CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2010-XXXX
AMENDING WASTE DISCHARGE REQUIREMENTS ORDER NO. R5-2008-0055
AND
AMENDING TIME SCHEDULE ORDER NO. R5-2008-0056
(NPDES PERMIT NO. CA0077691)

CITY OF VACAVILLE
EASTERLY WATEWATER TREATMENT PLANT
SOLANO COUNTY

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

1. On 25 April 2008, the Central Valley Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2008-0055 and Time Schedule Order (TSO) No. R5-2008-0056, prescribing waste discharge requirements and compliance time schedules for the City of Vacaville Easterly Wastewater Treatment Plant in Solano County. For the purposes of this Order, the City of Vacaville is hereafter referred to as "Discharger" and the Easterly Wastewater Treatment Plant is hereafter referred to as "Facility".

2. The Discharger owns and operates the Facility, which consists of two parallel plants, the existing North Plant and the newly constructed South Plant. The treatment system consists of headworks, primary sedimentation basins, aeration basins, secondary circular clarifiers, chlorination and dechlorination facilities, emergency ponds, dissolved aeration floatation thickener, anaerobic digesters, biosolids storage ponds, biosolids belt filter press and biosolids drying beds. Secondary treated wastewater is discharged to Old Alamo Creek, tributary to New Alamo Creek, tributary to Ulatis Creek, and tributary to Cache Slough, all waters of the United States.

3. Since the adoption of WDR Order No. R5-2008-0055 and TSO No. R5-2008-0056, the Discharger has performed monitoring studies to confirm that compliance with the final effluent limitations for dibromochloromethane and dichlorobromomethane in WDR Order No. R5-2008-0055 cannot be attained with the current facilities. The Discharger conducted a use attainability analysis (UAA) for the downstream receiving waters. Based on the results of the UAA, the Discharger has chosen to pursue a Basin Plan amendment to establish site-specific water quality objectives that would be more applicable to the segments of receiving water downstream of the discharge (i.e., New Alamo Creek and Ulatis Creek). The proposed site-specific objectives are currently being developed by Central Valley Water Board staff as proposed amendment to the Basin Plan. The adoption of the site-specific objectives, as proposed, would result in the removal of the effluent limitations for dibromochloromethane and dichlorobromomethane in WDR Order No. R5-2008-0055. Therefore, in the interim, the Discharger requests additional time to complete the Basin Plan amendment process, and/or complete upgrades to the Facility, as necessary. This Order amends TSO R5-2008-0056 by adding a time schedule for the Discharger to comply with final effluent limits for dibromochloromethane and dichlorobromomethane by 1 April 2015.

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4. On 22 October 2008, as required in Order No. R5-2008-0055, the Discharger submitted a work plan and schedule for completion of an electrical conductivity (EC) and pH study to evaluate site-specific water quality objectives to protect the agricultural beneficial uses of the receiving water. However, since the adoption of WDR Order No. R5-2008-0055, several developments pertaining to salinity have occurred regarding approaches to determining applicable salinity standards in Central Valley surface waters. The developments include the CV-SALTS efforts initiated by the Central Valley Water Board, and the State Water Resources Control Board's reevaluation of salinity standards in the South Delta as described in the 5 January 2010 report by Dr. Hoffman, "Salt Tolerance of Crops in the Southern Sacrament-San Joaquin Delta." In order to be consistent with the approaches that are being developed under these two efforts, the Discharger has requested additional time to revise its work plan, if necessary, and to extend the due date for submittal of the final study report to April 2015. This Order amends WDR Order R5-2008-0055 to extend the due date for submittal of the final EC and pH Study report to 1 April 2015.

5. 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.

6. The Central Valley Water Board has notified the Discharger and interested agencies and persons of its intent to amend the Time Schedule Order for this discharge and has provided them with an opportunity to submit their written views and recommendations.

7. 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.

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IT IS HEREBY ORDERED THAT:

Waste Discharge Requirements Order No. R5-2008-0055 (NPDES No. CA0084255) is amended solely to modify Special Provisions VI.C.2.b of the Limitations and Discharge Requirements and Section VII.B.2.b of the Fact Sheet (Attachment F).

