

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

CLEANUP AND ABATEMENT ORDER R5-2014-0707
FOR
CLEARLAKE OAKS COUNTY WATER DISTRICT
WASTEWATER TREATMENT FACILITY
LAKE COUNTY

This Order is issued to Clearlake Oaks County Water District based on provisions of Water Code section 13304, which authorizes the California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board or Board) to issue a Cleanup and Abatement Order (CAO), and Water Code section 13267, which authorizes the Board to require the submittal of technical reports.

The Assistant Executive Officer of the Central Valley Water Board finds, with respect to the Discharger's acts, or failure to act, the following:

1. Clearlake Oaks County Water District (hereafter Discharger) owns and operates the Clearlake Oaks Wastewater Treatment Facility (WWTF).
2. The WWTF is located at 13705 Jensen Road in Clearlake Oaks, Section 32, T14N, R7W, MDB&M, and serves approximately 2,350 residents from Clearlake Oaks, Orchard Shores, Heritage, the Keys, and other unincorporated areas along the southeastern shore of Clear Lake.
3. On 23 October 1998, the Central Valley Water Board adopted Waste Discharge Requirements (WDRs) Order 98-211, which prescribes requirements for the treatment and disposal of domestic wastewater. The WDRs allow a maximum daily flow of 2.1 million gallons per day (mgd), with a monthly average dry weather discharge flow not to exceed 0.5 mgd.
4. The WWTF consists of a treatment plant headworks where a grinder and bar screen collects the solids. From the headworks, the wastewater enters an oxidation ditch where it mixes with backwash from the plant. From the oxidation ditch the wastewater enters a clarifier and then is pumped into two lined facultative ponds, and then to the chlorine contact chamber. The treated wastewater is then pumped from the contact chamber into a pipeline that is connected to the Lake County Sanitation District Southeast Regional wastewater storage pond. Lake County Sanitation District is responsible for disposal of the wastewater.
5. The Discharger is also responsible for operation and maintenance of the sewage collection system. The collection system consists of 12 lift stations and approximately 53,669 feet of piping. The piping is a combination of vitrified clay pipe, asbestos concrete pipe, and ductile iron pipe.
6. This Order is necessary to address the antiquated sewer collection system, sporadically maintained lift stations, and other WWTF components that are in need

of improvements to reduce the threat of sewage spills into Clear Lake, as well as enhance wastewater treatment to better protect water quality.

PREVIOUS BOARD ENFORCEMENT

7. The Clearlake Oaks County Water District has a history of sewage spills and overflows which have resulted in the following enforcement actions since issuance of the 1998 WDRs:
 - a. On 24 February 1999, the Executive Officer issued CAO 99-704 for a raw sewage spill estimated at 150,000 gallons per day into Clear Lake. The spill resulted from a ruptured force main pipeline between the last lift station and the wastewater treatment plant. The CAO required the Discharger to immediately cease the discharges of wastewater into surface waters and operate the WWTF in compliance with the WDRs. In addition, the CAO required the Discharger to address the ruptured force main and any other areas of the collection system where pipelines cross under waterways or surface water drainage courses, and submit certain technical reports summarizing completion of the work.
 - b. On 3 October 2002, the Executive Officer issued California Water Code Section 13308 Time Schedule Order (TSO) R5-2002-0902 for not completing the work required by the CAO. The TSO required the Discharger to submit an updated compliance schedule to address the items that had not been completed in the CAO.
8. On 7 November 2003, the Executive Officer rescinded the both the CAO and the TSO. The order rescissions were based on a 14 August 2003 site inspection, and Board staff's determination that the Discharger had completed each item required by the CAO and TSO.

SEWAGE SPILL VIOLATIONS

9. Discharge Prohibition No. 1 of WDRs Order 98-11 states: "*Discharge of wastes to surface waters or surface water drainage courses is prohibited.*"
10. Discharge Prohibition No. 2 of the WDRs states: "*Bypass or overflow of untreated or partially treated waste is prohibited.*"
11. The Discharger has experienced various wastewater spills that are in violation of Discharge Prohibitions Nos. 1 and 2 of the WDRs. Board staff's review of records over the last 10 years shows that the Discharger has reported six raw sewage spills exceeding 1,000 gallons, as listed in the table below.

