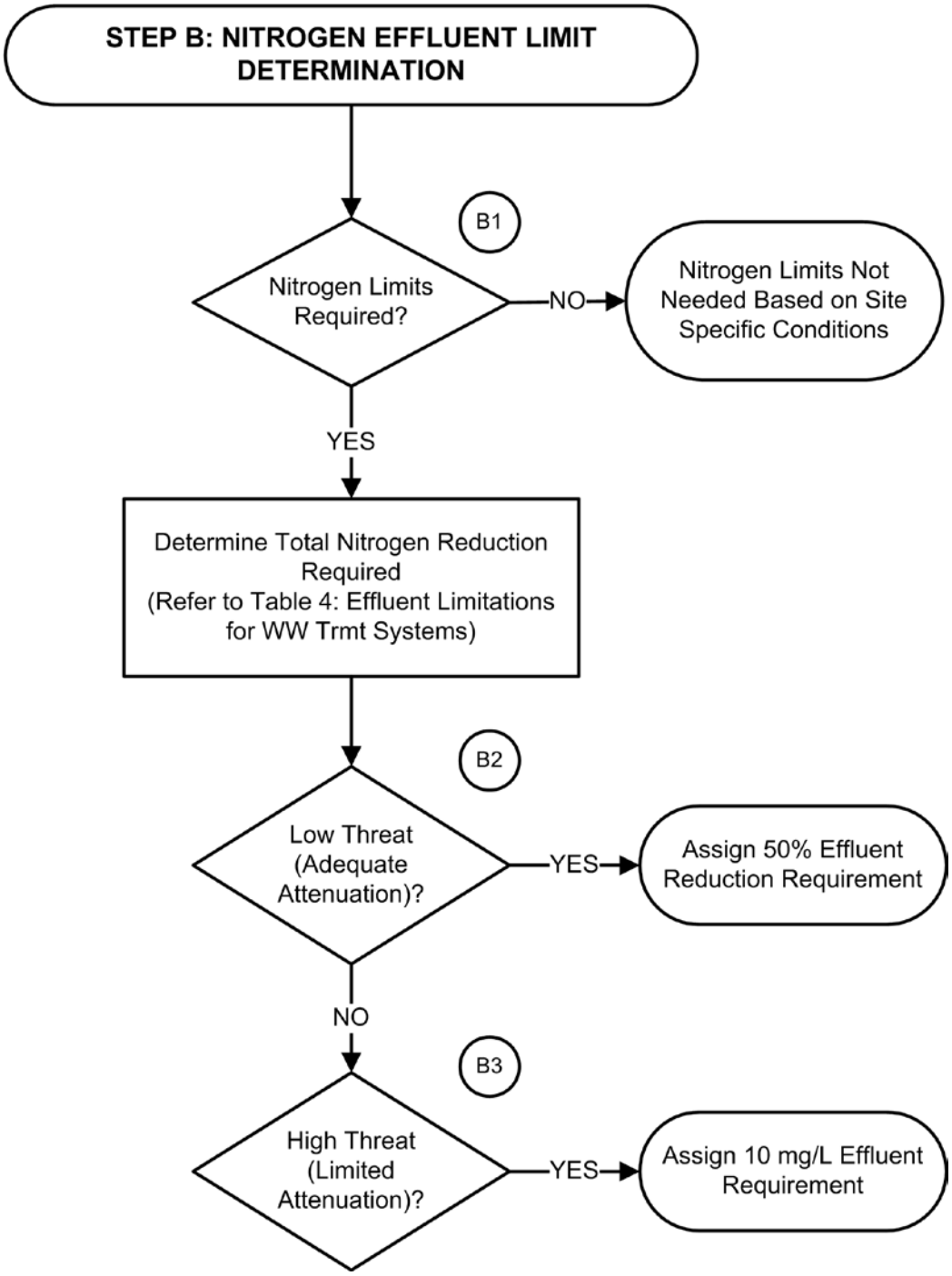
A fractured environment is defined as less permeable rock with porosity resulting from fractures that allows groundwater to flow through the fractures and has either of the following: a) No unconsolidated soil cover, or b) Unconsolidated soil cover that possesses an excessive percolation rate (that does not comply with the conditions defined in Table 5.

A4 *Exceed Domestic Wastewater Strength?* Typical domestic wastewater strength is presented in Finding 8 of the General Order. Alternative domestic wastewater strengths may be based upon other per capita flow rate assumptions. The data presented in the General Order may be used; alternative characterizations from textbook and/or governmental organizations (e.g. U.S. Environmental Protection Agency) may be acceptable at the discretion of Regional Water Quality Control Board (Regional Water Board) staff.

Some domestic wastewater streams (domestic wastewater originating in factory or warehouse situations) may exceed the typical municipal wastewater strengths due to a lack of diluting flows from showers, dishwashers, etc. Such flows are not excluded from coverage by the General Order; however, the discharge shall be evaluated to determine if nitrogen effluent limits are appropriate.

A5 *Nitrogen Removal May Be Required?* If the Regional Water Board Basin Plan or groundwater studies indicate that nitrogen is a constituent of concern, then nitrogen reduction may be required. The appropriate limit shall be based on site conditions as evaluated in Step B.

A6 *Go to "NITROGEN EFFLUENT LIMIT DETERMINATION" flowchart:* If the preliminary evaluation (Step A) indicates a nitrogen effluent limit may be required, proceed to the Nitrogen Effluent Limit Determination flowchart to determine if an effluent limit for nitrogen is required.