1. Special Provisions VI.C.2.b of the Limitations and Discharge Requirements shall be amended, as shown below in strikeout/underline format.

Task	Compliance Date
Submit Work Plan	**6 Months from Adoption of this Order**
Submit Completed Study Report	**~~3 Years from Adoption of this Order~~** **1 April 2015**

2. Section VII.B.2.b of the Fact Sheet (Attachment F) shall be amended, as shown below in strikeout/underline format.

   b. **Electrical Conductivity (EC) and pH Study (Special Provisions VI.C.2.b.)**. The discharge exceeds the screening levels for EC, TDS, and chloride recommended in Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1 (R.S. Ayers and D.W. Westcot, Rome, 1985) (UN Report) for irrigation of crops. However, the salinity level in irrigation water that harms crop production depends on the crop type, soil type, irrigation methods, rainfall, and other factors. Therefore, this Order requires the Discharger complete and submit a report on the results of a site-specific investigation of appropriate EC levels to protect the beneficial use of agricultural supply for the most salt sensitive crops in areas irrigated with Old Alamo Creek, New Alamo Creek, and Ulatis Creek waters in the vicinity of the discharge under reasonable worst-case conditions. The study shall determine the sodium adsorption ratio of soils in the affected area, the alkalinity of soils to whether site specific conditions would reduce fluoride impacts, the effects of rainfall and flood-induced leaching, and background water quality (Old Alamo, New Alamo and Ulatis Creeks and groundwater). The study shall evaluate how climate, soil chemistry, background water quality (surface water and groundwater), rainfall, and flooding affect salinity (EC) requirements. Based on these factors, as well as economic and environmental impacts (such as increased irrigation water usage, groundwater hydraulics and degraded water quality), the study shall recommend site-specific numeric values for EC that provide reasonable protection for the agricultural supply use designation in Old and New Alamo Creek and Ulatis Creek. The Order also requires TDS and pH groundwater limits based on the UN Report for protection of the agricultural water supply beneficial use of the groundwater. As part of the EC site-specific study, the Discharger shall evaluate the appropriate pH levels that are protective of the agricultural water supply beneficial use of the groundwater, which may be used to irrigate crops in the area.

Several developments pertaining to salinity are currently underway regarding approaches to determining applicable salinity standards in Central Valley surface waters. The developments include the CV-SALTS efforts initiated by the Central Valley Water Board, and the State Water Board's reevaluation of salinity standards in the South Delta as described in the 5 January 2010 report by Dr. Hoffman, "Salt Tolerance of Crops in the Southern Sacrament-San Joaquin Delta." To ensure that the Discharger's study is consistent with the approaches that are being developed under these two efforts, an extended period is allowed for submittal of the final EC and pH Study. The final Study is required by 1 April 2015.

The Regional Water Board will evaluate the recommendations, select appropriate values, re-evaluate reasonable potential for EC, including consideration of the secondary MCL for EC for the protection of MUN in New Alamo Creek and Ulatis Creek and reopen the Order, as necessary, to revise effluent limitations for EC. Furthermore, the Regional Water Board will re-evaluate the groundwater limitations for TDS and pH, based on the results of the study and may reopen to modify the groundwater limitations, as appropriate.

IT IS FURTHER HEREBY ORDERED THAT:

Time Schedule Order No. R5-2008-0056 (NPDES No. CA0084255) is amended as shown in underline/strikeout format in Attachment 1 to this Order.

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 **XX March 2010.**

PAMELA C, CREEDON, Executive Officer

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ATTACHMENT 1

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

TIME SCHEDULE ORDER NO. R5-2008-0056-01
As Amended by Order No. R5-2010-XXXX

REQUIRING THE CITY OF VACAVILLE
EASTERLY WASTEWATER TREATMENT PLANT
SOLANO COUNTY

TO COMPLY WITH REQUIREMENTS PRESCRIBED IN ORDER NO. R5-2008-0055
(NPDES PERMIT NO. CA0077691

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

1. On 25 April 2008, the Regional Water Board adopted Waste Discharge Requirements (WDR) Order No. R5-2008- 0055, prescribing waste discharge requirements for the City of Vacaville (hereafter Discharger) at the Easterly Wastewater Treatment Plant (hereafter Facility), Solano County.