Date of Spill	Volume Discharged (Gallons)	Discharge to Surface Water Drainage Course?	Type of Waste	Cause of Spill
01/07/2007	4,500	Yes	Raw Sewage	Obstruction in sewer line caused by grease.
03/15/2007	3,000	No	Raw Sewage	Overflow from oxidation ditch.
01/20/2010	10,000 to 20,000	Yes	Raw Sewage	Broken force main along with storm surge.
01/25/2010	15,000	No	Raw Sewage	Broken force main at the treatment plant.
07/31/2014	19,000	No	Raw Sewage	Structural failure of sewer line.
10/17/2014	4,000	No	Raw Sewage	Operational error resulting in a pump failure at Lift Station 11.

12. In addition, on 28 July 2014, the Discharger reported that Lift Station 8 experienced a structural and mechanical failure. To avoid raw sewage spills to Clear Lake, pumper trucks were used over a two week period to transport raw sewage from the lift station to the treatment plant. The Discharger then constructed a temporary system to pump the raw sewage from the lift station into a manhole located downstream of the lift station. This practice will continue until Lift Station 8 is repaired.

WASTEWATER SYSTEM ISSUES AND PROPOSED IMPROVEMENTS

13. Because of the aging infrastructure, history of overflows and problems with the treatment facility, in March 2014, the Discharger prepared a Wastewater Preliminary Engineering Report (PER) in accordance with guidelines provided by the United States Department of Agriculture (USDA) Rural Development Agency. The PER was part of a funding request to address issues with the 12 sewer lift stations, sewer collection system, and treatment facility.

Lift Stations

14. Because Lift Station 8 is in need of immediate repairs to prevent likely raw sewage spills to Clear Lake, on 19 August 2014 the Discharger submitted a grant application package to the State Water Resources Control Board (State Water

Board) Division of Financial Assistance. On 26 August 2014, Central Valley Water Board staff met with the Discharger to discuss the issues with Lift Station 8, and those issues associated with wastewater collection and treatment system described in the PER. On 4 September 2014, the SWRCB approved grant funding in the amount of \$50,000 from the Cleanup and Abatement Account to cover emergency repairs for Lift Station 8.

15. The 11 other lift stations within the sewer collection system are also in need of repair and or replacement primarily due to sporadic maintenance, as evident by corrosion issues. The Discharger has recommended upgrades to the lift stations which are to include new panels, access doors, pump railings, reconditioned wet wells, and new programmable logic controllers with float controls. This Order requires the Discharger to submit a *Wastewater System Improvement Workplan* and a *Project Completion Report*.

Sewer Collection System

16. The PER indicates that the sewer collection system's pipelines and components have a history of leakage that have resulted in wet weather surcharging, overflows, and excessive flows to the treatment facility. These inflow/infiltration (I/I) issues are associated with cracks, breaks, root intrusions, cracked cleanouts and manholes, cross connections from storm drains, sagging, and other related problems. In addition, because a majority of the sewer collection system is located within close proximity to the lake, groundwater can infiltrate into the sewer collection system during periods of high lake levels and cause excessive flow conditions.
17. The monthly monitoring reports required by the WDRs show that in March 2011 the influent flows to the treatment plant exceeded the maximum daily discharge flow of 2.1 mgd allowed by Discharge Specification B.2 of the WDRs. The highest influent flows were 2.7 mgd reported on 24 March 2011. These high volumes, which the Discharger managed by placing wastewater in the overflow ponds, are attributed to I/I issues within the sewer collection system, and the high lake levels that occurred during this period.
18. On 9 September 2014, the Discharger submitted a *Collection System Mapping and Infiltration and Inflow Analysis Plan of Study* to the State Water Board's Division of Financial Assistance as part of a planning grant application. The *Plan of Study* includes a scope of work for mapping the collection system, and completing an I/I analysis and sewer system survey. The scope of work includes the following tasks:
 - a. A mapping and system model to facilitate the I/I evaluation and condition assessment.

- b. An I/I Analysis and Sewer System Evaluation Survey which includes: (a) a collection system historical operation condition review, (b) hydraulic modeling and metering plan, (c) sewer manhole inspections, (d) flow meter installations, monitoring, and reporting, (e) rainfall meter installations and monitoring, (f) groundwater monitoring well installations and monitoring, (g) flow and rain monitoring reporting, (h) smoke testing of the sewer lines, (i) flow isolation studies, (j) main sewer line cleaning and video inspections, (k) optional dye testing of the sewer lines, (l) a cost effective analysis, and (m) submittal of a final report that provides recommendations for the collection system improvements.
19. This Order requires the Discharger to submit an *Inflow and Infiltration Assessment Workplan*, *Inflow and Infiltration Assessment Report*, and an *Inflow and Infiltration Project Completion Report*.

