

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER R5-2014-0901

REQUIRING THE CITY OF TURLOCK
WATER QUALITY CONTROL FACILITY
STANISLAUS COUNTY
TO COMPLY WITH REQUIREMENTS PRESCRIBED IN WASTE DISCHARGE REQUIREMENTS
ORDER R5-2010-0002-01
(NPDES PERMIT NO. CA0078948)

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

1. Waste Discharge Requirements (WDR) Order R5-2010-0002-01 was adopted by the Central Valley Water Board, prescribing waste discharge requirements for the City of Turlock (hereafter Discharger), Water Quality Control Facility (hereafter Facility), Stanislaus County. Order R5-2010-0002-01 regulates the discharge of up to 20 million gallons per day of tertiary treated municipal wastewater to Harding Drain (Discharge Point 001) and the San Joaquin River (Discharge Point 002), both waters of the United States. The Central Valley Water Board also adopted Time Schedule Order (TSO) R5-2010-0003 providing time schedules for compliance with the water quality-based effluent limitations for copper, selenium, carbon tetrachloride, chlorodibromomethane, dichlorobromomethane, nitrate, silver, and aluminum by **1 January 2015**.
2. WDR Order R5-2010-0002-01, contains Final Effluent Limitations IV.A.1.a., which reads, in part, as follows (Tables 1 and 2):

Table 1: Final Effluent Limitations – Discharge Point 001 (Harding Drain)

| Parameter | Units | Effluent Limitations | | | | |
|------------------------------------|----------------------|----------------------|----------------|---------------|-----------------------|-----------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Priority Pollutants | | | | | | |
| Copper, Total Recoverable | µg/L | 8.9 | -- | 15 | -- | -- |
| Selenium, Total Recoverable | µg/L | 3.7 | -- | 9.1 | -- | -- |
| | lbs/day ¹ | 0.62 | -- | 1.52 | -- | -- |
| Carbon Tetrachloride | µg/L | 0.25 | -- | 0.72 | -- | -- |
| Chlorodibromomethane | µg/L | 0.41 | -- | 0.78 | -- | -- |
| Dichlorobromomethane | µg/L | 0.56 | -- | 0.81 | -- | -- |
| Non-Conventional Pollutants | | | | | | |
| Nitrate Nitrogen, Total (as N) | mg/L | 10 | -- | -- | -- | -- |

¹ Based on a design flow of 20 MGD.

Table 2: Final Effluent Limitations – Discharge Point 002 (San Joaquin River)

| Parameter | Units | Effluent Limitations | | | | |
|--------------------------------|----------------------|----------------------|----------------|---------------|-----------------------|-----------------------|
| | | Average Monthly | Average Weekly | Maximum Daily | Instantaneous Minimum | Instantaneous Maximum |
| Priority Pollutants | | | | | | |
| Copper, Total Recoverable | µg/L | 8.9 | -- | 15 | -- | -- |
| Selenium, Total Recoverable | µg/L | 3.7 | -- | 9.1 | -- | -- |
| | lbs/day ¹ | 0.62 | -- | 1.52 | -- | -- |
| Silver, Total Recoverable | µg/L | 1.2 | -- | 2.3 | | |
| Chlorodibromomethane | µg/L | 7.3 | -- | 14 | -- | -- |
| Dichlorobromomethane | µg/L | 10 | -- | 15 | -- | -- |
| Non-Priority Pollutants | | | | | | |
| Aluminum, Total Recoverable | µg/L | 261 | -- | 750 | -- | -- |

¹ Based on a design flow of 20 MGD

- On 24 October 2013, the Discharger provided sufficient justification for extending the compliance schedules for chlorodibromomethane and dichlorobromomethane. This Order provides a five year extension of the compliance schedules for chlorodibromomethane and dichlorobromomethane from 1 January 2015 to 31 December 2019. The compliance schedules for copper, selenium, carbon tetrachloride, nitrate, silver, and aluminum are unchanged from TSO R5-2010-0003, which requires compliance with final effluent limitations by 1 January 2015.