STEP B: NITROGEN EFFLUENT LIMIT DETERMINATION
B1
Nitrogen Limits Required?
NO
Nitrogen Limits Not Needed Based on Site Specific Conditions
YES
Determine Total Nitrogen Reduction Required
(Refer to Table 4: Effluent Limitations for WW Trmt Systems)
B2
Low Threat (Adequate Attenuation)?
YES
Assign 50% Effluent Reduction Requirement
NO
B3
High Threat (Limited Attenuation)?
YES
Assign 10 mg/L Effluent Requirement

Step B – Nitrogen Effluent Limit Evaluation

If a Regional Water Board's Basin Plan addresses the area where the site is located, the nitrogen control measures shall be consistent with the Basin Plan.

If the Step A evaluation indicated additional treatment for nitrogen control may be necessary, continue the evaluation at "Step B, Nitrogen Effluent Limit Determination."

B1 *Nitrogen Limits Required?* The initial evaluation of the need for nitrogen control (discussed in Item A5) shall include comparison of the wastewater effluent quality to groundwater quality and the potential for the wastewater discharge to cause or contribute to a condition of pollution or nuisance. The benefits of nitrogen control should be balanced with the cost of implementing nitrogen control.

Measures implemented to protect groundwater quality (e.g. equipping a pond with a synthetic or low permeability liner to reduce infiltration, using supplemental water to reduce LAA loading rates, or agronomic application of nitrogen) should be considered when determining the need for nitrogen effluent limits.

B2 *Low-Threat (Adequate Attenuation)?* In low-threat situations, the 50 percent nitrogen removal (in effluent prior to discharge) is appropriate. Low-threat situations are those where additional nitrogen removal will occur in the dispersal area (e.g. land application crop uptake, denitrification, shallow dispersal area, etc.) or where adequate attenuation exists based on other conditions such as depth to groundwater.

B3 *High-Threat (Limited Attenuation)?* In high-threat situations, the 10 milligrams per liter (mg/L) effluent limit is appropriate. High-threat situations are those where limited nitrogen removal will occur in the dispersal area or in limited attenuation situations (e.g. shallow depth to groundwater, fractured aquifer, potential for groundwater to migrate to surface water bodies with limited attenuation, etc.).

INFORMATION SHEET SUMMARY
STATE WATER RESOURCES CONTROL BOARD
ORDER WQ 2014-0153-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS

The attachments to this Information Sheet will help Dischargers understand the process of obtaining coverage under these *General Waste Discharge Requirements for Discharges to Land by Small Domestic Systems* (General Order). The attachments describe the permitting process and the information needed by Regional Water Quality Control Board (Regional Water Board) staff to prepare a Notice of Applicability (NOA), which provides the Discharger coverage under the General Order. Although not required, organization of the technical report described in Attachment B1 in the format presented in the attachment will allow streamlined review of the facility information and may reduce the time required to prepare an NOA. Some Regional Water Boards have implemented procedures for electronic submittal of technical reports and monitoring data. The Dischargers shall comply with those submittal requirements when applicable.

The Discharger is encouraged to contact the Regional Water Board staff early in the process to discuss their conceptual wastewater plan. Attachment A shows the generalized permitting process; it is recommended each of the items in the box labeled “Contact Regional Water Board to Discuss” be listed on a meeting agenda so that they are adequately discussed.

The *Conceptual Wastewater Plan* listed on Attachment A shall be complete enough for a meaningful discussion with the Regional Water Board staff so that any significant issues can be identified early in the process. However, the details of the *Conceptual Wastewater Plan* are unlikely to be finalized at this stage of the process. Determinations regarding the *Conceptual Wastewater Plan* may require additional investigation by the Discharger before the Regional Water Board staff can provide definitive answers to questions about the *Conceptual Wastewater Plan*.

Questions the Discharger may have regarding any of the attachments (such as the report requirements described in Attachment B1) should also be discussed at the meeting. At the conclusion of the meeting, the Discharger should understand how their system will be evaluated using the General Order Attachment 1, *Nitrogen Effluent Limit Evaluation*, and if any additional investigations are required to provide a complete Report of Waste Discharge.

The attachments included in this Information Sheet consist of the following:

Name	Title
Attachment A	Generalized Permit Application Process Summary
Attachment B1	Recommended Report of Waste Discharge Format
Attachment B2	Safe Wastewater Disposal for Recreational Vehicles
Attachment C	Model Monitoring and Reporting Program

ATTACHMENT A - INFORMATION SHEET
GENERALIZED PERMIT APPLICATION PROCESS SUMMARY
STATE WATER RESOURCES CONTROL BOARD
ORDER WQ 2014-0153-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS

The Discharger shall perform the following:

- Determine availability of regional collection system
- Determine need to submit a Report of Waste Discharge (ROWD)
- Review Nitrogen Effluent Limit Evaluation (Attachment 1)
- Develop a Conceptual Wastewater Plan

Contact Regional Water Board to discuss:

- Wastewater characterization/treatment/disposal plan
- Water balance precipitation value
- Threat and Complexity/Application Fee
- Storm water runoff/wastewater disinfection needed?
- Review Nitrogen Effluent Limit Evaluation (Attachment 1)
- Title 22 Engineering Report needed?
- Groundwater monitoring needed?
- Sanitary Sewer Overflow General Order Applicability
- Operator Certification Required?
- California Environmental Quality Act status
- Electronic ROWD application/monitoring report procedures

Submit Report of Waste Discharge
(electronic submittal if requested by Regional Water Board)

- Completed Form 200
- Application fee payment
- Technical Report (prepared consistent with the guidance in Attachment B1, or as directed by Regional Water Board staff).

