

Central Valley Regional Water Quality Control Board

James Anderson, General Manager
Malaga County Water District
3580 South Frank Street
Fresno, CA 93725

31 May 2017

DISPOSAL CAPACITY REPORT; CEASE AND DESIST ORDER R5-2014-0146; MALAGA COUNTY WATER DISTRICT; WASTEWATER TREATMENT FACILITY; FRESNO COUNTY

Cease and Desist Order (CDO) R5-2014-0146 was adopted by the Central Valley Regional Water Quality Control Board on 4 December 2014 for the Malaga County Water District (District), Wastewater Treatment Facility. CDO R5-2014-0146 provides, among other things, a time schedule for the District to resolve issues regarding disposal capacity. CDO R5-2014-0146, Task 2a and Task 2b together require, by 1 February 2017, submittal of a technical report to describe measures that have been taken to address disposal issues, proposals for increasing and maintaining disposal capacity, and an analysis of the current disposal capacity. On 6 February 2017, the District submitted a Disposal Capacity Report to address both Task 2a and Task 2b, prepared by Provost & Pritchard Consulting Group. The enclosed memorandum provides a review of the Disposal Capacity Report.

The report is sufficient to meet the minimum requirements of CDO R5-2014-0146, Task 2a and Task 2b. The District has significantly improved the percolation rates of the on-site ponds to meet current disposal needs. The Disposal Capacity Report is hereby approved, and the District shall implement the proposed implementation schedule in accordance with CDO R5-2014-0146, Task 2c. However, no implementation step was proposed to develop the 4.33 acres of property at the northwest corner of Maple and Malaga. Please provide an update for the development of the property into supplemental disposal features.

As the District's potential for expanding on-site disposal capacity is very limited for long-term needs, we expect the District to diligently pursue efforts to expand re-use and disposal options. Many of these options could potentially require several years to acquire funding and land, complete environmental documentation, execute contracts, design, and construct. We do not want to see the District placed in a critical disposal situation should its current flow projections prove to be inaccurate.

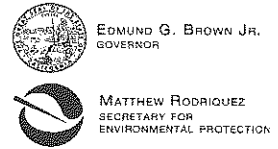
If you have any questions regarding this matter, please contact Nicolette Dentoni at (559) 444-2505 or at Nicolette.Dentoni@waterboards.ca.gov.

Signature of Clay L. Rodgers for Pamela C. Creedon, Executive Officer



Enclosure: 31 May 2017 Memorandum

cc: Charles Garabedian, Jr., President, Malaga County Water District, Fresno, CA



Central Valley Regional Water Quality Control Board

TO: Matt Scroggins
Senior Water Resource Control Engineer
Central Valley Regional Water Quality Control Board

FROM: Nicolette Dentoni
Water Resource Control Engineer
Central Valley Regional Water Quality Control Board

DATE: 31 May 2017

**SUBJECT: DISPOSAL CAPACITY REPORT; MALAGA COUNTY WATER DISTRICT;
WASTEWATER TREATMENT FACILITY; FRESNO COUNTY**

Background

Waste Discharge Requirements Order R5-2014-0145 (NPDES No. CA0084239) was adopted by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) on 4 December 2014 for Malaga County Water District (District), Wastewater Treatment Facility (Facility). Cease and Desist Order (CDO) R5-2014-0146 was also adopted by the Central Valley Water Board on 4 December 2014 to, among other things, provide a time schedule for the District to resolve the disposal capacity issues at the Facility.

CDO R5-2014-0146, Task 2a requires the District to submit a technical report that includes detailed information with supporting evidence of all measures the District has taken since March 2008 to address disposal capacity. CDO R5-2014-0146, Task 2b requires the District to submit a technical report that includes the following: (1) a description of what the District proposes to do to accommodate future flows from the Facility and to maintain increased disposal capacity; (2) a complete analysis of the disposal capacity of the on-site ponds, including supporting documentation on percolation rate determination, and (3) the schedule for implementing these proposed measures. On 6 February 2017, the District submitted the Disposal Capacity Report to address both Task 2a and Task 2b, prepared by Provost and Pritchard Consulting Group under the responsible charge of Michael Taylor (RCE No. 39961). On 14 February 2017, the District transmitted a cover letter to accompany the report.

During the permit adoption process through the permit effective date, the District submitted updated information on pond capacity and maintenance. In a 21 January 2015 letter, the Central Valley Water Board Executive Officer approved an alternative increased discharge flow rate due to the new information. Water balances and pond maintenance information submitted during that time demonstrated the Facility's ability to consistently dispose the entirety of the Facility's incoming flow to the disposal ponds until 2037. The updated flow projection included in the Disposal Capacity Report indicates flows to the Facility can adequately be disposed onsite until 2035. Thus, immediate concerns for disposal capacity have previously been addressed.

