



Central Valley Regional Water Quality Control Board

20 April 2018

Ben Guzman, Jr. San Joaquin County Public Works P.O. Box 1810 Stockton, CA 95201 CERTIFIED MAIL 91 7199 9991 7035 8420 3125

NOTICE OF APPLICABILITY

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

FOR

SAN JOAQUIN COUNTY PUBLIC WORKS, COUNTY SERVICE AREA 44 ZONE E (CASTELLO), SAN JOAQUIN COUNTY

San Joaquin County Public Works submitted a Report of Waste Discharge (RWD) dated 1 August 2017 describing the wastewater treatment facility (WWTF) for County Service Area (CSA) 44 Zone E (Castello) in San Joaquin County. Additional information was submitted on 4 April 2018 via email. The WWTF provides treatment and disposal service for domestic wastewater generated from a private residential subdivision. The WWTF discharge has been regulated by Waste Discharge Requirements (WDR) Order 5-00-226, which was adopted on 27 October 2000. Based on information provided in the RWD, 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) serves as formal notice that upon rescission of Order 5-00-226 at an upcoming Board meeting, the discharge shall be regulated pursuant to the General Order and this NOA. You are hereby assigned Order WQ 2014-0153-DWQ-R5266 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-R5266. The Discharger is responsible for all the applicable requirements that exist in the General Order and this NOA.

KARL E. LONGLEY SCD, P.E., CHAIR | PAMELA C. CREEDON P.E., BCEE, EXECUTIVE OFFICER

EXISTING FACILITY AND DISCHARGE DESCRIPTION

The CSA 44 Zone E (Castello) WWTF is owned by San Joaquin County Public Works (hereafter "Discharger") and is operated by San Joaquin County Utilities Maintenance Division. The WWTF is located at 8200 Waterwell Way, Tracy, in San Joaquin County as shown on Attachment A, which is attached hereto and is made part of this NOA by reference. The residential subdivision is located in an area without a regional wastewater collection system; therefore, wastewater is collected and treated on-site. The WWTF serves 88 residential homes and does not serve any commercial or industrial facilities. Wastewater is generated from domestic use, such as toilets and washing. The site plan is shown on Attachment B, which is attached hereto and is made part of this NOA by reference.

The WWTF is an activated sludge treatment system with tertiary treatment. A wastewater flow schematic is shown on Attachment C. Wastewater is collected in a lift station, pumped to an equalization tank, and then pumped to an anoxic tank at a reduced/equalized rate to minimize hydraulic and organic loading surges through the system. The flow through the entire activated sludge process is by gravity in a continuous-flow system. Mixed liquor recycle (MLR) pumping brings high-nitrate mixed solution from the aeration tank to the anoxic tank to achieve denitrification. Return activated sludge (RAS) is recycled from the clarifier to the anoxic tank for maintaining healthy biomass in the biological reactors. Periodically, the sludge is sent to the sludge digester as waste activated sludge (WAS).

The tertiary treatment stage uses equalized flow to process secondary effluent through filtration and disinfection. Dual media filters are used to remove excess suspended matter from the secondary effluent. The effluent is then disinfected by chlorine bleach in the chlorine effluent tank, prior to discharging to a disposal field.

The disposal field is located southwest of the WWTF along the railroad right of way, as shown on Attachment B. The disposal field is a subsurface emitter field consisting of six disposal zones. The zones are controlled by dose control valves to discharge the wastewater in rotating intervals to each zone. Effluent samples are collected from the chlorine effluent tank, as shown on Attachment C. Wastewater quality and flow rates for 2016 and 2017 are shown below.

