

Central Valley Regional Water Quality Control Board
27/28 March 2014 Board Meeting

Response to Comments
for the
City of Roseville
Dry Creek Wastewater Treatment Plant
Tentative Waste Discharge Requirements

The following are Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) staff responses to comments submitted by interested parties regarding the tentative Waste Discharge Requirements (NPDES Permit) for the Dry Creek Wastewater Treatment Plant (Facility), in Placer County.

The tentative NPDES Permit and Times Schedule Order were issued for a 30-day public comment period on 16 January 2014 and comments were due 17 February 2014.

The Central Valley Water Board received timely comments regarding the tentative NPDES Permit by the due date from the following interested parties:

- City of Roseville (City)
- Central Valley Clean Water Association (CVCWA)

Changes, where necessary, were made to the tentative NPDES Permit based on public comments received. The submitted comments were accepted into the record, and are summarized below, followed by Central Valley Water Board staff responses.

CITY COMMENTS

Limitations and Discharge Requirements, p. 4, III.A. Discharge Prohibitions; and Fact Sheet

The City remains concerned that the discharge prohibition, in the Limitations and Requirements and also in the Fact Sheet, as written, is not clear enough to ensure that the prohibitions apply to the treatment plant only. The City requests the language to be changed as follows:

Limitations and Requirements, Discharge Prohibitions, III. A

Discharge of wastewater from the Facility as specifically described in the Fact Sheet, p. F-4, Section II.B is prohibited except as described in this Order ~~at a location or in a manner different from that described in this Order is prohibited.~~

Fact Sheet, IV.A.1.

This prohibition is based on Water Code section 13260 that requires filing of a ROWD before discharges can occur. This prohibition applies specifically to discharges from the wastewater treatment facility and does not apply to the collection system. The collection system is governed by State Water Board Order No. 2006-003-DWQ and any future revisions thereto. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited

Response: In response to these comments and comments received from CVCWA (See CVCWA Comment No. 1), Central Valley Water Board staff revised the Limitations and Requirements section in the tentative NPDES Permit as shown in underline/strikethrough format below. However, the Fact Sheet was not revised.

Limitations and Requirements, Discharge Prohibition III.A.

Discharge of wastewater from the Facility, as the Facility is specifically described in the Fact Sheet in section II.B, at a location or in a manner different from that described in this Order is prohibited.

Limitations and Discharge Requirements, p. 13, VI.C.4.b.ii. Ultra Violet Light Disinfection System Operating Specifications

The City contends that the required minimum UV transmittance of 66 percent in the tentative NPDES Permit is not consistent with National Water Research Institute (NWRI) guidelines. The City requests that the minimum UV transmittance be changed to 55 percent, which is consistent with the 2012 NWRI UV guidelines lower level UV transmittance value at which the UV system is allowed to operate.

Response: Central Valley Water Board staff concurs and has made changes to the tentative NPDES Permit as shown in part in underline/strikethrough format below, and throughout the tentative NPDES Permit as appropriate.

The minimum hourly average UV transmittance (at 254 nanometers) in the wastewater measured at Monitoring Location UVS-001 shall not fall below ~~66~~55 percent. The minimum hourly average UV transmittance shall not fall below the system's design transmittance of 66 percent when flow is above 34.06 MGD.

Limitations and Discharge Requirements, p. 18, VII.D. Total Coliform Organisms Effluent Limitations

Part 1: The City provides that the 7-day median should be determined based on the last 7 tests, not the last 7 days as required in the tentative NPDES Permit. The City believes the tentative NPDES Permit 7-day median determination is inconsistent with the following requirements in section 60301.230 of Title 22:

“60301.230. Disinfected tertiary recycled water

*b) The median concentration of total coliform bacteria measured in the disinfected effluent does not exceed an MPN of 2.2 per 100 milliliters **utilizing the bacteriological results of the last seven days for which analyses have been completed** (emphasis added).”*

Response: Central Valley Water Board staff does not concur. Section 60321 (a) of Title 22 contains the following daily sampling requirement:

“60321. Sampling and Analysis

(a) ... *disinfected tertiary recycled water **shall be sampled at least once daily for total coliform bacteria** (emphasis added). The samples shall be taken from the disinfected effluent and shall be analyzed by an approved laboratory.”*

Central Valley Water Board staff believes section 60321 sampling requirement must be considered to understand the context and intent of the median concentration determination in section 60301.230. Section 60321 requires total coliform samples be obtained at least once per day. Therefore, Central Valley Water Board staff believes that the intent of section 60301.230 is to determine the median concentration of the last 7 days of samples, which could be seven samples or more. Thus, the 7-day median determination in the tentative NPDES permit is consistent with section 60301.230 of Title 22.

