

Central Valley Regional Water Quality Control Board
31 July 2008 Board Meeting

Response to Comments for the City of Colusa Wastewater Treatment Plant
Tentative Waste Discharge Requirements
(National Pollutant Discharge Elimination System (NPDES) Permit Renewal)

The following are Central Valley Regional Water Quality Control Board (Regional Water Board) staff responses to comments submitted by interested parties regarding the tentative NPDES Permit renewal for the City of Colusa Wastewater Treatment Plant. Public comments regarding the proposed permit renewal were required to be submitted to the Regional Water Board office by 5:00 p.m. on 13 June 2008 in order to receive full consideration.

The Regional Water Board received comments regarding the proposed NPDES Permit renewal by the due date from the City of Colusa (Discharger) and the Central Valley Clean Water Association. The submitted comments were accepted into the record, and are summarized below, followed by Regional Water Board staff responses.

CITY OF COLUSA (DISCHARGER) COMMENTS

Discharger Comment No. 1: Facility Address - The Discharger notes a correction to the Wastewater Treatment Plant address in the permit and Fact Sheet.

RESPONSE: Regional Water Board has corrected the Facility address in the proposed Permit and Fact Sheet.

Discharger Comment No. 2: MUN Beneficial Use Designation - The Discharger states that the Municipal and Domestic Water Supply (MUN) beneficial use designation applied to the receiving waters (the unnamed tributary to Powell Slough, and Pough Slough) will result in numerous effluent limitations that will ultimately require significant Discharger expenditure for studies, monitoring, and compliance assurance. The Discharger also states that the MUN designation is likely not applicable to this discharge. The existing NPDES permit (Order No. R5-2002-0020) contains Finding 7 as follows:

“The beneficial uses of the unnamed tributary to Powell Slough are not specifically identified in the Basin Plan. The unnamed tributary to Powell Slough is a tributary to Powell Slough and the Colusa Basin Drain. The Colusa Basin Drain is the first body of water downstream of the unnamed tributary to Powell Slough for which the Basin Plan has identified existing and potential beneficial uses. The beneficial uses of the Colusa Basin Drain, as defined in Table II-1 of the Basin Plan, are agricultural irrigation, agricultural stock watering, body contact water recreation, canoeing and rafting, warm freshwater aquatic habitat, cold freshwater aquatic habitat, warm fish migration habitat, warm spawning habitat, and wildlife habitat. Other beneficial uses identified in the Basin Plan apply to the unnamed

tributary to Powell Slough, including groundwater recharge and freshwater replenishment. Upon review of the flow conditions, habitat values, and beneficial uses of the unnamed tributary to Powell Slough, the Board finds that the beneficial uses identified in the Basin Plan are applicable to the unnamed tributary to Powell Slough.”

Fact Sheet, Page 2, of the existing permit further states:

“State Water Resources Control Board Resolution No. 88-63 “Sources of Drinking Water” provides that “All surface and groundwaters of the State are considered to be suitable, or potentially suitable, for municipal or domestic water supply and should be so designated by the Regional Board with exception of:…2.b. The water in the system is designed or modified for the primary purpose of conveying or holding agricultural drainage waters…”. The unnamed water bodies through which Colusa’s wastewater flows were constructed for the purpose of conveying agricultural drainage waters. Therefore, the unnamed water body and Powell Slough could likely meet the criteria for a municipal exemption under Resolution 88-63.”

The Discharger states that since the Findings in the existing permit were historically made that the MUN designation is not appropriate, it appears reasonable that the MUN designation continues to be inapplicable based primarily on the following factors:

- (1) In absence of the discharge, the unnamed tributary to Powell Slough and Powell Slough are ephemeral. As such, a drinking water supply cannot be developed.
- (2) The Department of Public Health does not allow drinking water supplies containing effluent in a ratio exceeding 20 parts receiving water to 1 part effluent. Therefore, with the addition of the discharge, the unnamed tributary to Powell Slough and Powell Slough would continue to be unsuited as a municipal water supply.
- (3) The unnamed tributary to Powell Slough and Powell Slough are tributaries to the Colusa Basin Drain. Per the Basin Plan, the MUN designation does not apply to the Colusa Basin Drain.
- (4) Previous Orders have concurred that the MUN designation is not applicable.