Treatment Facility

20. According to the PER, the WWTF headworks, oxidation ditch, secondary clarifier, return activated sludge pump station, and sludge drying beds are also unreliable, resulting in operational issues. As a result of their age and condition, the following improvements are recommended by the Discharger and required by this Order:
- a. Replace the flow splitter valve at the headworks.
 - b. Replace the rotor brush at the oxidation ditch.
 - c. Clean and remove accumulated sludge and debris from the oxidation ditch.
 - d. Design and construct a new clarifier to replace the existing outdated and under-designed clarifier.
 - e. Replace the existing return activated sludge pump and make the necessary pump station improvements, including electrical and controls, wet well, and piping.
 - f. Construct a new flow splitter box at the discharge point from the oxidation ditch.
 - g. Replace the existing liner in aerated lagoon No. 2.
 - h. Replace three of the existing center drains in the sludge drying beds.
 - i. Design and construct a fourth sludge drying bed.
 - j. Install a new electrical panel, programmable logic controller, and transformer at the operations building.

- k. Install a new Supervisory Control and Data Acquisition (SCADA) system that will be used to integrate flow data from the lift stations and various components at the treatment plant to the main control building.
21. This Order requires the Discharger to submit a *Wastewater System Improvement Workplan* and a *Project Completion Report*.

GROUNDWATER ISSUES

22. Provision D.1 of WDRs Order 98-211 states: "*The discharge shall not cause underlying groundwater to be degraded.*"
23. A review of groundwater monitoring reports submitted since the first quarter 2009 sampling event shows that total coliform organisms are consistently present in groundwater monitoring wells WWTP-01MW and WWTP-03MW, and in WWTP-02MW when there is sufficient groundwater to sample. This Order requires the Discharger to submit technical reports to address the total coliform detections in the wells.
24. A review of groundwater monitoring reports submitted since the First Quarter 2009 sampling event shows that WWTP-02MW did not contain sufficient water to sample during the following events: Third Quarter 2009, Fourth Quarter 2009, Fourth Quarter 2010, Fourth Quarter 2012, Third Quarter 2013, Fourth Quarter 2013, and Second Quarter 2014. This Order requires the Discharger to submit a report which evaluates the condition and performance of the groundwater monitoring system.

REGULATORY CONSIDERATIONS

25. The *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition*, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Board. Pursuant to Water Code section 13263(a), waste discharge requirements must implement the Basin Plan.
26. Surface water drainage is to Clear Lake. The Basin Plan designates the beneficial uses of Clear Lake as domestic supply; agricultural supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; spawning reproduction and/or early development; wildlife habitat; and commercial and sport fishing.

27. The Basin Plan designates the beneficial uses of the underlying groundwater as municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply.

28. Water Code section 13304(a) states, in relevant part:

Any person who has discharged or discharges waste into the waters of this state in violation of any waste discharge requirement or other order or prohibition issued by a regional board or the state board, or who has caused or permitted, causes or permits, or threatens to cause or permit any waste to be discharged or deposited where it is, or probably will be, discharged into the waters of the state and creates, or threatens to create, a condition of pollution or nuisance, shall upon order of the regional board, clean up the waste or abate the effects of the waste, or, in the case of threatened pollution or nuisance, take other necessary remedial action, including, but not limited to, overseeing cleanup and abatement efforts.

29. Water Code section 13267(b) states, in relevant 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 ... 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.

30. The technical reports required by this CAO are necessary to ensure compliance with this CAO and WDRs Order 98-211, and to ensure the protection of water quality. The Discharger is subject to these requirements because the Discharger owns and operates the facility that discharges waste subject to this CAO and WDRs Order 98-211.

31. The issuance of this Order is an enforcement action taken by a regulatory agency and is exempt from the provisions of the California Environmental Quality Act pursuant to California Code of Regulations, title 14, section 15321(a)(2).

IT IS HEREBY ORDERED that, pursuant to Water Code sections 13304 and 13267, Clearlake Oaks County Water District shall cleanup and abate the Clearlake Oaks County Water District WWTF and sewage collection system in accordance with the scope and schedule set forth below in order to comply with WDRs Order 98-211.

All submittals required by this Order shall be converted to PDF and sent to centralvalleysacramento@waterboards.ca.gov. To ensure that the submittals are routed to the appropriate staff as quickly as possible, please include the following

information in the body of the email: Attention Guy Childs, Compliance Unit, Waste Discharge to Land (Non-15). In addition, please include the Discharger name, facility name, county, and CIWQS place ID (No. 214812) in the body of the email.

