

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER R5-2015-0043
AMENDING WASTE DISCHARGE REQUIREMENTS
ORDER R5-2013-0106 (NPDES PERMIT NO. CA0082660)

CITY OF BRENTWOOD
WASTEWATER TREATMENT PLANT
CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Central Valley Water Board) finds that:

1. On 26 July 2013, the Central Valley Water Board adopted Waste Discharge Requirements Order R5-2013-0106 (NPDES Permit), prescribing waste discharge requirements for the City of Brentwood Wastewater Treatment Plant, Contra Costa County. For the purposes of this Order, the City of Brentwood is hereafter referred to as “Discharger” and the Wastewater Treatment Plant is hereafter referred to as “Facility”.
2. The Discharger owns and operates the Facility. The treatment system consists of a headworks (screening and grit removal), oxidation ditches and denitrification basins providing biological treatment, secondary clarification, tertiary filtration, chlorine disinfection, dechlorination, and a cascade aeration system. The Facility discharges tertiary treated effluent to Marsh Creek, a water of the United States.
3. The NPDES Permit contains, in part, Final Effluent Limitations for chloride in section IV.A.1.a as an average monthly of 344 mg/L and a maximum daily of 398 mg/L. The final effluent limitations for chloride become applicable to the waste discharge on 1 January 2018, because a compliance schedule is provided in the NPDES Permit.
4. The Discharger has been making diligent progress to comply with the final effluent limitations for chloride. The Discharger evaluated the sources and estimated loading of chloride in the service area as a component of its pollution prevention plan (March 2011) and developed a treatment feasibility study (2012) describing feasible alternatives and the process for evaluating and selecting the most appropriate alternative to comply with the final effluent limitations. The loading estimate indicated that up to 50% of the effluent chloride loading cannot be accounted for by other known or potential sources in the collection and wastewater treatment systems. The Discharger found, based on the evidence, that the known use of self-regenerating water softener (SRWS) systems are indicated as contributing substantially to the unaccounted chloride load, and the SRWS brine discharges are identified as a significant component of the controllable chloride load to the Discharger’s collection system. The Discharger subsequently prepared a “Chloride Compliance Alternatives Report” (December 2013) as required by the NPDES Permit. The report identified six alternatives that either individually or in combination could reduce effluent chloride levels, or eliminate the discharge to Marsh Creek, thereby achieving compliance with water quality objectives. The report identified “Alternative 2” (alternative water supply and salt-based SRWS controls) as the most cost-effective method, which would require reduction of SRWS-related brine discharges to the collection system. The Brentwood City Council adopted a resolution on 10 June 2014 approving funding and implementation of Alternative 2.

5. On 11 October 2009, the State enacted California Water Code Section 13148 which provides additional authority (relative to previous State law) to local wastewater service agencies to control SRWS-caused salinity inputs to their systems to protect the quality of waters of the State. The law allows the local agency to adopt an ordinance or resolution for the planned SRWS controls. Before a local agency takes action to control salinity input from SRWS, a Regional Water Board must make a finding that the control of SRWS-caused salinity inputs will contribute to the achievement of water quality objectives (Cal. Wat. Code 13148[e]). The Regional Water Board's finding can occur through any of five identified water quality actions, of which the issuance of these waste discharge requirements is one method. Accordingly, the Central Valley Water Board finds that the control of residential use of SRWS brine discharges to the Discharger's collection system will contribute to the achievement of the water quality objectives. This finding is based on the Discharger's evidence in the record and the Central Valley Water Board's independent review of the evidence.
6. Order R5-2013-0106 includes effluent limitations for temperature in Section IV.1.A.d of the Limitations and Discharge Requirements, as follows:

“d. Temperature. *The maximum temperature of the discharge shall not exceed the natural receiving water temperature, measured at RSW-001, by more than:*

- i. 20° F from 1 February through 30 November; and*
- ii. 24 ° F from 1 December through 31 January.”*

Since the temperature effluent limitations are in the units of degrees Fahrenheit, the Monitoring and Reporting Program has been modified to change the units for effluent temperature monitoring from Celsius to Fahrenheit for consistency.