The Discharger therefore believes that insufficient justification has been presented in the proposed NPDES Permit renewal to justify a change in the MUN beneficial use designation of the unnamed tributary to Powell Slough. Accordingly, it is requested that

the proposed permit be modified to remove the MUN beneficial use designation and that the effluent limitations be revised accordingly.

RESPONSE: Regional Water Board staff concurs that the applicability of the MUN beneficial use to the receiving water results in additional effluent limitations that will require the Discharger to either further upgrade their newly upgraded facility and/or conduct additional studies and monitoring. Regional Water Board staff additionally concurs that the beneficial uses of the unnamed tributary to Pough Slough, and Pough Slough, are not specifically identified in the Water Quality Control Plan for the Sacramento and San Joaquin River Basins (Basin Plan) to have a Municipal and Domestic Water Supply (MUN) beneficial use designation. The Colusa Basin Drain in which the above two mentioned water bodies flow into, is specifically identified to not have the MUN beneficial use.

As discussed in Finding II.H of the proposed NPDES permit, the MUN beneficial use is applied to the receiving waters based on the State Water Resources Control Board (State Water Board) Resolution No. 88-63, which establishes that all waters (with certain exceptions) should be considered suitable or potentially suitable for municipal or domestic supply. The Regional Water Board implemented this policy by designating all unnamed waterbodies as having the MUN use. Staff concurs that the unnamed tributary to Pough Slough may have been constructed or modified for the purpose of conveying agricultural drainage water, as specified in the criteria of Exception No. 2.b. of Resolution No. 88-63. Regional Water Boards staff does not concur, however, that the Tributary Rule eliminates the MUN use in the receiving waters. Applying the Tributary Rule to a tributary of the Colusa Basin Drain does not supercede the blanket MUN designation. As provided in the Basin Plan, page II-2.01, the Regional Water Board may de-designate MUN based on the applicability of one or more of the Resolution No. 88-63 exceptions; however, as specified in page VI-9.00, de-designation of a MUN use must occur through a formal basin plan amendment process. The Regional Water Board does not have the authority to grant an exception to Resolution No. 88-63 through an individual NPDES permit adoption. This conclusion is supported in State Water Board Water Quality Order No. 2002-0015 for the Vacaville's Easterly Wastewater Treatment Plant and State Water Board Order No. WQ 2006-0010.

Therefore, regardless of the findings in the previous NPDES permit (Waste Discharge Requirements No. R-2002-0020), Regional Water Board staff believes the proposed permit renewal correctly identifies the unnamed tributary and Pough Slough as a waterbody that currently has MUN as one of its designated uses. To address the need for the Discharger to take additional measures to comply with the new and/or more stringent effluent limitations associated with the new implementation of the MUN beneficial use to the receiving water body, the proposed permit contains a five year compliance schedule. Currently, it is

unknown if the Discharger will proceed with further plant upgrades to comply with the new and/or more stringent effluent limitations, or if it will proceed in conducting a Use Attainability Analysis (UAA) as the basis of a proposed Basin Plan Amendment. The Basin Plan includes a provision that where the Regional Water Board determines it is infeasible to achieve immediate compliance with an effluent limitation based on newly interpreted objectives or criteria, a compliance schedule of up to ten years may be included in the NPDES permit based on the shortest practicable time required to achieve compliance. To address the Discharger's concern regarding compliance with the more stringent permit requirements, the last paragraph of Finding M of the tentative NPDES permit has been modified to state the following:

This Order includes compliance schedules, interim effluent limitations and discharge specifications for effluent limitations in which the Discharger is not able to comply. A five year compliance schedule is included in this Order for effluent limitations associated with the new and/or more stringent effluent limitations based on the newly interpreted MUN beneficial use designation of the receiving waters in accordance with State Water Board Resolution No. 88-63. The Basin Plan allows for a compliance schedule of up to ten years. The Discharger may choose to seek a Basin Plan Amendment to dedesignate the MUN use from the receiving water, and may need a compliance schedule greater than five years. The Regional Water Board will consider extending the compliance schedule as necessary to allow time to complete the Basin Planning process, if that is the Discharger's selected compliance option. A detailed discussion of the basis for the compliance schedule(s) and interim effluent limitation(s) and discharge specifications is included in the Fact Sheet.