Need for Time Schedule Extension and Legal Basis

- The Discharger has made diligent efforts to comply with the final effluent limitations for chlorodibromomethane and dichlorobromomethane, which are disinfection byproducts (DBPs) formed through the chlorine disinfection process. The Discharger submitted and implemented a pollution prevention plan (PPP) for the DBPs on 25 January 2011. In addition, the Discharger has made diligent efforts to identify the sources, optimize removal, and evaluate treatment alternatives, which include ultraviolet disinfection, chloramination, and packed tower air stripping. Some of these treatment alternatives may be feasible; however, the Discharger has requested additional time to evaluate the development of a reclamation project that would result in the cessation of discharge to the San Joaquin River or reduce the discharge to the San Joaquin River such that sufficient dilution is available for compliance with the effluent limitations for the DBPs. The Discharger has requested to delay implementation of a treatment alternative in order to consider the development and implementation of the North Valley Regional Recycled Water Project (NVRWP).

The NVRWP is coordinating with the Discharger, City of Modesto, and other potential recycled water producers to provide tertiary treated recycled water to the west San Joaquin Valley, south of the Sacramento-San Joaquin Delta. The NVRWP is a regional reclamation project proposed to construct a pipeline to deliver high quality recycled water to regional irrigation districts via the Delta Mendota Canal (DMC). The Discharger intends to participate in the NVRWP to convey its recycled water through the new pipeline once it has been developed. The construction phase of the project is expected to be complete by June 2018. However, if the NVRWP is not sufficiently developed by June 2018, the Discharger has committed to initiate and complete a treatment control option (e.g., ultraviolet disinfection or chloramination) or other process/discharge modification prior to the expiration of the extended time schedule. In the event that the Discharger commits to the treatment

control option it will be necessary to revise this Order to modify the time schedule to be consistent with the treatment option selected.

5. The Central Valley Water Board encourages regionalization and reclamation and adopted Resolution No. R5-2009-0028 , “Resolution in Support of Regionalization, Reclamation, Recycling and Conservation for Wastewater Treatment Plants,” on 23 April 2009. Resolution R5-2009-0028 requires, “Regional Water Board staff will facilitate dischargers’ opportunities for wastewater regionalization, recycling, reclamation, and conservation. Regional Water Board staff facilitation may include, but is not limited to, attending local government and stakeholder meetings, participating in public outreach efforts, and supporting the use of grant funding. Staff facilitation should promote initiation, optimization, and/or promotion of all types of water efficiency programs.” Extending the compliance schedule for chlorodibromomethane and dichlorobromomethane will allow the Discharger to evaluate reclamation alternatives and is consistent with Resolution R5-2009-0028.
6. On 24 October 2013, the Discharger submitted a request for additional time to comply with the final effluent limitations at Discharge Points No. 001 and 002 for chlorodibromomethane and dichlorobromomethane. The Discharger has proposed a schedule to achieve compliance by **31 December 2019**.

Mandatory Minimum Penalties

7. California Water Code (CWC) sections 13385(h) and (i) require the Central Valley Water Board to impose mandatory minimum penalties (MMP’s) upon dischargers that violate certain effluent limitations. CWC section 13385(j)(3) exempts the discharge from MMP’s, “*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...*”.
8. Per the requirements of CWC 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 CWC section 13385(h) and (i).
 - b. To comply with final effluent limitations, the Discharger has determined that an additional five years is necessary to develop and implement the projects discussed in Finding 4.
 - c. This Order establishes a time schedule to bring the waste discharge into compliance with the effluent limitations in as short a time 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.
9. At Discharge Point 001 (Harding Drain), the final effluent limitations for copper, selenium, carbon tetrachloride, nitrate, dichlorobromomethane, and chlorodibromomethane became applicable to the waste discharge on the effective date of WDR Order R5-2010-0002-01 (19 March 2010). TSO R5-2010-0003 provided protection from MMP’s for violations of these final effluent limitations from 19 March 2010 until the adoption of this Order (22 July 2014).
10. At Discharge Point 002 (San Joaquin River), the final effluent limitations for copper, selenium, silver, dichlorobromomethane, and chlorodibromomethane became applicable to the waste discharge on the effective date of WDR Order R5-2010-0002-01 (19 March 2010). TSO R5-2010-0003 provided

protection from MMP's for violations of these final effluent limitations from 19 March 2010 until the adoption of this Order (22 July 2014).