7. Order R5-2013-0106 may be reopened and modified in accordance with the Code of Federal Regulations (CFR) at 40 CFR section 122.62(a)(2).
8. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Public Resources Code section 21000, et seq.), in accordance with CWC section 13389 and sections 15061(b)(3) and 15321 (a)(2), Title 14, of the California Code of Regulations.
9. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend the Waste Discharge Requirements Order for this discharge and has provided them with an opportunity to submit their written views and recommendations.

IT IS HEREBY ORDERED THAT:

Waste Discharge Requirements Order R5-2013-0106 (NPDES No. CA0082660) is amended solely to add findings regarding the control of self-regenerating water softeners, update the compliance schedule for chloride, and change the temperature units for effluent monitoring. WDR Order R5-2013-0106 is amended as shown in Items 1 through 5, below. This Order is effective upon adoption.

1. Change the Order number throughout to R5-2013-0106-01.
2. **Limitations and Discharge Requirements, Section II. Findings.** Add new subsection II.T, as shown underlined below, and renumber remaining subsections in Section II:

T. Self-Regenerating Water Softeners. Water Code Section 13148(e) provides for a local wastewater agency to control salinity inputs from residential self-regenerating water softener (SRWS) systems. The local agency may adopt a resolution or ordinance to take actions to control the salinity input. Before a local agency takes action to control salinity input from self-regenerating water softeners, the Regional Water Board must make a finding that the control of SRWS-caused salinity inputs will contribute to the achievement of water quality objectives. Accordingly, the Central Valley Water Board finds that the control of residential use of SRWS brine discharges to the discharger's collection system will contribute to the achievement of the water quality objectives. This finding is based on the discharger's evidence in the record and the Water Board's independent review of the evidence. See Fact Sheet - Rationale for Provisions (Section VII.B.7.b) for additional detail regarding this finding.

3. **Limitations and Discharge Requirements, Section VI.C.7 – Compliance Schedules.** Modify the compliance schedule for final effluent limitations for chloride (Section VI.C.7.a) as shown below in underline/strikeout format:

a. **Compliance Schedule for Final Effluent Limitations for Chloride.**

- i. **By 1 January 2018**, the Discharger shall comply with the chloride final effluent limitations specified in Section IV.A.1.a. Since the time schedule for completion of actions necessary to bring the waste discharge into compliance exceeds one year, this Order includes interim effluent limitations and interim requirements and dates for their achievement.

Task

Date Due

- | | |
|---|--|
| i. Submit a Pollution Prevention Plan (PPP)¹ for Chloride | Complete |
| ii. Compliance Alternative Investigation and Selection of Preferred Compliance Alternative. Submit a report that includes:
1) a compliance options investigations analysis and
2) a rationale for selection of preferred compliance option(s), and
3) a discussion of funding sources.
The report must also describe the selected preferred compliance alternative (s) and preliminary milestone schedule for implementing the alternative (s) for compliance with the final effluent limits for chloride. | Complete
31 December 2013 |

<u>Task</u>	<u>Date Due</u>
iii. Prepare Agenda Item for City Council Approval of Selected Alternative and Submit a report demonstrating compliance with this task that includes the following: 1) agenda item prepared that summarizes findings from the Compliance Alternative Investigation and recommended preferred compliance alternative(s), 2) summary of the outcome of the City Council meeting (e.g., resolution on compliance alternative options and selected preferred alternative), and 3) schedule for implementing the selected alternative(s).	Complete 30 June 2014
iv. Implementation of Selected Project Alternative. Submit report demonstrating the Discharger has begun implementing the Selected Project Alternative.	Complete 1 October 2014
v. Rate Analysis Report. Submit a report that includes the following: 1) identification of the funding alternatives and sources and 2) an evaluation of the source of rate revenue necessary to fund recommended compliance project(s) and 3) consider alternative funding alternatives such as revenue bonds and/or State Revolving Funds.	1 June 2015
vi. Project Funding. Submit a financing plan for the selected compliance project(s) and a schedule for obtaining State Water Board funding, if applicable.	1 December 2015
vii. Final Project Milestone Schedule. Submit final project milestone schedule that ensures compliance with the final effluent limits for chloride by the final compliance date.	1 February 2016
viii. Implementation of Expanded Recycled Water Usage. Submit report that describes the implementation of the expanded use of recycled water to reduce discharge of treated effluent into Marsh Creek.	31 December 2016
ix. Progress Reports³²	31 December 2014 31 December 2015 31 December 2016
viii. Comply with Final Effluent Limitations for Chloride. Submit report demonstrating compliance with the final limits	1 January 2018