Discharger Comment No. 3. Aluminum Effluent Limitations - The Discharger comments that the average monthly Aluminum Effluent Limitation (Section IV.A.1.a, Table 6, Page 9 of the proposed permit) is based on Policy for Implementation of Toxic Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (also referred to as the SIP) procedures and should be 330 µg/L (only two significant digits are required).

The Discharger also requests a footnote in the effluent limitations table that notes that compliance with the MDEL, based on the monitoring frequency of once-per-month, is sufficient to discern compliance with the average monthly effluent limitation of 330 µg/l. Only in an instance that aluminum is monitored more frequently than once-per-month should reported values be averaged and compared to the average monthly effluent limitation. The basis of the Discharger's request is that the maximum daily and average monthly effluent limitations are based on a statistical analysis revolving around a single water quality criterion (e.g., 750 µg/L) using an equivalent effluent dataset. The only difference is the use of two different averaging periods. Thus, both limitations are

equivalent after normalizing for the averaging period. The monitoring frequency, however, is insufficient to differentiate between the two criteria.

Additionally, the Discharger states that aluminum analysis is sufficiently complex and that the results are not returned from the laboratory in time to allow for additional sampling to demonstrate compliance with the average monthly limitation should the single daily value be found to exceed the monthly average limitation. A single data point is insufficient to discern monthly average compliance alone. This discharge is a minor discharge, and additional monitoring does not justify the expense when USEPA statistical procedures suggest that compliance with the maximum day limitation is equivalent to compliance with the average month limitation.

Similarly, it is reasonable that if the maximum day limitation is violated at some point, then the monthly average limitation would also be violated. Thus, a violation of the maximum day limitation would constitute a simultaneous violation of the monthly average limitation.

RESPONSE: Regional Water Board staff concurs that the SIP requires effluent limitations for California Toxic Rule (CTR) constituents to be rounded to two significant digits. Aluminum is not a CTR constituent, and therefore, the SIP requirements are not applicable. However, due to the Discharger's comment, the proposed maximum daily effluent limitations for copper (a CTR constituent) of 13.1 ug/l has been modified to 13 ug/l for accordance with the SIP. For consistency throughout the proposed permit, the aluminum effluent limitation was also modified in accordance with the Discharger's comment, from 327 ug/l to 330 ug/l.

The proposed NPDES permit includes maximum daily effluent limitations and average monthly effluent limitations to protect against acute and chronic threat to aquatic life. Compliance monitoring is required for the Discharger to demonstrate its compliance with all effluent limitations. Regional Water Board staff does not agree with only allowing compliance to be determined for the maximum daily effluent limitation yet allow non-compliance with monthly effluent limitations. It is recognized that monthly monitoring provides only one data point to determine compliance with both the average monthly limit and the daily maximum limit. If the discharger is concerned about violating the average monthly limit, it should monitor immediately at the beginning of the month and conduct subsequent monitoring later in the month if compliance is not obtained with the first sample. The Discharger is, however, required to report the results of any additional sampling, whether or not required by the permit. Regional Water Board staff agrees with the Discharger that compliance monitoring more frequent than once per month is not necessary for the subject discharge.

Discharger Comment No. 4: Total Coliform Effluent Limitation Units – The Discharger states that the units associated with the final effluent limitation for Total Coliform Organisms appear to be a typographic error. The Discharger also notes that footnote No. 2 of Table 6 (Effluent Limitations) does not refer to any of the entries in the Table.

RESPONSE: The units corresponding to the Total Coliform Organisms effluent limitation appeared to be a typo due to the table formatting. The table formatting has been corrected and the units clearly read as MPN/100 mL. Additionally, Regional Water Board staff concurs that footnote No. 2 is in error. The footnote has been deleted from the proposed permit.

