CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2014-0053
REQUIRING
CITY OF SHASTA LAKE
WASTEWATER TREATMENT FACILITY
SHASTA COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER R5-2014-0052
(NPDES PERMIT CA0079511)

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

1. On 28 March 2014 the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order R5-2014-0052, NPDES Permit No. CA0079511, prescribing WDRs for the City of Shasta Lake Wastewater Treatment Facility (hereafter Facility), Shasta County.

2. WDR Order R5-2014-0052 section IV.A.1.a. includes, in part, the following final effluent limitations applicable to discharges from the Facility through Discharge Point 001 and 002:

Table 4. Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
pH	standard units	--	--	--	6.5	8.5
Priority Pollutants						
Copper, Total Recoverable	µg/L	5.1	--	7.9	--	--
Dichlorobromomethane	µg/L	0.56	--	1.4	--	--
Zinc, Total Recoverable	µg/L	12	--	22	--	--
Non-Conventional Pollutants						
Ammonia Nitrogen, Total (as N)	mg/L	0.74	--	2.1	--	--
	lbs/day[2]	8.0	--	23	--	--
Nitrite Plus Nitrate (as N)	mg/L	10	--	--	--	--

[1] Effluent limitations applicable at Discharge Point 001 only.
[2] Based on an average dry weather flow of 1.3 million gallons per day (MGD).

Need for Time Schedule Extension and Legal Basis

3. On 12 September 2012 the Discharger submitted a request and justification for a compliance schedule for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc. For compliance with the final effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc, the Discharger has requested a 5-year compliance schedule to permit, design, procure funding for , and construct new facilities required to meet the expected effluent limitations, and also to conduct additional studies as may be necessary to comply with NPDES permit requirements.

Mandatory Minimum Penalties

4. California Water Code sections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties (MMPs) upon dischargers that violate certain effluent limitations. California Water Code section 13385(j)(3) exempts the discharge from mandatory minimum 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 13308, if all the* [specified] *requirements are met...for the purposes of this subdivision, the time schedule may not exceed five years in length...*".

5. Per the requirements of California Water Code section 13385(j)(3), the Central Valley Water Board finds that:

    a. This Order specifies the actions that the Discharger is required to take in order to correct the violations that would otherwise be subject to California Water Code sections 13385(h) and (i).

    b. The Discharger has stated that five years is necessary to allow the time to permit, design, procure funding for , and construct new facilities, and conduct necessary studies, required to meet the expected effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc. The Discharger has evaluated facility upgrades to comply with final effluent limitations for ammonia, dichlorobromomethane, nitrate + nitrite, and pH. Upgrades to the Facility will include, at a minimum: pH adjustment, new biological treatment units, replacement of the gas chlorination system with either UV or ozone disinfection, new coagulation feed system upstream of filtration, new filtration technology (either deep-bed or microfiltration), and equalization of reclaimed effluent feed flows. The Discharger reports that final design of facility upgrades shall occur within the years 2014 and 2015, and the construction completion and startup will be completed in the year 2018. The Discharger indicates that pH adjustment necessary to comply with the pH effluent limitation and improve nitrification to comply with the nutrient effluent limitations will improve compliance for copper and zinc.

c. The final effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc are new, more stringent, or modified regulatory requirements that became applicable to the waste discharge after the effective date of Order R5-2014-0052 and after 1 July 2000. New or modified control measures are necessary in order to comply with the final effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc. The new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

d. This Order establishes a time schedule to bring the waste discharge into compliance with the effluent limitations that is as short as possible, taking into account the technological, operational, and economic factors that affect the design, development, and implementation of the control measures that are necessary to comply with the effluent limitations.

6. Compliance with this Order exempts the Discharger from mandatory minimum penalties for violations of the final effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc found in WDR Order R5-2014-0052 from 28 March 2014 (the date of this Order) until 1 March 2019. The Discharger has not previously been protected from mandatory minimum penalties for violations of the ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc effluent limitations.