	рН	BOD	Nitrate as N	Ammonia Nitrate	TSS	TDS	Total Coliform (MPN/100 ml)	Average Daily Flow (gallons per day)
2016	7.55	0	3.9	0.2	0	1,413	3	20,656
2017	7.48	0	2.5	7.8	0	1,347	3	22,228
¹ Average concentrations are shown. BOD = biochemical oxygen demand mg/L = milligrams per liter MPN = most probable number TDS = total dissolved solids TSS = total suspended solids								

Effluent Quality ¹

Four groundwater monitoring wells (MW-1 to MW-4) were installed in June 2000 to monitor groundwater quality beneath the disposal field. Beginning in 2015, groundwater was unable to be collected from the wells due to a declining water table. In 2017, four new groundwater monitoring wells (MW-1R through MW-4R) were installed adjacent to the existing wells. Depths to groundwater in 2017 ranged from 57 feet to 83 feet below the top of casing. Regional groundwater flow direction

Constituents	MW-1R	MW-2R	MW-3R	MW-4R	Concentrations Protective of Beneficial Use
TDS (mg/L)	820	1,590	1,130	470	450 ¹ to 1,500 ²
Nitrate as N (mg/L)	16.6	11.4	12.3	2	10 ³
Total Coliform (MPN/100mL)	<1.8	<1.8	<1.8	<1.8	<2
pH (standard units)	7.12	7.03	7.08	7.36	
Note: Concentrations in bold exceed a concentration protective of beneficial use.					

is generally east. Groundwater monitoring data collected during the fourth guarter 2017 sampling event are tabulated below.

Lowest agricultural water quality goal.

Short-term Secondary Maximum Contaminant Level

Primary Maximum Contaminant Level.

Concentrations of nitrate as nitrogen and TDS in groundwater beneath the discharge area are generally higher than concentrations in the effluent. First encountered groundwater in the area is considered poor guality groundwater due to high concentrations of salts. While the discharge may be contributing to existing groundwater pollution, poor quality groundwater in the area is likely the main source of high nitrate as nitrogen and TDS concentrations in the groundwater monitoring wells beneath the discharge area.

SITE-SPECIFIC REQUIREMENTS AND EFFLUENT LIMITS

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 and effluent limits for your treatment system are summarized below.

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

Requirements by Wastewater System Type, Section B of General Order

B.1 All Wastewater Systems

This section applies in its entirety to the CSA 44 Zone E (Castello) WWTF with the following site specific requirements.

B.1.a Influent flow limits.

Treatment Unit	Flow Limit as Monthly Average	
WWTF	30,000 gpd	

B.1.I 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.
Leach Field ²	100 ft.	100 ft.	50 ft.	5 ft.	200 ft.

Setbacks referenced under "Septic Tank, Aerobic Treatment Unit, Treatment System, or Collection System" in Table 3 of General Order.

² Setbacks referenced under "Leach Field" in Table 3 of General Order.

This is an existing facility, constructed prior to the issuance of the new General Order for Small Domestic Wastewater Treatment Systems, and the disposal area is not compliant with the setbacks included in the General Order. However, the WWTF will still be permitted under this General Order provided that nuisance conditions do not result from noncompliance. Expansion of a noncomplying wastewater treatment system shall trigger further evaluation of the setbacks, as described in Section B.1.I of the General Order.

B.4 Activated Sludge Systems

The WWTF utilizes an activated sludge system; therefore this section applies in its entirety.

B.6 Subsurface Disposal Systems

The WWTF utilizes a subsurface disposal system; therefore this section applies in its entirety.

Effluent Limitations, Section D of General Order

This section applies in its entirety to the CSA 44 Zone E (Castello) WWTF and shall include the following site specific limitations.

Effluent Limitations

The following limits apply to effluent samples collected at the sample location shown on Attachment C.

Constituent	Units	Limit
BOD	mg/L	40
Total Nitrogen	mg/L	10

Effluent Limit Rationale

The treatment system effluent is subject to technology performance effluent limits for biochemical oxygen demand (BOD) as specified in the General Order.

Staff evaluated the need for a total nitrogen effluent limit using the method contained in the General Order and determined that a nitrogen effluent limit is required because the monthly average flow is greater than 20,000 gpd.

Technical Report Preparation Requirements, Provisions Section E.1 of General Order The following technical reports shall be submitted as described below:

- 1. By **1 August 2018**, the Discharger shall submit a *Spill Prevention and Emergency Response Plan* (Response Plan) consistent with the requirements of General Order Provision E.1.a.
- 2. By **1** August 2018, the Discharger shall submit a *Sampling and Analysis Plan* consistent with the requirements of General Order Provision E.1.b.
- 3. By **1 August 2018**, the Discharger shall submit a Sludge Management Plant consists with the requirements of General Order Provision E.1.c.

