

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

Response to Written Comments on
Tentative Waste Discharge Requirements for
City of Shasta Lake
City of Shasta Lake Wastewater Treatment Facility
Shasta County

At a public hearing scheduled for 27/28 March 2014, the Regional Water Quality Control Board, Central Valley Region (Central Valley Water Board) will consider adoption of tentative Waste Discharge Requirements (NPDES No. CA0079511) for the City of Shasta Lake Wastewater Treatment Facility. This document contains responses to written comments received from interested parties in response to the Tentative Order. Written comments from interested parties were required to be received by the Central Valley Water Board by 10 February 2014 in order to receive full consideration. Comments were received prior to the deadline from:

1. Central Valley Clean Water Association (CVCWA) (received 10 February 2014)

Written comments from the above interested parties are summarized below, followed by the response of Central Valley Water Board staff.

CVCWA COMMENTS

CVCWA COMMENT #1 – Duplicative Requirements in the MRP

CVCWA recommended deleting footnote 17 to Table E-3 of Attachment E, section IV.A.1 due to “inconsistent directions on priority pollutant monitoring” when compared to monitoring requirements specified in Attachment E, section IX.C.1.

RESPONSE:

Central Valley Water Board staff agrees that the sampling requirements for priority pollutants specified in footnote 17 to Table E-3 in Attachment E, section IV.A.1 are inconsistent with those requirements specified in Attachment E, section IX.C.1. The Discharger is required to conduct semi-annual priority pollutant monitoring during the third and fourth year of the Tentative Order as described in Attachment E, section IX.C.1. Footnote 17 has been amended to reflect these monitoring requirements.

Page E-6, footnote 17. The following changes were made:

“Priority pollutants shall be sampled ~~quarterly~~quarterly/semiannually during the third and fourth year ~~2016~~of the Order (see *Effluent and Receiving Water Characterization*, Attachment E, section IX.C.). Samples shall be conducted concurrently with upstream receiving water monitoring for hardness (as CaCO₃) and pH.

CVCWA COMMENT #2 – Collection System

CVCWA recommended revisions to the Tentative Order to avoid “duplicative regulation” and “possible third party lawsuits” pertaining to the management and operation of the Discharger’s collection system. In general, CVCWA contends that the Discharger’s collection system is regulated pursuant to Statewide General Waste Discharge Requirements for Sanitary Sewer Systems, Order No. 2006-0003-DWQ and, therefore, should not be considered a component of the facilities and systems of treatment and control to achieve compliance with the conditions of the Tentative Order.

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 has completed changes to remove duplicative regulatory language regarding collections systems in section III.A. and section VI.C.5.e, and in Fact Sheet section VI.B.5.b of the Tentative Order, as shown below. Staff have chosen not to make the recommended revision to the language in Fact Sheet section IV.A.1 of the tentative Order pending further discussion and resolution with the State Water Board, CVCWA, and U.S.EPA about potentially duplicative regulation for collection systems.

Page 4, section III.A. The language was changed as follows:

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

Page 22, section VI.C.5.e. The language was changed as follows:

Collection System. ~~The Discharger’s collection system is part of the system that is subject to this Order. As such, the Discharger must properly operate and maintain its collection system (40 CFR § 122.41(e)). The Discharger must report any non-compliance (40 CFR § 122.41(l)(6) and (7)) and mitigate any discharge from the collection system in violation of this Order (40 CFR § 122.41(d)). See the Order at Standard Provision VI.A.2.o and Attachment D, subsections I.D., V.E, V.H, and I.C. On 2 May 2006, the State Water Board adopted State Water Board Order No. 2006-0003-DWQ, Statewide General WDRs for Sanitary Sewer Systems. The Discharger shall be subject to the requirements of Order No. 2006-0003-DWQ and any future revisions thereto. Order No. 2006-0003-DWQ requires that all public agencies that currently own or operate sanitary sewer systems apply for coverage under the general WDRs. The Discharger has applied for and has been approved for coverage under Order 2006-0003-DWQ for operation of its wastewater collection system.~~