Part 2: The City requests the following clarifying language be added to this section.

If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are <2, in which case the median value shall be the lower of the two data points.

Response: The above suggested changes have been made to the Limitations and Discharge Requirements, p. 18, VII.F.3.b. as shown in underline format below.

Total Coliform Organisms Effluent Limitations (Section IV.A.1.d). For each day that an effluent sample is collected and analyzed for total coliform organisms, the 7-day median shall be determined by calculating the median concentration of total coliform bacteria in the effluent utilizing the bacteriological results of the last 7 days. For example, if a sample is collected on a Wednesday, the result from that sampling event and all results from the previous 6 days (i.e., Tuesday, Monday, Sunday, Saturday, Friday, and Thursday) are used to calculate the 7-day median. If the 7-day median of total coliform organisms exceeds a most probable number (MPN) of 2.2 per 100 milliliters, the Discharger will be considered out of compliance. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number

of data points, then the median is the average of the two values around the middle unless one or both of the points are <2, in which case the median value shall be the lower of the two data points.

Attachment E – Monitoring and Reporting Program, p. E-5, Table E-3, Footnote 4, and Table E-8

The City indicates that Footnote 4 describes sample collection, analytical methods and reporting level requirements for effluent methyl mercury monitoring, while methyl mercury monitoring is not specified in Table E-3. The City also indicates that Table E-8 minimum reporting level of 0.06 ng/L conflicts with the reporting level requirement in Footnote 4.

Response: Central Valley Water Board staff concurs. The following changes have been made to the Monitoring and Reporting Program, Table E-3, Footnote 4, and Table E-8, as shown in part in underline/strikethrough format below.

- ⁴ ~~Unfiltered methyl mercury and Total mercury~~ samples shall be grab samples taken using clean hands/dirty hands procedures, as described in U.S. EPA method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, for collection of equipment blanks (section 9.4.4.2), and shall be analyzed by U.S. EPA method ~~1630/1631~~ (Revision E) with a reporting level of ~~0.05 ng/L for methyl mercury and 0.5 ng/L for total mercury.~~

Table E-8. Effluent and Receiving Water Characterization Monitoring

Parameter	Units	Effluent Sample Type	Maximum Reporting Level
...			
Mercury, Methyl	ng/L	Grab	<u>0.065</u>

Attachment E – Monitoring and Reporting Program, p. E-7, Section V.D.1, Chronic Test Reporting

The City contends that the tentative NPDES Permit requires that regular chronic testing be done on a quarterly basis. However, Footnote 4 of Monitoring and Reporting Program, Table E-3 requires that these results be reported within 30 days of completion of the test, not on a quarterly basis.

Response: Central Valley Water Board staff concurs. The following changes have been made to the Monitoring and Reporting Program, Table E-3, Footnote 4 as shown in part in underline/strikethrough format below.

- Chronic WET Reporting.** Regular chronic toxicity monitoring results shall be reported to the Central Valley Water Board ~~within 30 days~~ with the quarterly self-monitoring reports, as described in Table E-9, following completion of the test, and shall contain, at minimum:

Attachment E – Monitoring and Reporting Program, p. E-7, Table E-5

The City contends that several monitoring requirements in Table E-5 which are to be submitted with monthly e-SMRs are duplicative because the same parameters are required to be kept in an onsite log.

Response: Central Valley Water Board staff concurs. The changes have been made to the Monitoring and Reporting Program, Table E-3, Footnote 4 as shown in below in strikethrough format below.

Table E-5. Land Discharge Monitoring Requirements

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Discharge Initiation	Date and time	--	1/Day	--
Discharge Completion	Date and time	--	1/Day	--
Basin Emptied	Date and time	--	1/Day	--
Discharge Type⁴	--	--	1/Day	--
Freeboard	Feet ^{2,3}	--	1/Day	--
pH	standard units	Grab	1/Week	<u>43</u>
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Week	<u>43</u>
Odors	Observation	--	1/Week	--
Levee Condition	Observation	--	1/Week	--
Dissolved Oxygen	mg/L	Grab	1/Month	<u>43</u>

⁴ ~~For example, untreated due to plant upset, secondary treated.~~

¹² To be measured vertically to the lowest point of overflow.

²³ Include estimation of volume of wastewater in each pond.