Regional Water Board ROWD Review

- If the ROWD is complete, a notice of applicability (NOA) will be prepared.
- If incomplete, a Notice of Incomplete ROWD will be transmitted to the Discharger.

NOA Issued

- The NOA authorizes the wastewater discharge consistent with the ROWD, NOA, General Order, and title 22 Engineering Report (if applicable).
- The NOA will specify compliance criteria, monitoring requirements, and reporting requirements. In some cases, electronic reporting may be required.

ATTACHMENT B1 – INFORMATION SHEET
RECOMMENDED REPORT OF WASTE DISCHARGE FORMAT
STATE WATER RESOURCES CONTROL BOARD
ORDER WQ 2014-0153-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS
GENERAL INFORMATION FOR DISCHARGER

The information presented in the Report of Waste Discharge (ROWD) is relied upon by staff to prepare the Notice of Applicability (NOA) for coverage by this General Waste Discharge Requirements for Order (General Order). The Discharger shall ensure that the information presented in the ROWD is accurate. Misstatements, errors, or omissions that exist in the ROWD may be included in the NOA and become enforceable.

Waste Discharge Requirements (WDRs) are generally updated at 10 or 15 year intervals depending on the waste's potential to impact water quality. The ROWD shall state realistic growth projections. Underestimating growth may result in additional or more frequent permitting requirements. Overestimating growth will result in the need for the Discharger to prepare more treatment, storage, and disposal capacity than might otherwise be immediately required.

The ROWD outline presented below is intended to provide general guidance for Dischargers and consultants. Submitting an ROWD consistent with the format will help the Discharger include all of the information that Regional Water Quality Control Board (Regional Water Board) staff need and will expedite review of the document and speed the permitting process. Contacting your Regional Water Board representative to discuss the project before preparing the ROWD is recommended.

1. BACKGROUND
   - 1.1. Wastewater system description
     - 1.1.1. Briefly, describe what the wastewater system is and how wastewater is generated.
     - 1.1.2. Provide a site location map and a site plan.
     - 1.1.3. Provide information on the location of wastewater system buildings, wastewater treatment system components, groundwater wells, and surface water bodies.
     - 1.1.4. Provide the Assessor's Parcel Number(s), section number(s), and Township and Range.
     - 1.1.5. Describe the water supply to the residence(s), business(es), and/or other facilities being served by the wastewater system.
   - 1.2. Service area description
     - 1.2.1. Describe the proximity of the wastewater system to an existing regional collection system; if nearby, discuss why connection to the regional system cannot be accomplished. If located within a regional system service area, or in close proximity to a collection system, provide written documentation that a good faith effort to connect to the regional system was made and that the request was not approved.

1.2.2. Wastewater collection system (describe the following). For collection systems subject to State Water Board Order No. 2006-0003-DWQ, reports prepared to comply with the State Water Board Order No. 2006-0003-DWQ satisfies this requirement and may be submitted as part of the ROWD technical report.

1.2.2.1. Age and condition of collection system.

1.2.2.2. Piping construction and layout (show on map).

1.2.2.3. Lift stations and backup pumping systems.

1.2.2.4. Failure warning system.

1.2.2.5. Inflow and infiltration (I/I) estimates (and any control that is necessary).

1.2.2.6. Maintenance of collection system and spill response.

1.2.3. Storm water collection system

1.2.3.1. Storm water collection area (show on map).

1.2.3.2. Storm water disposal area in relation to wastewater disposal area.

1.2.3.3. Storm water disposal permit (if needed).

2. WASTEWATER CHARACTERIZATION AND TREATMENT

2.1. Domestic wastewater characterization (untreated wastewater).

2.1.1. Describe the generation of wastewater (retirees, families, recreational vehicle [RV], institution, etc.).[9] If RV waste is allowed, describe educational and institutional controls in place to minimize the potential for deleterious RV waste constituents to be discharged to the wastewater system.

2.1.2. Domestic wastewater flow rate (describe how determined). Describe any special events or seasonal variations that cause high wastewater flow rates or other sources of wastewater (e.g. swimming pool filter, potable water treatment backwash water, well attended festivals, etc.).

2.1.3. Characterize domestic wastewater for Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), electrical conductivity, nitrogen, sodium, chloride, and specific constituents of concern as needed based on site activities. Characterize wastewater for holding tank chemicals identified in the General Order (and others as appropriate) if RV waste is discharged to the system.

2.2. Wastewater treatment system

2.2.1. Provide a wastewater treatment schematic.

---

[9] Recreational vehicle (RV) holding tank connections, RV waste dump stations, etc. create special conditions for treatment and monitoring. Please refer to the General Order for more information.

2.2.2. Describe wastewater pretreatment components.

2.2.2.1. Domestic wastewater pretreatment systems (e.g. septic tank effluent pump system, grease traps, etc.).

2.2.2.2. Describe storage, treatment, and disposal of pretreatment residuals.

2.2.3. Describe preliminary treatment activities (e.g., screening, comminution, grit removal).

2.2.3.1. Describe storage, treatment, and disposal of preliminary treatment residuals.

2.2.4. Describe primary treatment activities (remove settleable/flotable matter)

2.2.4.1. Describe storage, treatment, and disposal of primary treatment residuals.

2.2.5. Describe treatment technology (e.g., activated sludge, membrane biological reactor, aerated lagoon, oxidation ditch, Imhoff tank, septic tank, etc.) include engineered design capacity in description.