¹ The PPP for chloride was submitted by the compliance date. The PPP was prepared and implemented in accordance with Water Code section 13263.3(d)(3) as outlined in the Fact Sheet (Attachment F section VII.B. 3.c).

² The progress reports shall detail what steps have been implemented towards achieving compliance with waste discharge requirements, including studies, construction progress, evaluation of measures implemented, funding resources, and recommendations for additional measures as necessary to achieve full compliance by **1 January 2018**. If another report is due on the same date as a progress report, the reports can be combined into one submittal.

4. **Attachment E, Monitoring and Reporting Program, Section IV.A.1 – Table E-3 Effluent Monitoring.** Change the temperature units from degrees C to degrees F as shown below in underline/strikeout format:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Temperature	°C	Grab	1/day ^{3,4}	1

5. **Attachment F, Fact Sheet, Section VII.B.7 – Compliance Schedules.** Modify Section VI.C.7.b. as shown below in underline/strikeout format:

b. Compliance Schedule for Final Effluent Limitations for Chloride.

- i. In accordance with the SIP and the Policy for Compliance Schedules in National Pollutant Discharge Elimination System Permits (Resolution 2008 0025), which is the governing Policy for compliance schedules in NPDES permits (hereafter “Compliance Schedule Policy”), the Discharger submitted an Infeasibility Analysis and Time Schedule Justification (May 2012) describing feasible alternatives and the process for evaluating and selecting the most appropriate alternative to comply with the final effluent limitations. As part of the Compliance Strategy Work Plan described in the Infeasibility Analysis the Discharger is proposing to: 1) investigate water supply control options; 2) investigate regulatory feasibility and cost effective alternative disposal options; and 3) develop and implement a control program for customers to minimize the use of Self-Regenerating Water Softeners. The compliance schedule justification included all items specified in Paragraph 3, items (a) through (d), of Section 2.1 of the SIP and Item 4 of the Compliance Schedule Policy. This Order establishes a compliance schedule for the final WQBELs for these constituents. Full compliance with the chloride WQBELs is required by **1 January 2018**. The justification in the Infeasibility Analysis provides for a time schedule for the Discharger to comply with the new limitation for chloride limitation in five years from the effective date of this Order. Allowance of an additional compliance schedule beyond the dates specified above may be granted in a subsequent enforcement order or within the permit as appropriate, as the Central Valley Water Board deems necessary.
- ii. Since the adoption of WDR Order R5 2008-0006 the discharger implemented a pollution prevention plan for chloride (March 2011) that identified possible alternatives to control chloride in order to comply with the final effluent limitations. The Discharger submitted an infeasibility analysis (June 2012) that included a Compliance Strategy Work Plan to: 1) investigate water supply control options; 2) investigate regulatory feasibility and cost effective alternative disposal options; and 3) develop and implement a control program for customers to minimize the use of Self Regenerating Water Softeners. Based on the results of pollution prevention and the identified compliance strategy, more time is needed to comply with the final limits. The infeasibility study adequately demonstrated that the Discharger cannot immediately comply with the final effluent limits for chloride, and included a request and justification for an extension of the compliance schedule for chloride that met the requirements of the Compliance Schedule Policy. This Order establishes a compliance schedule for the final WQBELs for chloride. Full compliance

with the chloride WQBELs is required by 1 January 2018. Federal Regulations at 40 C.F.R. § 122.47(a)(1) requires that, “Any schedules of compliance under this section shall require compliance as soon as possible...” The Compliance Schedule Policy also requires that compliance schedules are as short as possible and may not exceed 10 years. The final compliance date is as soon as possible in accordance with federal regulations and the Compliance Schedule Policy.