11. By statute, a Time Schedule Order may provide protection from MMP's for no more than five years, except as provided in CWC section 13385(j)(3)(C)(ii).
12. Per the requirements of CWC Section 13385(j)(3)(C)(ii)(II) for the purpose of treatment facility upgrade, the time schedule shall not exceed 5 years. Per the requirements of 13385(j)(3)(C)(ii)(II) following a public hearing, and upon a showing that the Discharger is making diligent progress toward bringing the waste discharge into compliance with the effluent limitation, the Central Valley Water Board may extend the time schedule for an additional five years, if the Discharger demonstrates that the additional time is necessary to comply with the effluent limitation. In accordance with CWC Section 13385(j)(3)(C)(ii)(II), the time schedule is extended no more than five years. The Central Valley Water Board finds, as described in previous findings in this Order, that the Discharger has demonstrated due diligence and is making diligent progress to bring the waste discharge into compliance with final effluent limitations for dichlorobromomethane and chlorodibromomethane contained in WDR Order R5-2010-0002-01.
13. At Discharge Point 001 (Harding Drain), compliance with this Order exempts the Discharger from MMP's for violations of the final effluent limitations for copper, selenium, carbon tetrachloride, and nitrate from 23 July 2014 through **31 December 2014**. For dichlorobromomethane and chlorodibromomethane, this Order exempts the Discharger from MMP's for violations of the final effluent limitations from 22 July 2014 through **31 December 2019**.
14. At Discharge Point 002 (San Joaquin River), compliance with this Order exempts the Discharger from MMP's for violations of the final effluent limitations for copper, selenium, and silver from 23 July 2014 through **31 December 2014**. For dichlorobromomethane and chlorodibromomethane, this Order exempts the Discharger from MMP's for violations of the final effluent limitations from 22 July 2014 through **31 December 2019**.
15. If an interim effluent limit contained in this Order is exceeded, then the Discharger is subject to MMP's for that particular exceedance as it will no longer meet the exemption in CWC Section 13385(j)(3).
16. In accordance with CWC section 13385(j)(3), the total length of protection from MMP's for copper, selenium, carbon tetrachloride, nitrate, silver, aluminum, dichlorobromomethane, and chlorodibromomethane does not exceed ten years from the date the effluent limits became applicable to the waste discharge.
17. This Order provides a time schedule for completing the actions necessary to ensure compliance with the final effluent limitations for copper, selenium, carbon tetrachloride, nitrate, silver, aluminum, dichlorobromomethane, and chlorodibromomethane contained in WDR Order R5-2010-0002-01 (or subsequently renewed permit). 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.
18. This Order continues the performance-based interim effluent limitations from TSO R5-2010-0003 for copper, selenium, carbon tetrachloride, nitrate, silver, and aluminum, which were established as maximum daily effluent limitations (MDEL) based on Facility performance. However, since the compliance date for dichlorobromomethane and chlorodibromomethane is extended, the performance-based interim effluent limitations have been recalculated for these constituents to be

representative of the most recent available data (August 2006 to November 2013).