³⁴ Pollutants shall be analyzed using the analytical methods described in 40 CFR Part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

Attachment E – Monitoring and Reporting Program, p. E-10, Section IX.C.1, Third Year, Quarterly Monitoring

This section requires the quarterly priority pollutant samples to be submitted with the monthly SMR's. Since this is a quarterly event, the City requests that the results of such quarterly monitoring be submitted with the quarterly reports to be consistent with the frequency of sampling.

Response: Central Valley Water Board staff concurs. The following changes have been made to the Monitoring and Reporting Program, Section IX.C.1, Third Year, Quarterly Monitoring as shown in part in underline/strikethrough format below.

Quarterly monitoring shall be conducted during the third year of the permit term (four consecutive samples, evenly distributed throughout the year) and the results of such monitoring be submitted to the Central Valley Water Board with the monthly SMR's ~~quarterly SMR's~~ described in Table E-9.

Attachment E – Monitoring and Reporting Program, p. E-17, Section X.C.2, DMR Reporting

The City requests that the tentative NPDES permit be consistent with the instructions submitted from the State Water Board to: "...mail ONLY ONE copy of your DMRs (no need for duplicates)".

Response: Central Valley Water Board staff concurs. The following changes have been made to the Monitoring and Reporting Program, Section X.C.2, DMR Reporting as shown in part in strikethrough format below.

The Discharger shall submit the original DMR ~~and one copy of the DMR~~ to the address listed below:

Attachment E – Monitoring and Reporting Program, p. E-18, Section X.D.3, Other Reports

The City requests the due date for the report outlining reporting levels and analytical methods be changed from "within 60 days of permit adoption" to "within 60 days of permit effective date."

Response: Central Valley Water Board staff concurs. The following changes have been made to the Monitoring and Reporting Program, Section X.D.3, Other Reports as shown in part in underline/strikethrough format below.

Within 60 days of permit ~~adoption~~effective date, the Discharger shall submit a report outlining reporting levels (RLs), method detection limits, and analytical methods for approval.

Attachment F – Fact Sheet, p. F-3, Section I.B., Permit Information

The City requests clarification in Section I.B, Permit Information.

Response: Central Valley Water Board staff concurs. The following changes have been made to the Fact Sheet, Section I.B., Permit Information as shown in part in underline/strikethrough format below.

The Facility discharges wastewater to Dry Creek, a water of the United States, and a tributary to the Sacramento River via the Natomas East Main Drainage Canal, within the Lower American watershed. The Discharger was previously regulated by ~~Order R5-2008-0077-01~~ and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0079502 adopted on 12 June 2008 (Order R5-2008-0077) and amended on 31 May 2013 (Order R5-2008-0077-01), and expired on 1 June 2013. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

Typographical Errors in the tentative NPDES Permit (Limitations and Discharge Requirements, Attachment E – Monitoring and Reporting Program, and Attachment F – Fact Sheet)

The City states that there are several typographical errors in the tentative NPDES Permit.

Response: Central Valley Water Board staff concurs and has made changes to the tentative NPDES Permit.

CVCWA COMMENTS

CVCWA Comment No. 1

CVCWA provides that the tentative NPDES Permit contains duplicative regulation by including the collection system as part of the facility; therefore, subjecting the collection system to regulation under the tentative Permit. CVCWA believes duplicative liability occurs when sanitary sewer overflows reach waters of the United States, thus becoming a permit violation as well as an unauthorized discharge. The State Water Resources Control Board (State Water Board) regulates sanitary sewer systems greater than one mile in length that collect and convey untreated or partially treated water to treatment facilities under the Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ. State Water Board Order No. 2006-0003-DWQ requires enrollees, which includes municipalities that operate sanitary sewer systems, to develop sewer system management plans and other measures to prevent sanitary sewer overflows. Thus the Central Valley Water Board does not need to regulate collection systems further in the City's NPDES permit. CVCWA proposed changes in regards to this comment are described below (a – c).

- a. CVCWA requests that the Central Valley Water Board eliminate any discussion of the collection system in the Facility Description. CVCWA has requested the following change to the Facility Description on page F-4 of the Fact Sheet.

The Discharger provides sewerage service for the southeast portion of the City of Roseville and portions of Placer County and the South Placer Municipal Utility District, and serves a population of approximately 111,000. ~~The Discharger owns and operates portions of the wastewater collection system. Placer County and South Placer Municipal Utility District own and operate the remaining portions of the wastewater collection system.~~ The design average dry weather flow capacity of the Facility is 18 MGD.