2.2.5.1. Describe storage, treatment, and disposal of treatment residuals (e.g. sludge, septage, etc.).

2.2.6. Size and location of treatment equipment (e.g. septic tank volume, package treatment plant, membrane biological reactor, pond size include acreage and storage capacity, pond liners, and number and horsepower of aerators, etc.).

2.2.7. Disinfection system equipment

2.2.8. Storage facilities

2.2.8.1. If wastewater will be stored prior to disposal, describe the size and location of wastewater storage ponds, include a map showing all the ponds and describe them as lined or not. Describe the materials, age, and condition of any liners.

2.2.9. Predicted wastewater effluent quality

2.2.9.1. Characterize the wastewater for TSS, BOD, total coliform organisms (if needed), and specific constituents of concern as needed. If RV waste is discharged to the system, characterize for holding tank chemicals identified in the General Order (and others as appropriate).

2.2.10. Treated effluent disposal method

2.2.10.1. Describe how treated wastewater will be dispersed (land application area, leach field, percolation pond).

2.2.10.2. Describe the proposed disposal area (and the 100-percent replacement area when needed, such as for a leach field disposal system) include acreage, surrounding land use, depth to groundwater, and the proximity of drainage ways, surface waters, and municipal, industrial, or agricultural wells.

2.2.10.2.1. If land application is proposed, describe how storm water that falls on the land application area (LAA) is handled. If storm water is allowed to run off the LAA, contact your Regional Water Board representative to discuss wastewater disinfection requirements.

2.2.10.2.2. Provide a water balance that demonstrates adequate storage/disposal capacity. Identify the safety factors used in the calculations. Please contact your Regional Water Board representative to determine the precipitation values to be included in the water balance. Typically, the 100-year return annual total precipitation value, distributed monthly in accordance with average (mean) precipitation values monthly is required. Some exemptions for existing ponds or sites that develop an acceptable *Spill Prevention and Emergency Response Plan* may apply. Rainfall depth duration frequency data is available on the Department of Water Resources Internet web page at:

<http://www.water.ca.gov/floodmgmt/hafoo/hb/csm/engineering/>

2.2.10.2.3. Support the assumptions and calculations in the water balance with adequate information. Information may include published infiltration values, site-specific percolation tests, application rates, or other sources. Cite the information source used; if a site-specific investigation, provide a copy of the report.

2.2.10.2.4. The use of subsurface disposal including leach fields and/or seepage pits serving more than 20 people, or systems that accept non-sanitary waste (generated by manufacturing, contains biocidal agents such as RV or portable toilets, etc.) must comply with the United States Environmental Protection Agency Underground Injection Control requirements. Please refer to General Order Requirement B.6.g and http://www.epa.gov/region9/ water/groundwater/uic.html to determine if federal requirements apply to the proposed project. If registration is required, documentation of registration shall be provided in the ROWD.

2.3. Recycled Water Projects

2.3.1. If treated wastewater will be applied for beneficial uses (such as those described in title 22 water recycling criteria), provide a title 22 Engineering Report and the State Water Board Division of Drinking Water (DDW) (formerly the California Department of Public Health (CDPH) review/approval letter. Guidance for preparation of a title 22 Engineering Report is available on the Internet at:
http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Recharge/ERGUIDE2001.PDF

2.3.1.1. Describe how any DDW requirements will be implemented in the project.

2.3.1.2. If needed, describe the disinfection requirements for the planned reuse.

2.4. Operation and Maintenance

2.4.1. Describe routine operation and maintenance procedures

2.4.2. Treatment operator training and qualifications requirements

2.4.3. Contingency plans for repairs/spills/treatment issues

3. GROUNDWATER QUALITY

3.1. Depending upon the threat to groundwater quality, groundwater monitoring may be required. Please contact your Regional Water Board representative to determine if groundwater monitoring is required.

4. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

4.1. Some existing Small Domestic Systems will be determined to be categorically exempt from the California Environmental Quality Act (CEQA) under Title 14, section 15301 (ongoing or existing projects), section 15302 (replacement or reconstruction of existing utility systems), and section 15303 (new construction or conversion of small structures). The potential for categorical exemptions shall be examined and discussed with the Regional Water Board representative prior to submitting an ROWD.

4.2. New or expanding Small Domestic Systems will likely require CEQA evaluation that should be performed by local agencies. The CEQA evaluation shall be submitted with the ROWD. At a minimum, the evaluation shall include the Initial Study, a list of any adopted mitigation measures related to water quality, and the Notice of Determination.

4.2.1. The ROWD must include a description of how any water quality related mitigation measures will be implemented.

5. ADDITIONAL TECHNICAL REPORTS

5.1. If required by the General Order, a *Sludge Management Plan* shall be submitted with the ROWD.

5.1.1. Estimate the amount of sludge and scum that will be generated.

5.1.1.1. Describe how sludge, scum, and supernatant will be stored and disposed of to protect groundwater quality.

5.1.1.2. If sludge will be subject to further treatment, describe the treatment and storage requirements.

5.1.1.3. Describe cleaning of digesters or storage vessels and the treatment and disposal of the residuals. If drying of residuals is planned, describe how that will be performed to prevent nuisance odors, prevent vectors, and protect groundwater quality.