2. WDR Order No. R5-2008-0055, contains Final Effluent Limitations IV.A.1.a. which reads, in part, as follows:

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Nitrate (as N) (total recoverable)	mg/L	17	--	--	--	--
Dibromochloromethane	µg/L	0.41	--	0.86	--	--
Dichlorobromomethane	µg/L	0.63	--	0.99	--	--

3. California Water Code (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.*"

4. Federal regulations, 40 CFR §122.44 (d)(1)(i), require that NPDES permit effluent limitations must control all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above any State water quality standard, including any narrative criteria for water quality. Beneficial uses, together with their corresponding water quality objectives or promulgated water quality criteria, can be defined per federal regulations as water quality standards.

5. In accordance with CWC section 13385(j)(3), the Regional Water Board finds that, based upon results of effluent monitoring, the Discharger is not able to consistently comply with the new effluent limitations for nitrate, dibromochloromethane and dichlorobromomethane. These limitations are new requirements that become applicable to the Order after the effective date of adoption of the waste discharge requirements, and after July 1, 2000, for which new or modified control measures are necessary in order to comply with the limitations, and the new or modified control measures cannot be designed, installed, and put into operation within 30 calendar days.

6. Immediate compliance with these new effluent limitations for nitrate, dibromochloromethane, and dichlorobromomethane are not possible or practicable. The Clean Water Act and the California Water Code authorize time schedules for achieving compliance.

7. On 15 February 2007 and on 12 November 2009, the Discharger submitted justification for a compliance schedule for nitrate, and dibromochloromethane and dichlorobromomethane, respectively, which included: (a) documentation that diligent efforts have been made to quantify pollutant levels in the discharge and the sources of the pollutant in the waste stream; (b) documentation of source control measures and/or pollution minimization measures efforts currently underway or completed; (c) a proposal for additional or future source control measures, pollutant minimization actions, or waste treatment (i.e., facility upgrades) with projected time schedules to achieve compliance with final effluent limitations; and (d) a demonstration that the proposed schedule is as short as practicable. Therefore, this Order provides a time schedule for the Discharger to develop, submit, and implement methods of compliance, including utilizing pollution prevention activities, conducting site specific studies to develop site specific water quality objectives, conducting Use attainability analysis to determine if the MUN designation is appropriate in New Alamo Creek, or constructing necessary treatment facilities to meet the new effluent limitations or require modification of the effluent limitations for nitrate, dibromochloromethane and dichlorobromomethane.

8. WDR Order No. R5-2008-0055 also contains, in part, the following interim limits that are in effect through the 17 May 2010.

Interim Effluent Limitations (CTR)

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Dibromochloromethane	µg/L	--	--	14	--	--
Dichlorobromomethane	µg/L	--	--	43	--	--

9. Since the adoption of WDR Order No. R5-2008-0055 and TSO No. R5-2008-0056, the Discharger has performed monitoring studies to confirm that compliance with the final effluent limitations for dibromochloromethane and dichlorobromomethane in WDR Order No. R5-2008-0055 cannot be attained with the current facilities. The Discharger conducted a use attainability analysis (UAA) for the downstream receiving waters. Based on the results of the UAA, the Discharger has chosen to pursue a Basin Plan amendment to establish site-specific water quality objectives applicable to the downstream receiving waters (i.e., New Alamo Creek and Ulatis Creek). The proposed site-specific objectives are currently being developed by Central Valley Water Board staff as an amendment to the Basin Plan. The adoption of the site-specific objectives, as proposed, would result in the removal of the effluent limitations for dibromochloromethane and dichlorobromomethane in WDR Order No. R5-2008-0055. Therefore, in the interim, the Discharger requests additional time to complete the Basin Plan amendment process, and/or complete upgrades to the Facility, as necessary.