Response: The Central Valley Water Board staff does not concur. The above proposed change is a factual description of who owns and operates the collection system that feeds into the treatment plant. Regardless of whether the collection

system is considered a part of the facility, the City must be mindful of the character of influent wastewater. In fact, federal pretreatment regulations require that the City ensure that materials introduced to the collection system do not upset treatment facility processes. Therefore, this requested change has not been made.

- b. CVCWA has requested the following change to Discharge Prohibition III.A on page 4 of the Limitations and Discharge Requirements.

Discharge of wastewater from the Facility, as the Facility is specifically described in the Fact Sheet in section II.A, at a location or in a manner different from that described in this Order is prohibited.

Response. The Central Valley Water Board concurs. Changes consistent with the above text have been made to the Limitations and Discharge Requirements, Discharge Prohibition III.A.

- c. CVCWA has requested the following change to the Fact Sheet (Discharge Prohibitions on page F-13).

1. **Prohibition III.A (No discharge or application of waste other than that described in this Order).** This prohibition is based on Water Code section 13260 that requires filing of a ROWD before discharges can occur. This prohibition applies specifically to discharges from the wastewater treatment facility and does not apply to the collection system. The collection system is governed by State Water Board Order No. 2006-0003-DWQ and any future revisions thereto. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.

Response. Central Valley Water Board staff agrees with CVCWA's goal to prevent duplicative regulation and that collection system discharges are adequately prohibited under the Collection Systems Order. Central Valley Water Board staff is working with State Water Board staff and CVCWA to determine the best way to address the potential duplicative regulation concern in NPDES permits. Staff have chosen not to make the recommended revision to the tentative Order and other NPDES permits pending further discussion and resolution with the State Water Board, CVCWA, and U.S.EPA about potentially duplicative regulation for collection systems.

CVCWA Comment No. 2

The tentative Order includes the conclusion that the possibility of inadequate disinfection creates the potential for pathogens to be discharged, and thus, the discharge has reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective. CVCWA contends that the regulation of

pathogens in not related to toxicity. CVCWA's basis for this contention is summarized below.

The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins (Basin Plan) provides the following water quality objective for toxicity: “[a]ll waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.” The toxicity objective relates to “toxic substances.” “Toxicity” means “any toxic (adverse) effect that a *chemical* or *physical* agent might produce within a living organism.”¹ CVCWA provides that biological organisms such as pathogens are not chemical or physical agents. Further, the comment describes that biological organisms invade and multiply in hosts, which can cause damage, but the organisms themselves are not toxic. Ergo, the organism's action within the host causes a detrimental physiological response.

CVCWA also provides that California Department of Toxic Substances Control's strategic plan does not mention regulation of bacteria or pathogens; USEPA's TSD does not consider pathogens as toxicants; and USEPA's National Toxics Rule² and California Toxics Rule³ do not include pathogens within the list of priority pollutants.

CVCWA describes that the RPA for pathogens should be based on the numeric bacteria objective in the Basin Plan. Or, if the board determines that a more stringent objective should be applied, then it should adopt limits based on a more stringent objective in compliance with California Water Code section 13241 and applicable State Water Board Orders. CVCWA requests that the following language from the Fact Sheet be deleted: “Although the Discharger provides disinfection, inadequate or incomplete disinfection creates the potential for pathogens to be discharged and provides the basis for the discharge to have a reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective.”

Response: Central Valley Water Board staff are working with CVCWA to further evaluate the application of the narrative toxicity objective to pathogens in the NPDES Permit. Therefore only the following changes have been made to the Fact Sheet, Section IV.C.3.b.iv.(b) as shown in part in underline/strikethrough format below, and throughout the tentative NPDES Permit as appropriate.

Although the Discharger provides disinfection, inadequate or incomplete disinfection creates the potential for pathogens to be discharged and provides the basis for the discharge to have a reasonable potential to cause or contribute to an exceedance of the Basin Plan's narrative toxicity objective.

¹ Williams et al., Principles of Toxicology: Environmental and Industrial Applications (2d ed. 2000) p. 3, emphasis added.

² See 40 C.F.R. § 131.36.

³ See 40 C.F.R. § 131.38

The above revision does not include deletion of the entire sentence as recommended. Central Valley Water Board staff is recommending only a partial change to CVCWA's recommendation because the potential for the discharge of pathogens from the facility is a concern regardless of whether the Basin Plan toxicity objective is applicable. In its comment, CVCWA contends that the Basin Plan's narrative toxicity objective should not be used in the reasonable potential analysis. CVCWA's comment does not argue against the finding that "inadequate or incomplete disinfection creates the potential for pathogens to be discharged."