Past Disposal Capacity Efforts

Included in the Disposal Capacity Report is the 28 July 2008 Treatment and Disposal Capacity Study (2008 Study). The 2008 Study focused on developing additional acres of ponds for disposal. In 2012, the District purchased 4.33 acres of land for future development into disposal ponds. Construction of the new ponds has not yet been initiated. The District also stated in the 2008 Study that it would consider a moratorium on new sewer connections in order to limit the influent flow rate to the Facility. The moratorium was established in 2010, but it was lifted on 12 August 2014 due to the decline in influent flowrate. To address disposal capacity issues, the District has primarily implemented better pond maintenance measures, including ripping and scraping ponds. The District reports that all ponds have been drained and ripped during 2016. Additionally, the District has recently contracted with a construction company to repair pond gates in order to facilitate pond maintenance. Included in the Disposal Capacity Report is detailed information on pond disposal capacity, including percolation rate calculations from 2007, 2014, and 2016.

Future Disposal Capacity Needs

To accommodate growth in the community of Malaga, the Disposal Capacity Report includes alternatives to aid in disposal. Disposal Capacity Report cover letter states that the District will identify more land near the Facility to construct additional disposal features for future expansion. The California High Speed Rail Authority (CHSRA) is looking into acquiring some of the District's land for rail construction. To balance the impact of the acquisition on the current pond area, the District is considering the possibility of removing embankments between Ponds 1, 2, and 5, which would increase total pond area even after accounting for the acquired land.

The District identified reuse opportunities at agricultural lands, the community park, the school, and industrial systems. A significant portion of wastewater flow is contributed by the boiler blowdown water from industrial dischargers. According to the District, these industries are not willing to receive tertiary treated wastewater for recycling, but they may consider reusing the industrial waste streams after being treated by reverse osmosis. The District favors this option, since it would decrease the use of potable water, decrease salt loading to the Facility, and decrease the influent flows to the Facility. The cover letter indicates that the District is preparing an application for a planning grant through Proposition 1 to evaluate the possibility of constructing a reverse osmosis treatment facility for industrial waste streams.

The Disposal Capacity Report discusses the option of regionalization by connecting to the City of Fresno, but it states that in 2002 both the City of Fresno and the District agreed that this was an unreasonable option. The Disposal Capacity Report discusses potential for connecting with Easton CSD or other unincorporated communities, which would increase the disposal demands of the Facility. The cover letter states that in addition to these informal discussions with unincorporated communities, the District has also had discussions with CHSRA and Fresno County about providing water and wastewater services for a potential maintenance facility for the High Speed Rail. Increasing flows to the Facility in this way will shorten the 18-year projection for when the Facility will reach 0.85 million gallons per day (mgd) influent flow.

Disposal Pond Capacity

CDO R5-2014-0146, Task 2b requires the District to provide a complete analysis of the disposal capacity of the on-site ponds. Data from 2014 indicate recently ripped ponds may achieve a percolation rate of 1.66 inches/day, which will decrease as particulates settle over time. Standard Operation Procedures (SOPs) for Pond Maintenance and Monitoring were developed in order to consistently meet a percolation rate of 1.29 inches/day, which corresponds to a 0.85 mgd disposal capacity. In approving the District's request for an increased discharge rate

of 0.85 mgd to the on-site ponds, the Executive Officer also approved the SOPs for Pond Maintenance and Monitoring.

Data from the Disposal Capacity Report indicate an average percolation rate of 1.26 inches/day, based on 2016 measurements of Ponds 1, 2, 3, 4, and 5. The Disposal Capacity Report states that Ponds 1, 2, 3, 4, and 5 were ripped in October 2016, which was after the 1.26 inches/day percolation rate was determined. No measurements after the 2016 ripping events were discussed in the Disposal Capacity Report. Ponds 6, 7, and 8 were used during 2015 and 2016, but no updated percolation rates for these ponds were included in the Disposal Capacity Report.

The 2016 average percolation rate before ripping potentially indicates that the SOPs for Pond Maintenance and Monitoring may not have been followed and/or may not have been sufficient to maintain the 1.29 inches/day rate. If pond percolation rates are less than 1.5 inches/day, the SOPs for Pond Maintenance and Monitoring require the pond to be disked, re-measured, and then ripped if low percolation rates persist. While it is commendable that the District has taken actions to increase percolation rates, it is concerning that percolation rates of the ponds were allowed to drop well below the 1.5 inches/day trigger before appropriate actions were taken.

Implementation Schedule

The Disposal Capacity Report includes a schedule of the next steps to be implemented. By February 2017, the District states that a pond maintenance log will be kept. An application for a planning grant to determine the feasibility of a reverse osmosis industrial reuse system is scheduled to be submitted in March 2017. Pond gate repair is scheduled for completion in May 2017. The Disposal Capacity Report estimates that in 2017 an evaporation pan will be installed and pond embankment removal at Ponds 1, 2 and 5 will continue to be evaluated. Additionally, the cover letter to the Disposal Capacity Report expresses the District's intent to evaluate the possibility of procuring additional property for construction of disposal ponds.

Conclusion

The District remains capable of disposing of 0.85 mgd, provided it maintains the ponds at no lower than 1.29 inches/day average percolation rate. The average percolation rate of 1.26 inches/day in 2016 before ripping is less than ideal. The District must perform maintenance operations on the disposal ponds at least as frequently as required in the SOPs for Pond Maintenance and Monitoring. It appears the District is prepared to offset any negative impacts of the CHSRA acquisition, and the District may actually increase the current pond area if the pond embankments are removed as suggested. This review indicates that the Disposal Capacity Report meets the minimum requirements for fulfilling CDO R5-2014-0146, Tasks 2a and 2b.