

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2005-0038

REQUIRING THE SHASTA COUNTY SERVICE AREA NO. 17
COTTONWOOD WASTEWATER TREATMENT PLANT,
SHASTA COUNTY
TO
CEASE AND DESIST
FROM DISCHARGING CONTRARY TO REQUIREMENTS

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

1. On 17 March 2005, the Regional Board adopted Waste Discharge Requirements Order No. R5-2005-0037, (NPDES No. CA0081507) for Shasta County Service Area No. 17, Cottonwood Wastewater Treatment Plant, (hereafter Discharger). Waste Discharge Requirements Order No. R5-2005-0037 regulates the discharge of wastewater from a municipal wastewater treatment plant facility to Cottonwood Creek, a tributary of the Sacramento River.
2. Waste Discharge Requirements Order (WDRs) No. R5-2005-0037, Effluent Limitations B.1 includes effluent limitations for copper and zinc as follows:

B. Effluent Limitations

1. The effluent discharge to Cottonwood Creek shall not exceed the following limitations:

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Monthly Maximum</u> ⁵	<u>Daily Maximum</u>	<u>Hourly Average</u>	<u>4-day Average</u>
BOD ¹	mg/L	10	15	--	30	--	--
	lbs/day ²	36	54	--	108	--	--
Total Suspended Solids	mg/L	10	15	--	30	--	--
	lbs/day ²	36	54	--	108	--	--
Settleable Solids	mL/L	0.1	--	--	0.2	--	--
Chlorine Residual ³	mg/L	--	--	--	--	0.02	0.01
Total Coliform Organisms ^{3,4}	MPN/100 mL	--	23 ⁶	240 ⁵	500	--	--
Copper (Total Recoverable)	ug/L	Must Calculate. See Attachment C.	--	--	Must Calculate. See Attachment C.	--	--
	lbs/day ²	Must Calculate. See footnote 2.	--	--	Must Calculate. See footnote 2.	--	--

<u>Constituent</u>	<u>Units</u>	<u>Monthly Average</u>	<u>Weekly Average</u>	<u>Monthly Maximum</u> ⁵	<u>Daily Maximum</u>	<u>Hourly Average</u>	<u>4-day Average</u>
Zinc (Total Recoverable)	ug/L	Must Calculate. See Attachment D.	--	--	Must Calculate. See Attachment D.	--	--
	lbs/day ²	Must Calculate. See footnote 2.	--	--	Must Calculate. See footnote 2.	--	--
<p>¹ 5-day, 20°C biochemical oxygen demand ² Based upon a design flow of 0.43 mgd. Calculate lbs/day by multiplying concentration (mg/L) by 0.43 mgd flow and by 8.34 conversion factor. ³ Chlorine residual and total coliform shall be measured at the chlorine contact chamber discharge or other location approved by the Executive Officer. Effluent chlorine residual shall be measured continuously. ⁴ The effluent coliform sample shall be taken during the period when the highest daily effluent flow occurs. ⁵ Shall not exceed more than once in any 30 day period. ⁶ As a 7-day median average.</p>							

3. The effluent limitations for copper are dependent on the hardness of the receiving water as shown in Attachment C - Copper of Order No. R5-2005-0037. For example, at a hardness of 75 mg/L, the applicable acute and chronic copper criteria are 9.93 ug/L and 7.00 ug/L respectively. At a hardness of 100 mg/L, these criteria increase to 12.88 ug/L (acute) and 8.96 ug/L (chronic), and at a hardness of 120 mg/L they are 15.19 ug/L (acute) and 10.47 ug/L (chronic).
4. The effluent limitations for zinc are also dependent on the hardness of the receiving water as shown in Attachment D - Zinc of Order No. R5-2005-0037. For example, at a hardness of 75 mg/L, the applicable acute and chronic zinc criteria are 26.96 ug/L and 92.58 ug/L respectively. At a hardness of 100 mg/L, these criteria increase to 34.24 ug/L (acute) and 118.14 ug/L (chronic), and at a hardness of 120 mg/L they are 39.83 ug/L (acute) and 137.87 ug/L (chronic).
5. Copper and zinc have been detected in the effluent at concentrations that have the reasonable potential to cause the receiving water to exceed applicable water quality standards for copper and zinc.
6. The Discharger has requested a time schedule to come into compliance with the copper and zinc effluent limits or to conduct studies, such as a site-specific translator study, or a mixing zone and dilution study, to demonstrate that the effluent limitations for copper and zinc should be modified.
7. California Water Code (CWC) Section 13385(h) and (i) require the Regional Board to impose mandatory minimum penalties upon dischargers that violate certain effluent limitations. CWC Section 13385(j) exempts certain violations from the mandatory penalties. CWC Section 13385(j)(3) exempts the discharge from mandatory penalties “where the waste discharge is in compliance with either a cease and desist order issued pursuant to Section 13301 or a time schedule order issued pursuant to Section 13300 or Section 13308, if all the [specified] requirements are met.”