7. In accordance with CWC section 13385(j)(3)(C), the total length of protection from mandatory minimum penalties for the final effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc does not exceed five years.

8. This Order provides a time schedule for completing the actions necessary to ensure compliance with the final effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc contained in WDR Order R5-2014-0052. 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.

9. This Order includes new performance-based interim effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc. The Central Valley Water Board calculated an interim average monthly effluent limitation (AMEL) and a maximum daily effluent limitation (MDEL) for ammonia, copper, dichlorobromomethane, nitrate + nitrite, and zinc based on the current treatment plant performance. In developing the performance-based interim AMEL, where there are 10 data points or more and only once per month sampling is required, sampling and laboratory variability is accounted for by establishing interim effluent limitations that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations (SD) of the mean (*Basic Statistical Methods for Engineers and Scientists*, Kennedy and Neville, Harper and Row, 3rd

Edition, January 1986). When at least 80 percent of the data points are reported as non-detect (ND) values, or if there are less than 10 data points available, the interim AMEL is based on 3.11 times the maximum observed effluent concentration (MEC) when once per month sampling is required. Additionally, if either of these procedures result in an interim AMEL less than the MEC, the MEC is sometimes established as the interim AMEL. The interim MDEL is calculated by applying statistical methods presented in the *Technical Support Document for Water Quality-based Toxics Control* (March 1991; EPA/505/2-90-001) to determine the maximum expected effluent concentration at a 99% confidence level and 99% probability basis.

In calculating interim effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, and zinc, effluent data for the period from March 2008 through February 2013 was used. The following table summarizes the calculation of the interim effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, and zinc:

Parameter	Discharge Point	Units	# Effluent Samples	Mean	SD	99.9%[1]	MEC	Interim MDEL[2]	Interim AMEL
Ammonia Nitrogen, Total (as N)	001, 002	mg/L	140	0.78	1.1	4.5	5.91	9.8	5.91
Copper, Total Recoverable	001, 002	µg/L	47	4.1	1.4	8.7	8.5	11.9	8.7
Dichlorobromomethane	001, 002	µg/L	43	1.1	1.1	4.7	3.6	8.7	4.7
Nitrate + Nitrite	001, 002	mg/L	41	7.4	4.7	23	16	30	23
Zinc, Total Recoverable	001, 002	µg/L	43	19.3	8.7	48	37.6	59.2	48

[1] Mean plus 3.3 standard deviations from the mean.
[2] Maximum expected effluent concentration,

For pH, the observed range at Discharge Points 001 and 002 was 6.01 through 10.19 s.u. Order No. R5-2008-0037 contained effluent limitations more stringent than the pH range observed during the previous permit term. Consistent with anti-backsliding regulations, this time schedule order establishes interim effluent limitations consistent with those established in Order No. R5-2008-0037, with an instantaneous minimum and maximum of 6.0 to 9.0, at all times.

10. The Central Valley Water Board finds that the Discharger can maintain compliance with the interim effluent limitations included in this Order. Interim effluent limitations are established when compliance with the final effluent limitations cannot be achieved by the existing Facility. Discharge of constituents in concentrations in excess of the final effluent limitations, but in compliance with the interim effluent limitations, can significantly degrade water quality and adversely affect the beneficial uses of the receiving stream on a long-term basis. The interim effluent limitations, however, establish an enforceable ceiling concentration until compliance with the final effluent limitation can be achieved.

11. If an interim effluent limit contained in this Order is exceeded, then the Discharger is subject to MMPs for that particular exceedance as it will no longer meet the exemption in CWC 13385(j)(3). It is the intent of the Board that a violation of an interim monthly effluent limitation subjects the Discharger to only one MMP for that monthly averaging period. In addition, a violation of an interim daily maximum effluent limit subjects the Discharger to one MMP for the day in which the sample was collected.