ATTACHMENT B2 – INFORMATION SHEET
SAFE WASTEWATER DISPOSAL FOR RECREATIONAL VEHICLES
STATE WATER RESOURCES CONTROL BOARD
ORDER WQ 2014-0153-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR SMALL DOMESTIC WASTEWATER TREATMENT SYSTEMS

EPA

United States Environmental Protection Agency | Region 9 Ground Water Office (WTR-9) | EPA 909-F-99-002 JULY 1999

ALERT FOR RV, BOAT AND MOBILE HOME OWNERS AND PARK OPERATORS **ABOUT SAFE WASTEWATER DISPOSAL**

If you spend any time in a recreational vehicle (RV) or boat, you probably know of the problem of odors from sewage holding tanks. There are a number of commercial products available to control those odors. Some of those products contain chemicals which may pollute water resources. If you use those chemicals and then empty your holding tank into a septic system (or other onsite wastewater treatment system) or dispose of holding tank waste illegally, you may be creating health and environmental hazards. These chemicals and their by-products may pass through onsite wastewater treatment systems, flowing to soil, ground water, and possibly nearby surface waters. They may also corrode treatment system parts, creating a safety hazard.

How septic systems work. A typical septic system contains two major components: a septic tank and an absorption field, also known as a drainfield or leachfield. These systems use natural processes to treat wastewater onsite, as opposed to offsite at a municipal wastewater treatment plant. The purpose of the septic tank is to separate solids from the liquid waste, and to promote partial breakdown of contaminants by microorganisms (bacteria) naturally present in wastewater. The leachfield also treats the wastewater through physical, biological and chemical processes in the soil.

Mixing chemicals with waste in sewage holding tanks or septic systems may produce toxic fumes, corrode pipelines and tanks, and pollute soil and ground water when discharged.

When chemicals, such as formaldehyde, are added to septic systems, they can cause bacteria in the system to die. When this happens, the septic system cannot treat waste adequately. Solids that are allowed to pass from the septic tank, due to inadequate or incomplete treatment, may clog the leachfield. Furthermore, clogged systems may send inadequately or incompletely treated sewage to the surface, threatening the health of people or pets who come into contact with it. Or it may percolate to ground water, where the chemicals and untreated wastewater could contaminate nearby drinking water wells, rivers and streams. Please ***read labels carefully*** to identify any hazardous ingredients.

The restoration of contaminated ground water is extremely costly and can take years. To prevent problems, RV and mobile home parks, as well as dump station operators, may take measures to control hazardous chemical disposal into their waste treatment systems. If they do not, and their system causes contamination, they may be forced to **close the dump station or the park** until the problem can be corrected.

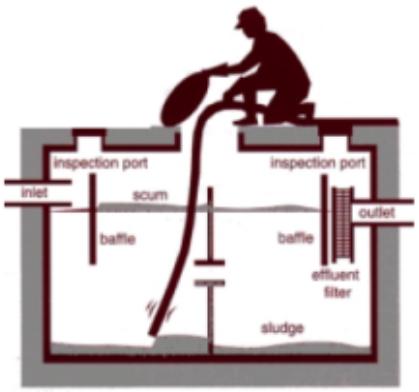
DO NOT USE CHEMICALS WHICH HARM SEPTIC SYSTEMS

Formaldehyde: active ingredient in some deodorizers, also called Formalin. Formaldehyde is an EPA-recognized probable carcinogen (i.e., causes cancer).

Para-dichlorobenzene: Known carcinogen and drinking water contaminant. Common ingredient in mothballs, urinal cakes and bowl fresheners.

OTHER CHEMICALS TO BEWARE OF INCLUDE heavy metals (such as Zinc), benzene, toluene, xylene, ethylene glycol (anti-freeze), methylene chloride, 1,1,1-trichloroethane (TCA), trichlorethylene (TCE) and perchloroethylene (PCE). Strong acids and bases, such as sulfuric acid or caustic soda, can destroy biological activity and damage tanks and pipes.

$ A healthy, well-maintained and appropriately sized septic tank will generally require less pumping over its service life, saving time and money.

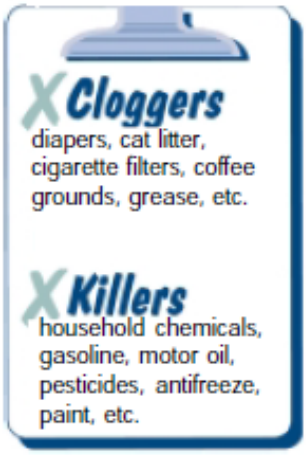


NATIONAL SMALL FLOWS CLEARINGHOUSE

REPORT SEWAGE SPILLS and other health hazards to the local health department. Keep People and Pets Away!

PARK OPERATORS:

The United States Department of Health, Education and Welfare said in 1957 that "... there are no known chemicals, yeasts, bacteria, enzymes or other substances capable of eliminating or reducing the solids and scum in a septic tank" and according to EPA, this is still true. No products have been verified by EPA to eliminate the need for routine maintenance, and some may actually accelerate system failure by allowing solids to clog the dispersal system; while the products may claim to "remove" sludge, they may just "move" sludge. Tanks should be checked routinely (see photo) for solids and scum buildup. Sludge Removal (pumpouts) may be needed more often for RV, Mobile Home and Boat waste systems than for single-family septic systems, especially if your tanks are undersized and/or your residents are conservative with water. Oversizing your tanks, or adding additional tanks, may allow greater waste stabilization. Consult a wastewater professional.



RVers CAN HELP... Here's How:

- Minimize your need of holding tank deodorizers by using rest stop facilities when you can.

- If you must use a holding tank deodorizer, read the label carefully. **Biodegradable** (enzyme and citrus-based) products are available. Whichever product you choose, **follow label directions** and add no more than recommended amounts.