The recalculated interim effluent limitations for dichlorobromomethane and chlorodibromomethane are based on current treatment plant performance and are established as average monthly effluent limitations (AMEL) and MDEL. The United States Environmental Protection Agency (USEPA) has developed a statistical approach to estimate the projected maximum effluent concentration, which is calculated as the upper bound of the log normal distribution of effluent concentrations at a high confidence level. Table 3-1 *Reasonable Potential Multiplying Factors: 99% Confidence Level and 99% Probability Basis*, in USEPA’s Technical Support Document For Water Quality-based Toxics Control, March 1991, (EPA/505/2-90-001) (TSD). The interim performance based AMELs in this Order are established as the estimated maximum effluent concentration determined through the above mentioned method. The interim performance-based MDELs in this Order were established using the procedures described in Table 5-3. *Multipliers for Calculating Maximum Daily Permit Limits From Average Monthly Permit Limits*, in USEPA’s TSD by multiplying the interim AMELs by the MDEL/AMEL multipliers.

A summary of the interim performance-based effluent limitations at Discharge Point 001 and 002 calculations is provided below (Table 3).

Table 3. Interim Effluent Limitation Calculation Summary

| Parameter | Units | MEC | Mean | Std. Dev. | # of Samples | AMEL | MDEL |
|--------------------------------|-------|------|------|-----------|--------------|-------------------|-------------------|
| Copper, Total Recoverable | µg/L | 16 | 5.88 | 2.28 | 31 | -- | 16 |
| Selenium, Total Recoverable | µg/L | 5 | 1.1 | 1.1 | 20 | -- | 5 |
| Carbon Tetrachloride | µg/L | 1.9 | 0.4 | 0.6 | 10 | -- | 2.2 |
| Nitrate Nitrogen, Total (as N) | mg/L | 31 | 16 | 3.8 | 35 | -- | 31 |
| Aluminum, Total Recoverable | µg/L | 640 | 114 | 151 | 42 | -- | 640 |
| Chlorodibromomethane | µg/L | 10.3 | 5.8 | 3.2 | 10 | 39 ^{1,3} | 65 ^{2,3} |
| Dichlorobromomethane | µg/L | 28.9 | 19.5 | 5.4 | 18 | 52 ^{1,3} | 78 ^{2,3} |

¹ AMEL calculated using the TSD approach as the maximum statistically projected critical discharge concentration

² MDEL calculated as the AMEL x MDEL/AMEL multiplier (Table 2 of SIP)

³ Based on effluent data from August 2006 to November 2013

- 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.

Other Regulatory Requirements

- CWC 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.”*

21. CWC 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.*
22. The Discharger owns and operates the 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 Order R5-2010-0002-01 (or subsequently renewed permit) and with this Order.
23. Issuance of this Order is exempt from the provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) ("CEQA") pursuant to CWC 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.)
24. On 10 December 2009, the Central Valley Water Board adopted Resolution R5-2009-0114 to provide explicit authority to the Executive Officer to issue or modify time schedule orders, and to make this authority known to the public and regulated community. This Order may be issued by the Executive Officer of the Central Valley Water Board.
25. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to extend the compliance schedules for dichlorobromomethane and chlorodibromomethane contained in Time Schedule Order R5-2010-0003 for this discharge and has provided them with an opportunity to submit their written views and recommendations. No adverse public comments were received during the 30-day public comment period as required pursuant to Water Code section 13167.5.

IT IS HEREBY ORDERED THAT:

1. Time Schedule Order R5-2010-0003 is rescinded upon the effective date of this Order except for enforcement purposes.
2. Pursuant to CWC Section 13300 and 13267, the Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations at Discharge Point 001 for copper, selenium, carbon tetrachloride, and nitrate, and the final effluent limitations at Discharge Point 002 for copper, selenium, and silver contained in Order R5-2010-0002.

| <u>Task</u> | <u>Date Due</u> |
|---|---|
| Submit Infeasibility Report | Complete |
| Submit Method of Compliance Workplan/Schedule | Complete |
| Submit and implement Pollution Prevention Plan (PPP) ¹ pursuant to CWC section 13263.3 for copper, selenium, carbon tetrachloride, nitrate, silver, and aluminum | Complete |
| Progress Reports ² | 28 February, annually, until final compliance |
| Full compliance with copper, selenium, carbon tetrachloride, nitrate, silver, and aluminum effluent limitations | 1 January 2015 |

¹ The PPP shall be prepared and implemented for copper, selenium, carbon tetrachloride, nitrate, silver, and aluminum, as appropriate, and shall meet the requirements specified in CWC section 13263.3.