Other Regulatory Requirements

12. California Water Code section 13300 states: "*Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, or that the waste collection, treatment, or disposal facilities of a discharger are approaching capacity, the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements*."

13. Water Code section 13267 states in 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, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge, waste outside of its region that could affect the quality of waters 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.*

14. The Discharger owns and operates the wastewater treatment facility which is subject to this Order. The technical and monitoring reports required by this Order are necessary to determine compliance with the WDRs and with this Order.

15. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) ("CEQA") pursuant to Water Code section 13389, since the adoption or modification of a NPDES permit for an existing source is statutorily exempt and this Order only serves to implement a NPDES permit. (*Pacific Water Conditioning Ass'n, Inc. v. City Council of City of Riverside* (1977) 73 Cal.App.3d 546, 555-556.).

16. On 28 March 2014, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider this Time Schedule Order under Water Code section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.

IT IS HEREBY ORDERED THAT:

1. Pursuant to California Water Code Sections 13300 and 13267, the Discharger shall comply with the following time schedule to submit reports and ensure completion of the compliance project described in Finding 5.b, above:

Task	Compliance Date
Submit Record of Decision on compliance project and Compliance Project Workplan/Schedule.	6 months after effective date of WDR Order R5-2014-0052
Submit and implement a Pollution Prevention Plan (PPP) pursuant to Water Code section 13263.3 for ammonia, pH, copper, dichlorobromomethane, nitrate + nitrite, and zinc.	6 months after effective date of WDR Order R5-2014-0052
Secure funding assurances for final design, construction, and operation of facility upgrades.	31 December 2016
Complete final design and submit a detailed final design report describing the Facility improvements.	31 December 2017
Begin construction of Facility improvements	30 April 2018
Comply with final effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc	5 years from effective date of WDR Order R5-2014-0052
Submit Annual Progress Reports documenting the steps taken to comply with this Order, describing the completion of tasks, progress of construction, evaluation of the effectiveness of the implemented measures, and an assessment of whether additional measures are necessary to meet the final compliance date.	1 February 2015, 1 February 2016, 1 February 2017, 1 February 2018, 1 February 2019

2. Discharge from both Discharge Points 001 and 002 shall not exceed the following interim effluent limitations. These interim effluent limitations for ammonia, copper, dichlorobromomethane, nitrate + nitrite, pH, and zinc are effective upon adoption of this Order and shall apply in lieu of the corresponding final effluent limitations in WDR Order R5-2014-0052. The Discharger shall comply with the following interim effluent limitations until 5 years following adoption date of permit.

Parameter	Units	Interim MDEL	Interim AMEL
Ammonia Nitrogen, Total (as N)	mg/L	9.8	5.91
Copper, Total Recoverable	µg/L	11.9	8.7
Dichlorobromomethane	µg/L	8.7	4.7
Nitrate Plus Nitrite (as N)	mg/L	30	23
pH	s.u	[1]	
Zinc, Total Recoverable	µg/L	59.2	48

[1] Between 6.0 and 9.0 s.u. at all times.

3. 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."

4. In accordance with California Business and Professions Code sections 6735, 7835, and 7835.1, engineering and geologic evaluations and judgments shall be performed by or under the direction of registered professionals competent and proficient in the fields pertinent to the required activities. All technical reports specified herein that contain work plans for, that describe the conduct of investigations and studies, or that contain technical conclusions and recommendations concerning engineering and geology shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

If, in the opinion of the Executive Officer, the Discharger fails to comply with the provisions of this Order, the Executive Officer may refer this matter to the Attorney General for judicial enforcement, may issue a complaint for administrative civil liability, or may take other enforcement actions. Failure to comply with this Order or with the WDRs may result in the assessment of Administrative Civil Liability of up to $10,000 per violation, per day, depending on the violation, pursuant to the Water Code, including sections 13268, 13350 and 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.

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 28 March 2014.

ORIGINAL SIGNED BY

PAMELA C. CREEDON, Executive Officer