10. On 22 October 2008, as required in Order No. R5-2008-0055, the Discharger submitted a work plan and schedule for completion of an electrical conductivity (EC) and pH study to evaluate site-specific water quality objectives to protect the agricultural beneficial uses of the receiving water. However, since the adoption of WDR Order No. R5-2008-0055, several developments pertaining to salinity have occurred regarding approaches to determining applicable salinity standards in Central Valley receiving waters. The developments include the CV-SALTS efforts initiated by the Central Valley Water Board, and the State Water Resources Control Board's reevaluation of salinity standards in the South Delta as described in the 5 January 2010 report by Dr. Hoffman, "Salt Tolerance of Crops in the Southern Sacrament-San Joaquin Delta." The Discharger, in order to be consistent with the approaches that are being developed under these two efforts, has requested additional time to revise its work plan, if necessary, and to extend the due date for submittal of the final study report to April 2015.

Mandatory Minimum Penalties

11. CWC section 13385(h) and (i) require the Regional Water Board to impose mandatory minimum penalties (MMPs) upon dischargers that violate certain effluent limitations. CWC section 13385(j) exempts certain violations from the mandatory minimum penalties. CWC 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, if all the [specified] requirements are met..... For the purposes of this subdivision, the time schedule may not exceed five years in length.....*"

12. ~~Compliance with this Order exempts the Discharger from mandatory penalties for violations of effluent limitations for nitrate, only, in accordance with CWC section 13385(j)(3). CWC section 13385(j)(3) requires the Discharger to prepare and~~

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~~implement a pollution prevention plan pursuant to section 13263.3 of the California Water Code~~. By statute, a Cease and Desist Order or Time Schedule Order may provide protection from MMPs for no more than five years. Compliance with this Order exempts the Discharger from mandatory penalties for violations of effluent limitations for nitrate, dibromochloromethane, and dichlorobromomethane, only, in accordance with CWC section 13385(j)(3). Protection from MMPs for the effluent limitations for nitrate begins on 25 April 2008 and may not extend beyond 25 April 2013. The Central Valley Water Board has not previously issued an Order to provide MMP protection from exceedance of dibromochloromethane and dichlorobromomethane for this facility. Therefore, compliance with this Order exempts the Discharger from MMPs for violations of the final effluent limitations for dibromochloromethane and dichlorobromomethane in accordance with CWC section 13385(j)(3). Protection from MMPs begins on **XX** March 2010 and may not extend beyond the compliance schedule listed in this Order (i.e., 1 March 2015).

13. Since the time schedules for completion of action necessary to bring the waste discharge into compliance exceeds 1 year, this Order includes interim requirements and dates for their achievement. The time schedules do not exceed 5 years.

The compliance time schedules in this Order include interim performance-based effluent limitations for nitrate, dibromochloromethane and dichlorobromomethane. The interim effluent limitations consist of a maximum daily effluent concentration derived using sample data provided by the Discharger. The interim limitations for dibromochloromethane, and dichlorobromomethane in WDR Order No. R5-2008-005 are re-established in this Order and they are based on the current plant performance.

In developing the interim limitations, when there are ten sampling data points or more, sampling and laboratory variability is accounted for by establishing interim limits that are based on normally distributed data where 99.9% of the data points will lie within 3.3 standard deviations of the mean (*Basic Statistical Methods for Engineers and Scientists, Kennedy and Neville, Harper and Row*). Therefore, the interim limitations in this Order are established as the mean plus 3.3 standard deviations of the available data. Where actual sampling shows an exceedance of the proposed 3.3-standard deviation interim limit, the maximum detected concentration has been established as the interim limitation. When there are less than 10 sampling data points available, the *Technical Support Document for Water Quality- Based Toxics Control* ((EPA/505/2-90-001), TSD) recommends a coefficient of variation of 0.6 be utilized as representative of wastewater effluent sampling. The TSD recognizes that a minimum of 10 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 maximum daily limitation based on a long-term average objective. In this case, the long-term average objective is to maintain, at a minimum, the current plant performance level. Therefore, when there are less than ten sampling points for a constituent, interim limitations are based on 3.11 times the maximum observed effluent concentration to obtain the daily maximum interim

limitation (TSD, Table 5 2). Derivation of these interim limitations is summarized below:

14. The Regional Water Board finds that the Discharger can undertake treatment plant measures to maintain compliance with the interim limitations included in this Order. Interim limitations are established when compliance with the final effluent limitations cannot be achieved by the existing discharge. 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 limitations, however, establish an enforceable ceiling concentration until compliance with the effluent limitation can be achieved.