MONITORING AND REPORTING PROGRAM

The Discharger shall comply with MRP 2014-0153-DWQ-R5266, 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.

San Joaquin County Public Works and San Joaquin County Utilities Maintenance Division will generate the waste subject to the terms and conditions of WQ 2014-0153-DWQ-R5266 and will maintain exclusive control over the discharge. As such, San Joaquin County Public Works and San Joaquin County Utilities Maintenance Division are 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 2-B. The annual fee corresponding to a threat to water quality and complexity of 2-B is currently \$7,465. 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: CSA 44 Zone E (Castello), San Joaquin County		
Program: Non-15 Compliance	Order: 2014-0153-DWQ-R5266	CIWQS Place ID: 216287

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

- 6 -

Now that the Notice of Applicability has been issued, the Board's Compliance and Enforcement section will take over management of your case. Brendan Kenny 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, Brendan will direct you to the appropriate Permitting staff. You may contact Brendan at (916) 464-4635 or at *bkenny@waterboards.ca.gov*.

--original signed by Andrew Altevogt for--

PAMELA C. CREEDON Executive Officer

- enc: Water Quality Order WQ 2014-0153-DWQ Monitoring and Reporting Program 2014-0153-DWQ-R5266 Attachment A, Site Location Map Attachment B, Site Plan Attachment C, Wastewater Treatment System Schematic
- cc w/out enc: Timothy O'Brien, State Water Resources Control Board, Sacramento San Joaquin County Environmental Health Department

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

MONITORING AND REPORTING PROGRAM WQ 2014-0153-DWQ-R5266

FOR

SAN JOAQUIN COUNTY PUBLIC WORKS, COUNTY SERVICE AREA 44 ZONE E (CASTELLO), SAN JOAQUIN COUNTY

This Monitoring and Reporting Program (MRP) describes requirements for monitoring a wastewater treatment system at the County Service Area (CSA) 44 Zone E (Castello) WWTF. 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, Central Valley Region (Central Valley Water Board) or Executive Officer.

Water Code section 13267 states, in part:

"In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to 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 CSA 44 Zone E (Castello) WWTF discharge is regulated by the Notice of Applicability (NOA) of Water Quality Order 2014-0153-DWQ-R5266 and is owned by San

Joaquin County Public Works and operated by San Joaquin County Utilities Maintenance Division. Pursuant to Water Code section 13267, the Discharger shall implement this MRP and submit the monitoring reports described herein. The reports are necessary to ensure that the Discharger complies with the NOA and General Order.

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.

EFFLUENT MONITORING

Flows shall be measure at the flow meter location shown on Attachment C. Effluent samples shall be collected the chlorine effluent tank prior to disposal. A grab sample will be considered representative of the effluent. At a minimum, the Discharger shall monitor effluent as specified below:

Parameter	Units	Type of Sample	Monitoring Frequency	Reporting Frequency
Average Daily Flow	MGD	Meter Observation	Daily	Quarterly
BOD ₅ ¹	mg/L	Grab	Monthly	Quarterly
Total Nitrogen	mg/L	Grab	Monthly	Quarterly
TDS	mg/L	Grab	Monthly	Quarterly
Total Coliform	MPN/100 mL	Grab	Monthly	Quarterly

¹ 5-day Biochemical Oxygen Demand.

DISPOSAL FIELD AREA

Monitoring shall be sufficient to determine if wastewater is evenly applied, the disposal area is not saturated, burrowing animals are not present, plant roots have not compromised the disposal area, and odors are not present. Inspection of dosing pump

controllers, automatic distribution valves, etc. is required to maintain optimum treatment in the dripfield area. Monitoring shall include, at a minimum, the following:

Parameter	Inspection Frequency	Reporting Frequency
Pump Controllers, Automatic Valves, etc. ¹	Quarterly	Quarterly
Nuisance Odor Condition	Quarterly	Quarterly
Saturated Soil Conditions ²	Quarterly	Quarterly
Plant Growth ³	Quarterly	Quarterly
Vectors or Animal Burrowing ⁴	Quarterly	Quarterly

 All pump controllers and automatic distribution valves shall be inspected for proper operation as recommended by the manufacturer.