iii. Additionally, the Discharger evaluated the sources and estimated loading of chloride in the service area as a component of its pollution prevention plan (March 2011). The loading estimate indicated that up to 50% of the effluent chloride loading cannot be accounted for by other known or potential sources in the collection and wastewater treatment systems. The Discharger found, based on the evidence, that the known use of self-regenerating water softener (SRWS) systems are indicated as contributing substantially to the unaccounted chloride load, and the SRWS brine discharges are identified as a significant component of the controllable chloride load to the Discharger’s collection system. The Discharger subsequently prepared a “Chloride Compliance Alternatives Report” (December 2013) as required in this compliance schedule. The report identified six alternatives that either individually or in combination could reduce effluent chloride levels, or eliminate the discharge to Marsh Creek, thereby achieving compliance with water quality objectives. The report identified “Alternative 2” (alternative water supply and salt-based SRWS controls) as the most cost-effective method, which would require reduction of SRWS-related brine discharges to the collection system. The Brentwood City Council adopted a resolution on 10 June 2014 approving funding and implementation of Alternative 2.

On 11 October 2009, the State enacted Water Code Section 13148 which provides additional authority (relative to previous State law) to local wastewater service agencies to control SRWS-caused salinity inputs to their systems to protect the quality of waters of the State. The law allows the local agency to adopt an ordinance or resolution for the planned SRWS controls. Before a local agency takes action to control salinity input from SRWS, a Regional Water Board must make a finding that the control of SRWS-caused salinity inputs will contribute to the achievement of water quality objectives (Cal. Wat. Code 13148[e]). The Regional Water Board’s finding can occur through any of five identified water quality actions, of which the issuance of these waste discharge requirements is one method. Accordingly, the Central Valley Water Board finds that the control of residential use of SRWS brine discharges to the Discharger’s collection system will contribute to the achievement of the water quality objectives. This finding is based on the Discharger’s evidence in the record and the Central Valley Water Board’s independent review of the evidence.

iiiv. Any compliance schedule contained in an NPDES permit must be “...an enforceable sequence of actions or operations leading to compliance with an effluent limitation...” per the definition of a compliance schedule in CWA Section 502(17). See also 40 C.F.R. § 122.2 (definition of schedule of compliance). The compliance schedule for chloride meets these requirements. The compliance schedule requires submittal of the Compliance Alternative Investigation report by 31 December 2013, to identify the preferred compliance alternative(s) and preliminary implementation schedule. Upon identification of the selected alternative(s), by 30 June 2014, the Discharger will develop an agenda item for consideration by the City Council of the selected compliance alternative(s) and schedule. The Discharger shall then implement the selected project

alternative and submit a report by 1 October 2014. The compliance schedule also requires development of a Rate Study to identify funding alternatives and sources by 1 June 2015 and a Project Funding with a financing plan for the selected compliance project(s) by 1 December 2016. The compliance schedule also requires submit a final implementation schedule by 1 February 2016, and requires the Discharger implement expanded recycled water usage by 31 December 2016. Specific construction milestones cannot be established at this time, because the compliance alternative(s) has not been selected. Until the Discharger identifies the selected compliance alternative(s), some specific milestone tasks cannot be identified. This Order includes a reopener provision that allows the Central Valley Water Board to reopen the permit for addition and/or modification of the specific tasks and due dates for the chloride compliance schedule upon completion of the Compliance Alternative Investigation report.

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 CWC 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 that this Order becomes final, except that if the thirtieth day following the date that this Order becomes final falls on a Saturday, Sunday, or state holiday (including mandatory furlough days), 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.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **17 April 2015**.

Original Signed by Pamela C. Creedon

PAMELA C. CREEDON, Executive Officer