Discharger Comment No. 5. Chlorine Residual Effluent Limitations - The Discharger is in process of constructing an Ultraviolet Light (UV) disinfection system to replace the existing chlorination/dechlorination system. The Discharger requests that the total chlorine residual limitation be assigned only until the proposed UV system becomes operational and the chlorination system is decommissioned.

RESPONSE: Regional Water Board staff does not concur with the Discharger's requested for the total residual chlorine effluent limitations to become ineffective upon operation of the UV disinfection system. Staff believes that the total chlorine residual effluent limitations must remain effective throughout the term of this permit or until the permit is modified accordingly after monitoring data is available to illustrate that the UV system is operating correctly, and that the Discharger has ceased all use of chlorine-containing agents in its treatment process. However, to address the Discharger's comment, the proposed Monitoring and Reporting Program (MRP) has been modified make the required compliance monitoring for chlorine residual ineffective upon the Discharger's written certification that the UV disinfection system has fully replaced the existing chlorination disinfection system and that the Discharger has ceased all use of chlorine-containing agents in its treatment process. This approach eliminates the need for the Regional Water Board to reopen the NPDES permit if the Discharger, during the life of the permit, needs to use chlorine in the treatment process to meet disinfection or operational and maintenance needs at the Facility.

Discharger Comment No. 6. Permit Re-Opener for Constituents Related to Tertiary Treatment and UV Disinfection: The proposed NPDES permit includes final effluent limitations for chlorodibromomethane, dichlorobromomethane, total trihalomethanes (THMs), aluminum, iron, and manganese. The Discharger is in process of constructing a tertiary filtration and UV disinfection system that will provide

filtration and replace the previously used chlorination/dechlorination system to reduce these pollutants in the discharge, and requests that a Reopener Provision be added for these constituents. The Discharger is also requesting that these constituents be added to the proposed Constituents Study Provision. Upon review of the additional monitoring data, the Discharger requests that the adopted permit be reopened and the effluent limitations and monitoring requirements for these constituents be removed if reasonable potential to violate standards no longer exists. This change would be consistent with Federal anti-backsliding provisions of 40 CFR 122.44(1)12 and 122.62(a)(16).

RESPONSE: The proposed permit includes effluent limitations for chlorodibromomethane, dichlorobromomethane, total THMs, aluminum, iron, and manganese because effluent and/or receiving water data demonstrated reasonable potential for the discharge to cause or contribute to an exceedance of a water quality criteria or objective (Reasonable Potential). The proposed treatment plant upgrade is for the Discharger to come into compliance with effluent limitations, including those listed above. Compliance with permit limitations does not justify the re-opening of an NPDES permit, therefore, Regional Water Board staff does not concur with the Discharger's request. Upon expiration of the proposed permit, a subsequent Reasonable Potential Analysis will be performed for NPDES permit renewal, and if at that time data indicate that reasonable potential for a constituent no longer exist, an effluent limitation will not be included in the renewed permit.

Discharger Comment No. 7. Initiation Date of Proposed Constituent Study – The Discharger request that the schedule for initiation of the proposed Constituents Study “on the first day of the next calendar month following permit adoption date”, be modified since the adopted date may be 31 July or 1 August 2008, and the treatment plant upgrades will not be completed until the end of August 2008 at the earliest. The Discharger requests that the required Study monitoring initiate as early as possible after the permit adoption but no later than 50 days from the date of the adoption.

RESPONSE: Regional Water Board staff concurs that the proposed permit may be adopted on the first or last day of a calendar month, which does not allow the Discharger to plan for the required monitoring. The initiation date for the proposed Constituent Study has been changed from the “the first day of the next calendar month following permit adoption date” to “the first day of the next calendar month following permit effective date”. The effective date of the permit is proposed to be fifty days after the permit adoption date.

Discharger Comment No. 8: Reclaimed Water Feasibility Study Requirement - The Discharger states that, in 2004, it completed and submitted to the Regional Water Board an Amended Wastewater Facilities Plan that evaluated land disposal and

reclamation alternatives for secondary and tertiary effluent. In addition, land disposal and reclamation options were discussed in the 2006 Report of Waste Discharge for the Colusa WWTP. The Discharger requests that this provision be removed from the permit as the previous work satisfies the requirements of the provision.