8. In accordance with CWC 13385(j)(3), the Regional Board finds that the Discharger is not able to consistently comply with copper and zinc effluent limits contained in the Waste Discharge Requirements Order No. R5-2005-0037. The copper and zinc effluent limitations are new requirements that became applicable to the permit after the effective date of adoption of the waste discharge requirements, and after 1 July 2000, for which new or modified control measures are necessary in order to comply with the limitation, and the new or modified control measures cannot be completed, and put into operation within 30 calendar days. As the copper and zinc limitations are based on existing Basin Plan water quality objectives that were adopted prior to 25 September 1995, compliance schedules for these effluent limitations must be placed in a Cease and Desist Order.

9. The Discharger needs time to develop reasonable measures to achieve compliance with the final effluent limits for copper and zinc. The Discharger may also conduct studies, such as a site-specific translator study, or a mixing zone and dilution study to demonstrate that the final effluent limits for copper and zinc should be modified. The development of measures to achieve compliance and study periods require up to five (5) years from the effective date of the waste discharge requirements. Since the time schedule for completion of actions necessary to achieve full compliance exceeds one year, interim requirements are included in and by this Order. A time schedule for compliance is included in this Order. In accordance with CWC Section 13385(j)(3) this Order requires the Discharger to prepare and implement a pollution prevention plan pursuant to Section 13263.3(d)(3) of the CWC. Copper and zinc may be able to be reduced through source control measures.

10. The interim limitations in this Order as Maximum Daily Effluent Limits (MDEL) are based on the current operation and treatment practices. In developing the interim limitations, when there are less than ten sampling data points available, the USEPA Technical Support Document (TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of ten data points is necessary to conduct a valid statistical analysis. The multipliers contained in Table 5-2 of the TSD are used to determine a MDEL based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current performance level. Therefore, when there are fewer than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed sampling point to obtain the MDEL. The data used to develop the interim effluent limitations are summarized in the following table:

INTERIM EFFLUENT LIMITATIONS		
	Total Copper	Total Zinc
Number of Samples	2	2
Minimum Concentration (ug/L)	10	16
Maximum Concentration (ug/L)	12	52
Multiplier	3.11	3.11
Interim (MDEL)	37 ug/L	162 ug/L

11. Section 13301 of the California Water Code states, in part:

“When a regional board finds that a discharge of waste is taking place or threatening to take place in violation of requirements or discharge prohibitions prescribed by the regional board or the state board, the board may issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions (a) comply forthwith, (b) comply in accordance with a time schedule set by the board, or (c) in the event of a threatened violation, take appropriate remedial or preventative action. In the event of an existing or threatened violation of waste discharge requirements in the operation of a community sewer system, cease and desist orders may restrict or prohibit the volume, type, or concentration of waste that might be added to such system by dischargers who did not discharge into the system prior to the issuance of the cease and desist order. Cease and desist orders may be issued directly by a board, after notice and hearing, or in accordance with the procedure set forth in Section 13302.”

12. Compliance with this Order exempts the Discharger from mandatory minimum penalties for violations of the copper limitations, in accordance with CWC Section 13385 (j)(3).
13. On 17 March 2005, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Regional Board conducted a public hearing at which evidence was received to consider a Cease and Desist Order pursuant to CWC Section 13301 to establish a time schedule to achieve compliance with waste discharge requirements in Order No. R5-2005-0037.
14. 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 Section 15321 (a)(2), Title 14, California Code of Regulations.
15. Any person adversely affected by this action of the Regional Board may petition the State Water Resources Control Board to review this action. The petition must be received by the State Water Resources Control Board, Office of the Chief Counsel, P.O. Box 100, Sacramento, CA 95812-0100, within 30 days of the date in which the action was taken. Copies of the law and regulations applicable to filing petitions will be provided on request.

IT IS HEREBY ORDERED PURSUANT TO CALIFORNIA WATER CODE SECTION 13301, THAT:

1. The Discharger shall comply with the following time schedule to assure compliance with Waste Discharge Requirements Order No. R5-2005-0037, Effluent Limitations B.1 for copper and zinc:

<u>Task</u>	<u>Compliance Date</u>
Develop and Implement a Pollution Prevention Plan ¹	1 January 2008
Progress Reports ²	1 July of each year
Achieve Full Compliance	1 March 2010
¹ The Pollution Prevention Plan shall meet the requirements specified in California Water Code Section 13263.3(d)(3). ² The progress reports shall detail what steps are planned, and have been implemented to reduce the discharge of copper and zinc into receiving waters. Additionally, describe the progress on any studies undertaken to support alternate effluent limits, such as a site-specific metals translator study, or a mixing zone and dilution study.	

2. The Discharger shall comply with the following interim effluent limitations for copper and zinc. The final water quality based effluent limitations will become effective on **1 March 2010**. The maximum daily effluent limitations cited in table below will be the enforceable interim limitations until that time.

<u>Parameter</u>	<u>Unit</u>	<u>Daily Maximum</u>
Total Copper	ug/L	37
Total Zinc	ug/L	162

3. The Discharger shall monitor the effluent for copper and zinc in accordance with Monitoring and Reporting Program No. R5-2005-0037.
4. If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may apply to the Attorney General for judicial enforcement or issue a complaint for Administrative Civil Liability. Additionally, the interim limit in this Order may be revoked, and the final limits contained in Order No. R5-2005-0037 will immediately become fully applicable.

I, THOMAS R. PINKOS, 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 March 2005.

 THOMAS R. PINKOS, Executive Officer