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, and recommendations for additional measures as necessary to achieve full compliance by the final date.

3. Pursuant to CWC Section 13300 and 13267, by **31 December 2019** the Discharger shall comply with the following time schedule to ensure compliance with the final effluent limitations at Discharge Points 001 and 002 for dichlorobromomethane and chlorodibromomethane contained in Order R5-2010-0002 (or subsequently renewed permit).

| <u>Task</u> | <u>Date Due</u> |
|---|--|
| i. Financing Plan. The Discharger shall submit financing plan developed for the NVERRWP | 1 January 2015 |
| ii. Environmental Documentation. Submit with the annual progress report confirmation that environmental documentation is complete for compliance with CEQA/NEPA for construction of the NVERRWP. | 1 September 2015 |
| iii. Funding Status. Submit with the annual progress report an update on the status of secured funding for construction of the NVERRWP. Funding may be secured in project phases and the updates should indicate the amount and source of secured funding until funding is complete. | 28 February, annually, until funding is complete |
| iv. Complete Design. Submit documentation confirming that design is complete for construction of the NVERRWP. | 1 September 2016 |
| v. Initiate Construction. Submit documentation that construction of NVERRWP has begun. | 1 January 2017 |

- | <u>Task</u> | <u>Date Due</u> |
|---|---|
| vi. Report of Waste Discharge (ROWD). The Discharger shall submit a ROWD to change point of discharge and/or request for reduction in effluent discharge rate to the San Joaquin River and modification of effluent limits for dichlorobromomethane and chlorodibromomethane that will result in full compliance. | 1 June 2017 |
| vii. Complete Construction. Submit with the annual progress report confirmation that construction of NVRWP is complete. | 1 June 2019 |
| viii. Full Compliance – Eliminate Discharge to Harding Drain and Eliminate or Reduce Discharge to San Joaquin River. Submit documentation that recycled water is being delivered to the NVRWP, the discharge to Harding Drain has ceased, and describe any remaining discharges to the San Joaquin River or confirm that discharges to the San Joaquin River have ceased. If the discharges to the San Joaquin River are reduced, the reductions must be sufficient to result in full compliance with the final effluent limitations for dichlorobromomethane and chlorodibromomethane at Discharge Point 002. | 31 December 2019 |
| ix. Progress Reports. 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, and recommendations for additional measures as necessary to achieve full compliance by the final date. | 28 February, annually, until final compliance |
4. The following interim effluent limitations are effective immediately. The interim effluent limitations for copper, selenium, carbon tetrachloride, nitrate, silver, and aluminum are effective through **31 December 2014**. The interim effluent limitations for dichlorobromomethane and chlorodibromomethane are effective through **31 December 2019**.

Interim Effluent Limitation for Discharge Points 001 and 002

| <i>Constituent</i> | <i>Units</i> | <i>Interim Effluent Limit</i> | |
|--------------------------------|--------------|-------------------------------|----------------------|
| | | <i>Average Monthly</i> | <i>Maximum Daily</i> |
| Copper, Total Recoverable | µg/L | -- | 16 |
| Selenium, Total Recoverable | µg/L | -- | 5 |
| Carbon Tetrachloride | µg/L | -- | 2.2 |
| Nitrate Nitrogen, Total (as N) | mg/L | -- | 31 |
| Aluminum, Total Recoverable | µg/L | -- | 640 |
| Chlorodibromomethane | µg/L | 39 | 65 |
| Dichlorobromomethane | µg/L | 52 | 78 |

5. 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.”

6. 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 civil engineering, geologic, or geophysical plans, calculations, specifications, and related reports submitted with technical reports specified herein shall be prepared by or under the direction of appropriately qualified professional(s), even if not explicitly stated and 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.

This Order is effective upon the date of signature.

ORIGINAL SIGNED BY

PAMELA C. CREEDON, Executive Officer

22 July 2014

Date