Inspect a disposal area for saturated conditions.

^{3.} Shallow-rooted plants are generally desirable, deep-rooted plants such as trees shall be removed as necessary.

4. Evidence of animals burrowing shall be immediately investigated and burrowing animal populations controlled as necessary.

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

Groundwater monitoring wells MW-1R to MW-4R shall be monitored according to the schedule below. Monitoring data and groundwater flow direction analysis shall be performed semiannually (twice per year) and shall be performed under the supervision of a California licensed civil engineer or geologist. After wastewater disposal has begun and six semiannual groundwater monitoring events have occurred, the Discharger may request a reduced monitoring and reporting schedule if groundwater monitoring data indicate that the discharge is not impacting groundwater quality.

Parameter	Units ¹	Sample Type	Sampling Frequency	Reporting Frequency
Groundwater Elevation ¹	0.01 Feet	Calculated	Semiannually	Annually
Depth to Groundwater ²	0.01 Feet	Measured	Semiannually	Annually
Gradient	Feet/Feet	Calculated	Semiannually	Annually
Gradient Direction	Degrees	Calculated	Semiannually	Annually
рН	Std. Units	Grab	Semiannually	Annually
Total Dissolved Solids	mg/L	Grab	Semiannually	Annually
Nitrate as Nitrogen	mg/L	Grab	Semiannually	Annually
Total Coliform	MPN/100 mL	Grab	Semiannually	Annually

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

2. Depth to groundwater shall be reported as feet below ground surface.

REPORTING

All monitoring reports 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 submittal is routed to the appropriate staff person, the following information should be included in the body of the email or transmittal sheet:

Attention: Compliance/Enforcement Section San Joaquin County Public Works CSA 44 Zone E (Castello) WWTF San Joaquin County Place ID: 216287

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.

Monitoring information shall include the method detection limit (MDL) and the Reporting limit (RL) or practical quantitation limit (PQL). If the regulatory limit for a given constituent is less than the RL (or PQL), then any analytical results for that constituent that are below the RL (or PQL) but above the MDL shall be reported and flagged as estimated. For a Discharger conducting any of its own analyses, reports must be signed and certified by the chief of the laboratory.

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 quarterly monitoring. Data shall be organized by the associated monitoring sections (e.g., Flow Monitoring, Effluent Monitoring, etc.) and presented in tabular format.

- 2. A comparison of monitoring data to the discharge specifications, flow limit, and effluent limits.
- 3. A disclosure of any violations of the NOA and/or General Order requirements and an explanation of corrective actions.
- 4. 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 **February 1st following the monitoring year**. The Annual Report shall include the following:

- 1. Tabular and graphical summaries of all monitoring data collected during the year.
- 2. An evaluation of the performance of the wastewater treatment system, including discussion of 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 if required.
- 3. A description of the disinfection system maintenance activities performed in the calendar year. The description shall address inspections performed 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 combined with a corresponding quarterly report or submitted separately. 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 volumes, groundwater elevations and trends, 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.

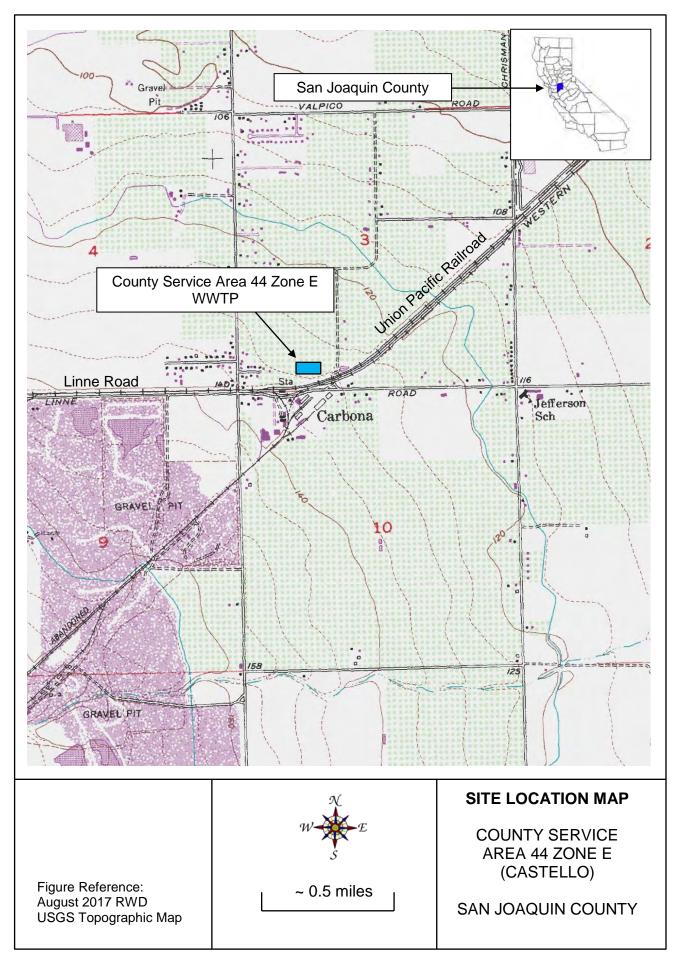
Ordered by:

--original signed by Andrew Altevogt for--PAMELA C. CREEDON, Executive Officer

DATE

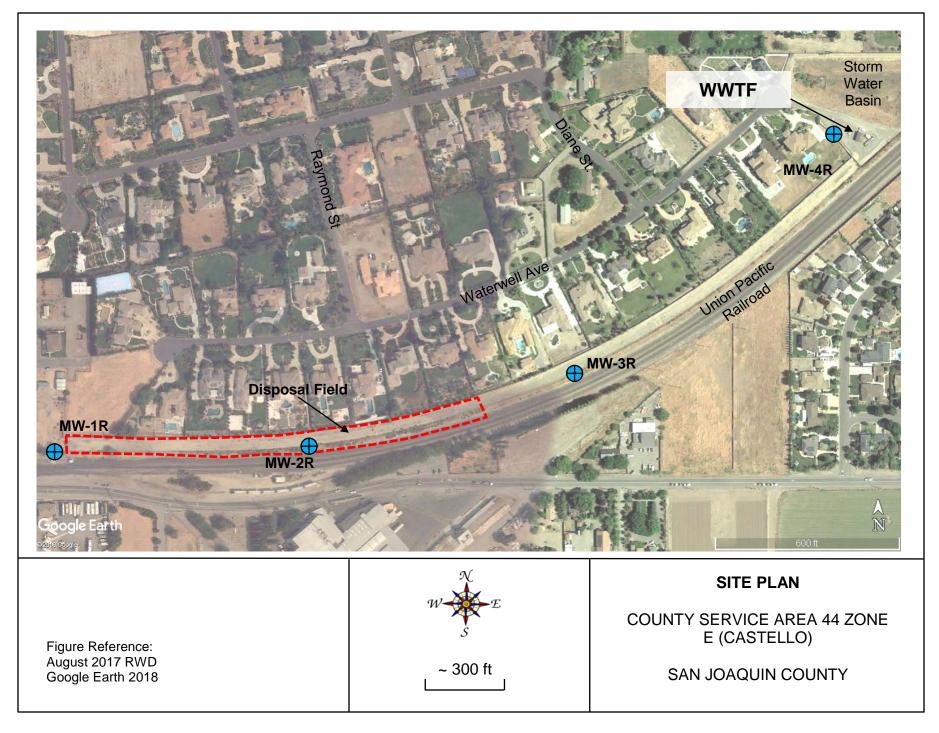
GLOSSARY

BOD₅	Five-day biochemical oxygen demand
TDS	Total dissolved solids
Daily	Every day except weekends or holidays.
Weekly	Once per week.
Monthly	Once per calendar month.
Quarterly	Once per calendar quarter.
Semiannually	Once every six calendar months (i.e., two times per year) during non- consecutive quarters.
Annually	Once per year.
mg/L	Milligrams per liter
mgd	Million gallons per day
MPN/100 mL	Most probable number [of organisms] per 100 milliliters



ORDER NO. 2014-0153-DWQ-R5266

ATTACHMENT B



ORDER NO. 2014-0153-DWQ-R5266