1. The Discharger shall **immediately** comply with all aspects of WDRs Order No. 98-211 (or subsequent WDRs that rescind and replace Order No. 98-211).
2. **Beginning 1 January 2015, and continuing quarterly until this Order is rescinded**, the Discharger submit quarterly progress reports describing the work completed to date to comply with each of the requirements described below. In addition, the reports shall include: (a) signed copies of all applications that have been submitted to obtain the funds necessary to complete the work described in this Order, (b) the status of obtaining those funds, and (c) a copy of the Notice of Award to complete the improvements described in the Findings of this Order. **The Quarterly Progress Reports shall be submitted by the 1st day of the month following the end of the quarter (e.g. 1 January, 1 April, 1 July, and 1 October).**

Collection System Assessment

3. By **1 December 2014**, the Discharger shall submit an *Inflow and Infiltration Assessment Workplan* based on the outline in Finding 18 of this Order. At a minimum, the workplan shall include the following: (a) measures to quantify and identify the I/I sources using information pertaining to observed overflows, surcharges, reported bypasses, chronic maintenance activities, etc., (b) an evaluation of cost effective measures to reduce the I/I, (c) a description of how identified repairs and any sewer line replacements will be implemented and the timing for the work, and (d) an identification of the types of repairs that should be done in the field without further evaluation. The workplan shall also describe methods (i.e., smoke testing, video surveying, manhole surveying, etc.) that will be used to provide an assessment of those segments of the collection system known to exhibit significant I/I and shall describe those portions of the collection system that are in need of immediate repair and shall include a proposed schedule for completing these necessary repairs.
4. By **7 August 2015**, the Discharger shall submit an *Inflow and Infiltration Assessment Report* that describes the results of the Discharger's I/I evaluation of the collection system, and describes the repairs which must be completed to reduce I/I. The report shall also include a proposed schedule for necessary repairs and/or replacement of collection system components contributing to the I/I problems not to extend beyond **1 June 2017**.
5. By **1 June 2017**, the Discharger shall submit an *Inflow and Infiltration Project Completion Report* that provides a description of the final improvements to sewer

collection system that were identified in the *Inflow and Infiltration Assessment Report*.

Wastewater System Improvements

6. By **1 August 2015**, the Discharger shall submit a *Wastewater System Improvement Workplan* that provides final designs of the proposed wastewater system improvements described in Findings 15 and 20 of this Order.
7. By **1 June 2017**, the Discharger shall submit a *Project Completion Report* that provides a description of the final improvements to the wastewater system that have been completed in accordance with the *Wastewater System Improvement Workplan*.

Groundwater Monitoring

8. By **1 December 2014**, the Discharger shall submit a *Groundwater Monitoring Well Disinfection and Development Workplan* that shall describe how the three monitoring wells will be disinfected and re-developed. The purpose of this work is to address the total coliform detections outlined in Finding 23 of this Order.
9. By **1 March 2015**, the Discharger shall submit a *Groundwater Monitoring Well Disinfection and Development Completion Report* that describes the results of the disinfection and development work. This report shall also include an evaluation of the conditions and performance of the monitoring well network.
10. By **1 April 2016**, the Discharger shall submit a *Groundwater Monitoring Well Evaluation Report* that evaluates the total coliform levels in the wells, both before and after the wells were disinfected and re-developed. If the concentrations still show that groundwater is degraded, then the *Report* shall contain a proposal for facility improvements such that the Discharger will comply with Provision D.1 of WDRs Order 98-211.

As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed by the registered professional.

Any person signing a document submitted under this Order 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 knowledge and 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.”

If the Discharger is unable to perform any activity or submit any document in compliance with the schedule set forth herein, or in compliance with any work schedule submitted pursuant to this Order and approved by the Assistant Executive Officer, the Discharger may request, in writing, an extension of the time specified. The extension request shall include justification for the delay. Any extension request shall be submitted as soon as a delay is recognized and prior to the compliance date. An extension may be granted by revision of this Order or by a letter from the Assistant Executive Officer.

If the Discharger fails to comply with the provisions of this Order, the Assistant Executive Officer may refer this matter to the Attorney General for judicial enforcement or may issue a complaint for administrative civil liability. Failure to comply with this Order may result in the assessment of administrative civil liability up to \$10,000 per violation per day, pursuant to the Water Code sections 13268, 13350, and/or 13385. The Central Valley Water Board reserves its right to take any enforcement actions authorized by law.

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at:

http://www.waterboards.ca.gov/public_notices/petitions/water_quality

or will be provided upon request.

This Order is effective upon the date of signature.

Original signed by

ANDREW ALTEVOGT, Assistant Executive Officer

(Date)