- Some products that claim to be flushable, such as some types of cat litter, may clog hoses and septic tanks; use toilets for waste and toilet paper only.

- Ask questions of your park manager about drinking water and wastewater management. Sanitation costs can be minimal, but not free.

- Educate other RVers. Don't be shy about health.

FREE HOTLINES!

Septic System Care: The National Small Flows Clearinghouse, (800) 624-8301, EST, or *www.nsfc.wvu.edu*
The Safe Drinking Water Act Hotline, US EPA: (800) 426-4791, EST, or *www.epa.gov/ogwdw*

U.S. EPA, Region 9, WTR-9
Ground Water Office
75 Hawthorne Street
San Francisco, CA 94105-3109
OFFICIAL BUSINESS - PENALTY FOR PRIVATE USE $300

ATTACHMENT C – INFORMATION SHEET
MODEL MONITORING AND REPORTING PROGRAM
STATE WATER RESOURCES CONTROL BOARD
ORDER WQ 2014-0153-DWQ
GENERAL WASTE DISCHARGE REQUIREMENTS
FOR SMALL DOMESTIC WASTEWATER SYSTEMS

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 Discharger shall not implement any changes to this MRP unless and until a revised MRP is issued by the Regional Water Quality Control Board (Regional Water Board) Executive Officer.

The State Water Resources Control Board (State Water Board) and Regional Water Boards are transitioning to the paperless office system. In some regions, Dischargers will be directed to submit reports (both technical and monitoring reports) to the State Water Board's GeoTracker database over the Internet in portable document format (pdf). In addition, analytical data shall be uploaded to the GeoTracker database under a site-specific global identification number. Information on the GeoTracker database is provided on the Internet at:

<http://www.waterboards.ca.gov/ust/electronic_submittal/index.shtml>

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) 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 and operates the wastewater system that is subject to the Notice of Applicability (NOA) of Water Quality Order 2014-0153-DWQ. 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 Regional 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 Board California Environmental Laboratory Accreditation Program 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.

SEPTIC TANK MONITORING

Monitoring of septic tank shall include the following:

Parameter	Units	Sample Type	Sampling Frequency	Reporting Frequency
Flow Rate	gpd	Metered [a]	Continuous	Annually

gpd denotes gallons per day.

a. Flow rate may be metered or estimated based on potable water supply meter readings or other approved method.

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.

Parameter	Units	Measurement Type	Inspection/Reporting Frequency
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	NA	Annually

NA denotes 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.

AEROBIC TREATMENT UNIT MONITORING [10]

Influent Monitoring

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

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Total Nitrogen [a]	mg/L	Grab	Monthly	Quarterly

mg/L denotes milligrams per liter.

a. When needed for 50% reduction effluent limit calculations. .

[10] Determine the need for monitoring based on the flow rate and Attachment 1. Biochemical oxygen demand limits apply with flow rates above 400 gpd; nitrogen limits may apply at flow rates above 20,000 gpd. (See General Order Section D, Effluent Limits and Attachment 1, Nitrogen Effluent Limit Evaluation.)

Effluent Monitoring

Samples of effluent shall be taken at an area that represents the effluent quality distributed to the disposal area. At a minimum, effluent monitoring shall consist of the following:

Parameter	Units	Sample Type	Sampling Frequency	Reporting Frequency
Flow Rate	gpd	Metered [a]	Continuous	Quarterly
Biochemical Oxygen Demand	mg/L	Grab	Monthly	Quarterly
Total Nitrogen [b]	mg/L	Grab	Monthly	Quarterly

gpd denotes gallons per day. mg/L denotes milligrams per liter.

a. Flow rate may be metered or estimated based on potable water supply meter readings or other approved method. Flow rates may be measured as influent or effluent flow.

b. Include nitrogen monitoring when a nitrogen effluent limit is imposed.

Aerobic treatment units may be integrated in a treatment train and all components shall be inspected to verify operational status. It is highly recommended that a service agreement with a qualified service provider/vendor be required by the Regional Water Board's Executive Officer. Because aerobic treatment units generate more biosolids than septic systems (similar to the activated sludge process), systems shall be inspected and/or pumped at least as frequently as described below. Depending upon the amount of solids removed from the aerobic treatment unit, less frequent inspections may be allowed by the Regional Water Board's Executive Officer. Inspections of sludge and scum depth are not required if the tanks are pumped at least annually.

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

NA denotes not applicable.

Aerobic treatment units 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 final settling tank or interferes with the operation of the system (mixed liquor aerator solids shall not exceed the manufacturer's recommendation).
2. The scum layer is within 3 inches of the outlet device.
3. The sludge layer is within 8 inches of the outlet device.

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.

ACTIVATED SLUDGE MONITORING [11]

Influent Monitoring

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

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Total Nitrogen [a]	mg/L	Grab	Monthly	Quarterly

mg/L denotes milligrams per liter.

a. When needed for 50% reduction effluent limit calculation.

Effluent Monitoring

Samples of effluent shall be taken at an area that represents the effluent quality distributed to the disposal area. At a minimum, effluent monitoring shall consist of the following:

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Flow Rate [a]	gpd	Meter	Continuous	Quarterly
Biochemical Oxygen Demand	mg/L	Grab	Monthly	Quarterly
Total Suspended Solids	mg/L	Grab	Monthly	Quarterly
Total Nitrogen [b]	mg/L	Grab	Monthly	Quarterly

gpd denotes gallons per day.

a. At a minimum, the total flow shall be measured monthly to calculate the average daily flow for the month. Flow rates may be measured on influent or effluent flow.

b. Include nitrogen monitoring when a nitrogen effluent limit is imposed.