RESPONSE: Regional Water Board staff concurs that the proposed requirement for a Reclaimed Water Feasibility Study has been fulfilled and has removed the study requirement from the proposed permit.

Discharger Comment No. 9. Pollution Prevention Plan (PPP) Requirements - The proposed NPDES Permit requires the Discharger to prepare a Pollution Prevention Plan (PPP) for copper, foaming agents, nitrate and nitrite. The Discharger states that it completed and submitted a PPP for copper to the Regional Water Board in February 2008. Therefore, the Discharger requests that the copper PPP requirement be removed from the permit. In addition, the Discharger requests that the requirement for a PPP for nitrate and nitrite be removed from the permit since source control and pollution prevention for these constituents is not feasible. Nitrate and nitrite are products of the ammonia decomposition through the nitrification process at the WWTP. Source control of ammonia is not feasible and, typically, is not required. Table E-10 in MRP (page E-14) refers to these PPPs and should be modified if the copper and nitrate/nitrite PPP requirements are removed from the permit.

RESPONSE: Regional Water Board staff has confirmed that the Discharger submitted a PPP for copper on 19 February 2008. Therefore, the requirement for the copper PPP has been removed from the proposed permit.

The proposed permit contains a compliance schedule for the Discharger to comply with the final effluent limitation for nitrate plus nitrite. In accordance with California Water Code (CWC) Section 13263.3, the Discharger must prepare and implemented a PPP for nitrate-plus-nitrite, as appropriate. Although reduction of nitrate-plus-nitrite is not amenable to pollution prevention (source control) since it is a characteristic of domestic wastewater, the Discharge must address the items required in CWC Section 13263.3, and explain the non-applicability in its PPP submittal.

Discharger Comment No. 10. Compliance Determination for Chlorine Residual Effluent Limitations – The Compliance Determination language in the proposed NPDES permit refers to the use of continuous monitoring analyzers for measurement of the chlorine residual in the effluent. The Discharger states that it currently operates a chlorine disinfection system but does not own continuous monitoring equipment. By the time the proposed NPDES permit is adopted and comes into effect, the Discharger plans on implementing its new UV system for disinfection of effluent and abandoning

the chlorine system. The Discharger requests that the requirement for continuous monitoring analyzers be removed from the permit.

Additionally, the Discharger requests that the Total Residual Chlorine monitoring, as required in the Monitoring and Reporting Program, be conducted as grab samples (as currently done) and the sampling be discontinued upon taking the chlorine disinfection system out of services.

RESPONSE: Regional Water Board staff concurs and has made the suggested change in the Compliance Determination language and compliance monitoring requirements to reflect grab sampling. The proposed chlorine residual monitoring requirements have also been modified, as explained in Response to Comment No. 5 above, for when the Discharger has ceased the use of chlorine in its treatment process.

Discharger Comment No. 11. Flow Schematic Corrections – The Discharger states that the Flow Schematic for the upgraded wastewater treatment plant is missing a return line from the Monthly Equalization Basin to the Headworks. Also effluent from the Daily Equalization Basin will not be discharge directly to the unnamed tributary to the Powell Slough; therefore, the arrow after the Re-aeration Basin to the Daily Equalization Basin should only go in one direction.

RESPONSE: Regional Water Board staff has corrected the Flow Schematic accordingly.

Discharger Comment No. 12. Effluent Monitoring Location: The Discharger requests that the EFF-001 monitoring location be at the Effluent Pump Station not at the discharge to unnamed tributary to the Powell Slough, as the discharge location is not at the wastewater treatment plant site and is sometimes inaccessible during wet weather conditions.

RESPONSE: Regional Water Board concurs and has modified the EFF-001 location in the proposed Monitoring and Reporting Program (MRP).

Discharger Comment No. 13. Influent Monitoring Footnote Error - The Discharger comments that the footnotes in Table E-2 of the Monitoring and Reporting Program (Influent Monitoring) appear to be incomplete due to a typographical error.

RESPONSE: The error in the footnotes for Table E-2 is that the footnote numbering is missing. Footnote numbering has been added.