Other Regulatory Requirements

15. On 25 April 2008, and on XX March 2010, in Sacramento, California, after due notice to the Discharger and all other affected persons, the Board conducted a public hearings at which evidence was received to consider a Time Schedule Order and the amended Time Schedule Order, respectively, under CWC section 13300 to establish a time schedule to achieve compliance with waste discharge requirements.

16. ~~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 15321 (a)(2), Title 14, of the California Code of Regulations.~~ The issuance of this Order is not a "project" as defined by the California Environmental Quality Act (Public Resources Code, Section 21000, *et seq.*) (CEQA), and does not have the potential to cause a significant adverse impact on the environment (Title 14 CCR section 15061(b)(3)). This Order enforces preexisting requirements to improve the quality of ongoing discharges that are part of the CEQA "baseline"; and includes interim effluent limitations to ensure that discharges do not increase above the CEQA baseline. Any measures to meet effluent limitations are the result of WDRs Order No. R5-2008-0055 and not this Order. Even assuming the issuance of this Order is a "project" within the meaning of CEQA, issuance of this Order is exempt from the provisions of in accordance with Water Code Section 13389, which exempts the adoption or modification of a NPDES Permit for an existing source. This Order only serves to implement a NPDES permit and is therefore exempt under Section 13389. The issuance of this Order is also exempt under Section 15321(a)(2), Title 14, California Code of Regulations (CCR).

17. Any person adversely affected by this action of the 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 on which this action was taken. Copies of the law and regulations applicable to filing petitions will be provided upon request.

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IT IS HEREBY ORDERED THAT:

1. The Discharger shall comply with the following time schedule to ensure compliance with the effluent limitations for nitrate, dibromochloromethane, and dichlorobromomethane, contained in WDR Order No. R5-2008-0055 as described in the above Findings:

a.

Task	Date Due
Submit Method of Compliance Workplan/Schedule for nitrate	**Within 6 months of adoption of this Order**
Submit Pollution Prevention plan (PPP)[1] pursuant to CWC section 13263.3 for nitrate	**Within 6 months of adoption of this Order**
Progress Reports[2]	**1 June annually**, after approval of work plan until final compliance
Full compliance with effluent limitations for nitrate	**1 May 2013**

b.

Task	Date Due
Submit Method of Compliance Workplan/Schedule for dibromochloromethane, and dichlorobromomethane	**1 July 2010**
Submit Pollution Prevention plan (PPP)[1] pursuant to CWC section 13263.3 for dibromochloromethane, and dichlorobromomethane	**1 October 2010**
Progress Reports[2]	**1 September, annually**, after approval of work plan until final compliance
Full compliance with effluent limitations for dibromochloromethane, and dichlorobromomethane	**1 March 2015**

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[1] The PPP shall be prepared for nitrate, dibromochloromethane and dichlorobromomethane where appropriate, and shall meet the requirements specified in CWC section 13263.3(d)(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.

2. The following interim effluent limitations shall be effective immediately. The interim effluent limitations for nitrate shall be effective until 30 April 2013, and for dibromochloromethane and dichlorobromomethane until 28 February 2015 or when the Discharger is able to come into compliance, whichever is sooner.

Parameter	Maximum Daily Effluent Limitation
Nitrate as N (Total Recoverable) (mg/L)	30
Dibromochloromethane (µg/L)	14
Dichlorobromomethane (µg/L)	43

3. For the compliance schedules required by this Order, the Discharger shall submit to the Regional Water Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, and shall include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule.

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. If compliance with these effluent limitations is not achieved by the Full Compliance date, the discharge would not be exempt from the mandatory minimum penalties for violation of certain effluent limitations, and would be subject to issuance of a Cease and Desist Order in accordance with CWC section 13301.

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 25 April 2008 and amended by Order No. R5-2010-XXXX on 17/18/19 March 2010.

PAMELA C CREEDON, Executive Officer

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