[11] Determine the need for monitoring based on the flow rate and Attachment 1. Biochemical oxygen demand limits apply with flow rates above 400 gpd; nitrogen limits may apply at flow rates above 20,000 gpd. (See General Order Section D, Effluent Limits and Attachment 1, Nitrogen Effluent Limit Evaluation.)

POND SYSTEM MONITORING [12]

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:

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Flow Rate [a]	gpd	Meter	Continuous	Quarterly
Total Nitrogen [b]	mg/L	Grab	Monthly	Quarterly

gpd denotes gallons per day. mg/L denotes milligrams per liter.

a. At a minimum, the total flow shall be measured monthly to calculate the average daily flow for the month. If wastewater is stored and applied to land, flow rate measurement may also be needed on the effluent flow.

b. When needed for 50% reduction effluent limit calculation.

Wastewater Pond Monitoring

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

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

mg/L denotes milligrams per liter.

Effluent Monitoring

Effluent samples shall be taken from a location that provides representative samples of the wastewater. At a minimum, effluent monitoring shall consist of the following:

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Biochemical Oxygen Demand	mg/L	Grab	Monthly	Quarterly

[12] Determine the need for monitoring based on the flow rate and Attachment 1. Biochemical oxygen demand limits apply with flow rates above 400 gpd; nitrogen limits may apply at flow rates above 20,000 gpd. (See General Order Section D, Effluent Limits and Attachment 1, Nitrogen Effluent Limit Evaluation.)

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Total Nitrogen [a]	mg/L	Grab	Monthly	Quarterly

mg/L denotes milligrams per liter.

a. Include nitrogen monitoring when a nitrogen effluent limit is imposed.

DISINFECTION SYSTEM MONITORING

If disinfection is performed, samples shall be collected from immediately downstream of the disinfection system. Depending upon the level of disinfection and wastewater disposal, monitoring requirements vary. Disinfection monitoring shall be customized to the site-specific conditions from the following:

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Total Coliform Organisms	MPN/100 mL	Grab	TBD [a]	Quarterly
Turbidity	NTU	Grab/Meter	TBD [a]	Quarterly

MPN/100 mL denotes most probable number per 100 mL sample. NTU denotes nephelometric turbidity unit.

a. TBD (to be determined) shall be specified in the NOA or as required by California Code of Regulations, title 22 section 60321.

RECREATIONAL VEHICLE DISCHARGE MONITORING

Any wastewater system that has accepted recreational vehicle, portable toilet, or similar waste in the previous 12 months shall perform the following additional monitoring. Samples shall be collected to characterize effluent that is stored in wastewater ponds or that will be applied to a disposal area. Wastewater shall be monitored as specified below:

Constituent	Units	Sample Type	Sample Frequency	Reporting Frequency
Zinc	mg/L	Grab	Quarterly	Quarterly
Phenol	mg/L	Grab	Quarterly	Quarterly
Formaldehyde	mg/L	Grab	Quarterly	Quarterly

mg/L denotes milligrams per liter.

SUBSURFACE DISPOSAL AREA

Subsurface disposal areas may be configured many different ways (e.g. traditional leach field, pressure-dosed, drip system, mound/at grade, gravel less, etc.). 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 shall include, at a minimum, the following:

Constituent	Inspection Frequency	Reporting Frequency
Pump Controllers, Automatic Valves, etc. [a]	Quarterly	Quarterly
Nuisance Odor Condition	Quarterly	Quarterly
Saturated Soil Conditions [b]	Quarterly	Quarterly
Plant Growth [c]	Quarterly	Quarterly
Vectors or Animal Burrowing [d]	Quarterly	Quarterly
Seepage Pit Condition [e]	Quarterly	Quarterly

a. All pump controllers and automatic distribution valves shall be inspected for proper operation as recommended by the manufacturer.
b. Inspect a disposal area for saturated conditions. If a mound system is used, inspect perimeter base for signs of wastewater seepage or saturated soil conditions.
c. Shallow-rooted plants are generally desirable, deep-rooted plants such as trees shall be removed as necessary.
d. Evidence of animals burrowing shall be immediately investigated and burrowing animal populations controlled as necessary.
e. Seepage pits shall be inspected to ensure they are allowing wastewater to infiltrate as designed. Visual inspection of the water level in the seepage pit is adequate.

RECYCLED WATER MONITORING

If recycled water is used for irrigation of landscape areas,[13] priority pollutant monitoring is required at the production facility. Sampling shall be consistent with the following:

Constituent	Sampling Frequency	Reporting Frequency
Priority Pollutants	5 years	The next annual report.

mgd denotes million gallons per day.

LAND APPLICATION AREA MONITORING

The Discharger shall monitor LAAs 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 so state. LAA monitoring shall include the following:

[13] Landscape areas are defined as parks; greenbelts, playgrounds; school yards; athletic fields; golf courses; cemeteries; residential landscaping; common areas; commercial landscaping (except eating areas); industrial landscaping (except eating areas); freeway, highway, and street landscaping

Constituent	Units	Sample Type	Sampling Frequency	Reporting Frequency
Supplemental Irrigation	gpd	Meter [a]	Monthly	Quarterly
Wastewater Flow [a]	gpd	Meter [a]	Monthly	Quarterly
Local Rainfall	Inches	Weather Station [b]	Monthly	Quarterly
Acreage Applied [c]	Acres	Calculated	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

gpd denotes gallons per day.

a. Meter requires meter reading, a pump run time meter, or other approved method.
b. Weather station may be site-specific station or nearby governmental weather reporting station.
c. Acreage applied denotes the acreage to which wastewater is applied.
d. Application rate may also be reported as inch/acre/month.

