

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

RESOLUTION R5-2013-0107

GRANTING AN EXCEPTION TO THE WATER QUALITY CONTROL PLAN
FOR THE CONTROL OF TEMPERATURE
IN THE COASTAL AND INTERSTATE WATERS
AND ENCLOSED BAYS AND ESTUARIES OF CALIFORNIA
FOR THE CITY OF BRENTWOOD WASTEWATER TREATMENT PLANT
TREATED MUNICIPAL WASTEWATER DISCHARGE INTO MARSH CREEK

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

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 Resolution, 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, within the legal boundary of the Sacramento-San Joaquin Delta (Delta).
3. The State Water Resources Control Board adopted the *Water Quality Control Plan for Control of Temperature in the Coastal and Interstate Water and Enclosed Bays and Estuaries of California* (Thermal Plan) on 18 May 1972, and amended this plan on 18 September 1975. The Thermal Plan contains temperature water quality objectives applicable to the Delta, including Marsh Creek in the vicinity of the discharge.
4. The discharge from the Facility is considered an existing elevated temperature waste in accordance with the Thermal Plan. For existing elevated temperature waste discharges to estuaries, Specific Water Quality Objectives 5.A.(1) of the Thermal Plan requires the following:
 - "a. *The maximum temperature shall not exceed the natural receiving water temperature by more than 20°F.*
 - "b. *Elevated temperature waste discharges either individually or combined with other discharges shall not create a zone, defined by water temperatures of more than 1°F above natural receiving water temperature, which exceeds 25 percent of the cross-sectional area of a main river channel at any point.*
 - "c. *No discharge shall cause a surface water temperature rise greater than 4°F above the natural temperature of the receiving waters at any time or place.*"

5. The Discharger is unable to comply with these temperature water quality objectives. However, an exception to the Thermal Plan may be authorized under General Water Quality Provision No. 4, in accordance with Section 316(a) of the CWA. The exception is promulgated in 40 CFR Section 125.73(a), which provides that, *“Thermal discharge effluent limitations or standards established in permits may be less stringent than those required by applicable standards and limitations if the discharger demonstrates to the satisfaction of the director that such effluent limitations are more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made. This demonstration must show that the alternative effluent limitation desired by the discharger, considering the cumulative impact of its thermal discharge together with all other significant impacts on the species affected, will assure the protection and propagation of a balanced indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is to be made.”*
6. The Discharger conducted thermal studies and provided findings in a January 2010 report entitled “Thermal Plan Exception Justification for the City of Brentwood Wastewater Treatment Plant”. The Thermal Plan Exception Justification report was submitted to the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) and the United States Fish and Wildlife Service (USFWS) for review. Approval of the Thermal Plan exception was provided by NMFS on 19 August 2011 and USFWS on 31 January 2013. USFWS recommended that for future permit renewals additional temperature monitoring and/or analysis would be useful to evaluate the thermal effects of the discharge to Delta Smelt in lower Marsh Creek near Big Break.
7. Based on the findings of the Thermal Plan Exception Justification report, the Discharger requested exceptions to Specific Water Quality Objectives 5.A.(1)a – c of the Thermal Plan. The following effluent and receiving water temperature limitations will assure the protection and propagation of a balanced, indigenous community of shellfish, fish and wildlife in and on the body of water into which the discharge is made:
 - a. The maximum effluent temperature shall not exceed the natural receiving water temperature by more than:
 - i. 20° F from 1 February through 30 November; or
 - ii. 24 ° F from 1 December through 31 January.
 - b. The discharge shall not cause the surface water temperature to raise greater than 5 ° F above the natural temperature of the receiving water on a monthly average basis for the months of March through September.
 - c. The discharge shall not cause the receiving water temperature to exceed:
 - i. 74 ° F as monthly average for October;
 - ii. 72 ° F as monthly average for November;
 - iii. 65 ° F as a period average for 1 December through 28 February.”

8. The studies concluded that Specific Water Quality Objective 5.A.(1) a, 5.A.(1) b, and 5.A.(1) c of the Thermal Plan were more stringent than necessary to assure the protection and propagation of a balanced, indigenous community of shellfish, fish, and wildlife in an on the body of water into which the discharge is made.
9. These study conclusions were confirmed in approval letters from NMFS and USFWS staff to the Central Valley Water Board on 19 August 2011 and 31 January 2013, respectively.
10. The alternatives to ensure compliance by the Discharger with Specific Water Quality Objectives 5.A. (1) a, 5.A. (1) b, and 5.A. (1) c would require modifications not commensurate with benefit to the aquatic environment.
11. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to approve a Thermal Plan exception for this discharge and has provided them with an opportunity to submit their written views and recommendations. The Central Valley Water Board, on 26 July 2013, held a hearing in Rancho Cordova and considered all evidence concerning this matter;

THEREFORE BE IT RESOLVED that an exception to the *Water Quality Control Plan for the Control of Temperature in the Coastal and Interstate Waters and Enclosed Bays and Estuaries of California* is granted for the City of Brentwood Wastewater Treatment Plant tertiary treated wastewater discharge to Marsh Creek. This exception is conditional and may be terminated at any time.

1. Specific Water Quality Objectives 5.A.(1)a, 5.A.(1)b, 5.A.(1)c of the Thermal Plan are replaced by the following:
 - a. The maximum effluent temperature shall not exceed the natural receiving water temperature by more than:
 - i. 20° F from 1 February through 30 November; or
 - ii. 24 ° F from 1 December through 31 January.
 - b. The discharge shall not cause the surface water temperature to raise greater than 5 ° F above the natural temperature of the receiving water on a monthly average basis for the months of March through September.
 - c. The discharge shall not cause the receiving water temperature to exceed:
 - i. 74 ° F as monthly average for October;
 - ii. 72 ° F as monthly average for November;
 - iii. 65 ° F as a period average for 1 December through 28 February.”

I, Pamela C. Creedon, Executive Officer, do hereby certify that foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Central Valley Region, on 26 July 2013.

Original Signed by Kenneth D. Landau
PAMELA C. CREEDON, Executive Officer