Discharger Comment No. 14. Receiving Water Priority Pollutant Monitoring – The Discharger noted that the permit requires sampling of the receiving water for Priority Pollutants, and requests clarification regarding which of the receiving water monitoring stations the sampling shall be conducted.

RESPONSE: Regional Water Board staff concurs that the receiving water sampling location for priority pollutant monitoring is not clear in the proposed permit. For clarification, footnote No. 2 in Table E-5, Receiving Water Monitoring Requirements, has been revised to clarify priority pollutant monitoring of the receiving water upstream of the discharge (R-1).

Discharger Comment No. 15. Editorial Comment – The Discharger states that the proposed NPDES permit describes a CLO (correction: Cease and Desist Order (CDO) issued in 2003, but does not refer to the most recently adopted CDO issued in 2008.

RESPONSE: The Facility Description discussed in Section II.D of the Fact Sheet addresses the recent Time Schedule Order (TSO) for the City of Colusa WWTP, adopted in June 2007. To date, no other enforcement order has been adopted by the Regional Water Board.

Discharger Comment No. 16. Fact Sheet – Applicable Plans, Policies, and Regulations – The Discharger comments that the second paragraph of Section III.D.1 of the Fact Sheet (Applicable Plans, Policies, And Regulations) states that diazinon and molinate were not detected in the effluent. In a subsequent sentence of the paragraph, it mistakenly states that diazinon and molinate were not monitored by the Discharger. The Discharger requests the error in the subsequent sentence be revised to remove diazinon and molinate from the list of constituents that were not monitored.

RESPONSE: The correction has been made to the proposed permit.

Discharger Comment No. 17. Fact Sheet – Rationale for Effluent Limitations – The Discharger comments that the last sentence of the second paragraph of Section IV.C.3.j of the Fact Sheet (Rationale for Effluent Limitations), states that the method detection limit of 50 ug/L is greater than Maximum Effluent Concentration (MEC). This statement, although correct, should be corrected to reflect the appropriate intent of the method detection limit of 50 ug/L being greater than the criterion concentration.

The Discharger also states that: (1) the mass load limitations in these tables are based on previous requested regulated flow of 0.8 MGD rather than the currently proposed flow of 0.7 MGD; and (2) reference is made to a single sampling event of the Powell

Slough. Powell Slough was not sampled by the Discharger. Instead, the Discharger sampled Colusa Basin Drain on 5 August 2002 and 15 October 2002.

The Discharger also requests that chlorodibromomethane, dichlorobromomethane, total THMs, aluminum, iron, and manganese be added to the discussion regarding Reopener Provision Rationale, per Comment No. 6 above.

RESPONSE: Regional Water Board staff concurs that the discussion regarding the method detection level, the proposed flow rate for calculations of mass limitations, and the description of the 2002 sampling events, are in error and have corrected these items per the Discharger's comments.

Regional Water Board staff does not concur with the Discharger's request for a permit reopener, as discussed in the above response to Comment No. 6, for chlorodibromomethane, dichlorobromomethane, total THMs, aluminum, iron, and manganese. No change has been made to the Rationale for Effluent Limitations Section in the Fact Sheet corresponding to the requested reopener.

CENTRAL VALLEY CLEAN WATER ASSOCIATION (CVCWA) COMMENTS

CVCWA Comment No. 1: MUN Designation of Receiving Water – CVCWA comments that it disagrees with the application of the MUN beneficial use (based on the implementation of State Water Board Resolution No. 88-63) to the receiving waters and the inclusion of the corresponding effluent limitations associated with the MUN use. CVCWA believes that the Discharger does not have to obtain approval for an exemption to the MUN designation in Resolution No. 88-63. It believes that the Basin Plan establishes that the exceptions are self-implementing and the Regional Water Board need only find that the exception for agricultural drainage applies to exclude requirements in the proposed permit related to the MUN designation. Specifically, CVCWA states that:

- (A) Resolution No. 88-63 exempts the agricultural drain to which the WWTP discharges from the generally applicable MUN Designation; and
- (B) The Basin Plan requires case-by-case consideration of beneficial uses and incorporates the exceptions to MUN Designation under Resolution No. 88-63 where applicable.

RESPONSE: See Regional Water Board staff response to Discharger Comment No. 2 above.