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.

GROUNDWATER MONITORING

The Discharger shall monitor groundwater quality if required by the NOA. Consistent with the Business and Professions Code, groundwater monitoring reports, well construction workplans, etc. shall be prepared under the supervision of a California licensed civil engineer or geologist. Prior to construction of any groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Water Board's staff for review and approval. Once installed, all monitoring wells designated as part of the monitoring network shall be sampled and analyzed according to the schedule below.

The data from routine groundwater monitoring events shall be submitted quarterly. Analysis of the data and groundwater flow directions shall be performed at least annually and shall be performed under the supervision of a California licensed professional (as described above). The Discharger may request a reduced monitoring and reporting schedule once adequate data has been collected to characterize the site. (Typically two years of quarterly sampling is required for adequate characterization.)

Prior to sampling, groundwater elevations shall be measured and the wells shall be purged of at least three well volumes and until pH and electrical conductivity have stabilized. No-purge, low-flow, or other sampling techniques are acceptable if they are described in an approved Sampling and Analysis Plan. Depth to groundwater shall be measured to the nearest 0.01 feet. Groundwater elevations shall be calculated. Samples shall be collected using approved USEPA methods. Groundwater monitoring shall include, at a minimum, the following:

Constituent	Units	Sample Type	Sampling/Reporting Frequency [c,d]
Groundwater Elevation [a]	0.01 Feet	Calculated	Quarterly
Depth to Groundwater	0.01 Feet	Measurement	Quarterly
Gradient	Feet/Feet	Calculated	Quarterly
Gradient Direction	degrees	Calculated	Quarterly
pH	Std. Units	Grab	Quarterly
Total Dissolved Solids	mg/L	Grab	Quarterly
Nitrate as Nitrogen	mg/L	Grab	Quarterly
Sodium	mg/L	Grab	Quarterly
Chloride	mg/L	Grab	Quarterly
Total Coliform Organisms [b]	MPN/100 mL	Grab	Quarterly
Zinc [c]	mg/L	Grab	Quarterly
Phenol [c]	mg/L	Grab	Quarterly
Formaldehyde [c]	mg/L	Grab	Quarterly

MPN/100 mL denotes most probable number per 100 mL sample. Std. Units denotes standard units. mg/L denotes milligrams per liter.

a. Groundwater elevation shall be based on depth to water using a surveyed measuring point elevation on the well and a surveyed reference elevation.

b. Using a minimum of 15 tubes or three dilutions.

c. Monitoring of the constituents zinc, phenol, and formaldehyde are required only when recreational vehicles were allowed to discharge to the wastewater system in the previous 12 months.

d. Analysis of data by a California licensed professional is required at least annually,

SURFACE WATER MONITORING

Because of the difficulty in monitoring bacteria in surface water, sample collection procedures must be described in a *Sampling and Analysis Plan*. Natural bacteria levels can vary significantly, and may be correlated with rainfall. When possible, surface water bacteria samples should be collected under dry weather conditions. It is critical when monitoring bacteria that all containers and surfaces a sample contacts are sterile. Sample containers must be autoclaved or manufactured to maintain sterility; use of screw top bottles, Whirl-pak® bags, or similar containers is acceptable. The sample hold time for bacteria samples is typically no more than six hours. Monitoring shall include, at a minimum, the following:

Constituent	Units	Weather (Rain/Dry)	Sampling Frequency	Reporting Frequency
Escherichia coli (E. coli)[a]	MPN/100 mL	Observation	Quarterly	Quarterly
Enterococci [b]	MPN/100 mL	Observation	Quarterly	Quarterly

MPN/100 mL denotes most probable number per 100 mL sample
a. Analysis by USEPA Method 1603 or equivalent.
b. Analysis by USEPA Method 1600 or equivalent.

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.

During the life of this General Order, the State Water Board or Regional Water Board may require the Discharger to electronically submit monitoring reports using the State Water Board's California Integrated Water Quality System (CIWQS) program Internet web site or alternative database. Electronic submittal procedures will be provided when directed to begin electronic submittals. Until directed to electronically submit monitoring reports, the Discharger shall submit hard copy monitoring reports.

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 a minimum, the quarterly reports shall include:

1. Results of all required monitoring.
2. A comparison of monitoring data to the discharge specifications, applicable 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 Regional 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 facility, 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 disinfection with ultraviolet light is performed, describe disinfection system maintenance activities performed in the calendar year. The description shall address inspections performed, lamp bulb replacement, lamp sleeve cleaning, and manufacturer recommended maintenance activities.
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.
7. A groundwater monitoring report prepared by a California licensed professional. This report may be prepared separately from the rest of the Annual Report. The report shall contain an analysis of groundwater data collected during the year. The analysis shall include a description of the sample events, copies of the field logs, purge method and volume, groundwater elevation and trend, a groundwater elevation map for each sample event, summary tables showing results for parameters measured, comparison of groundwater quality parameters to standards in the NOA, chain-of-custody forms, calibration logs for field equipment used, and a general evaluation of any impacts the wastewater discharge is having on groundwater quality.

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 the 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 as of the date of this MRP.

Ordered by:

_____
NAME, Executive Officer

_____
DATE