Page F-74, Fact Sheet section VI.B.5.b. The language was changed as follows:
Furthermore, the General Order contains requirements for operation and maintenance of collection systems and for reporting and mitigating sanitary sewer overflows. ~~Inasmuch that the Discharger's collection system is part of the system that is subject to this Order, certain standard provisions are applicable as specified in Provisions, section VI.C.5. For instance, the 24-hour reporting requirements in this Order are not included in the General Order. The Discharger must comply with both the General Order and this Order. The Discharger and public agencies that are discharging wastewater into the facility were required to obtain enrollment for regulation under the General Order by 1 December 2006. The Discharger is enrolled under State Water Board General Order No. 2006-0003-DWQ.~~

CVCWA COMMENT #3 – Section 13241 Analysis

CVCWA requested that the sentence *"In addition, the Central Valley Water Board has considered the factors in Water Code section 13241 in section IV.C.3.d.viii of this Fact Sheet"* be deleted from page F-63 of the Fact Sheet. CVCWA assumes this sentence was included in error because no discussion regarding factors pertaining to California Water Code (CWC) section 13241 are presented in the Tentative Order under section IV.C.3.d.viii of the Fact Sheet.

RESPONSE

Necessary rationale for including effluent limitations for total coliform organisms that are more stringent than applicable federal standards is provided in section IV.C.3.d.viii of the Fact Sheet in the Tentative Order. As presented on page F-48 of the Fact Sheet, Central Valley Water Board finds that is appropriate to apply an equivalent level of treatment to that required by DPH's reclamation criteria specified in California Code of Regulations (CCR), Division 4, Chapter 3 (Title 22) to protect beneficial uses applicable to Churn Creek, a tributary of the Sacramento River. Central Valley Water Board staff has removed this sentence from page F-63 of section IV.D.5 in the Fact Sheet.

Page F-63, Fact Sheet section IV.D.5. The language was changed as follows:

~~In addition, the Central Valley Water Board has considered the factors in Water Code section 13241 in section IV.C.3.d.viii of this Fact Sheet.~~

CVCWA COMMENT #4 – Reasonable Potential Analysis for Pathogens

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 is 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 page F-49 of 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 is working with CVCWA to further define this comment and its potential application to NPDES permits. The following change has been made to the Tentative Order’s Fact Sheet (pg. F-49) based on CVCWA’s recommendation.

~~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.~~

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

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

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."

Central Valley Water Board Modifications to Tentative Permit

Central Valley Water Board staff has made the following modifications to the Tentative Order:

1. Page E-17, Table E-11, Attachment E section IX.C.3. Removed footnote 2 stating:
 ² TCDD-Dioxin Congener Equivalents shall include all 17 of the 2,3,7,8 TCDD dioxin congeners as listed in section 3 of the SIP."
2. Page E-14, Table E-11, Attachment E section IX.C.3. Added the following priority pollutants:
 1,1-Dichloroethane; 1,1-Dichloroethene; 1,1,1-Trichloroethane; 1,1,2-Trichloroethane; 1,1,2,2-Tetrachloroethane; 1,2-Dichlorobenzene; 1,2-Dichloroethane; cis-1,2-Dichloroethene; 1,2-Dichloropropane; 1,2,4-Trichlorobenzene; 1,3-Dichlorobenzene; 1,3-Dichloropropene; 1,4-Dichlorobenzene; Acrolein; Acrylonitrile; Benzene; Bromoform; Bromomethane; Carbon Tetrachloride; Chlorobenzene (monochlorobenzene); Chloroethane;
3. Page E-15 and E-17, Table E-11, Attachment E section IX.C.3. Removed Diuron from sampling list. Diuron sampling already specified in Table E-11, page E-16.
4. Table E-11, Attachment E section IX.C.3. Changed effluent sample type from 24-hr composite to grab for the following parameters:
 Sulfide; Chromium (VI); Cyanide
5. Table E-11, Attachment E section IX.C.3. Changed the maximum reporting level for the following parameters:
 Arsenic (from 10 µg/L to 2 µg/L); Cadmium (from 0.5 µg/L to 0.25 µg/L); Mercury (from 0.5 µg/L to 0.2 µg/L); Heptachlor Epoxide (from 0.02 µg/L to 0.01 µg/L); Lindane (gamma-Hexachlorocyclohexane) (from 0.5 µg/L to 0.02 µg/L); Toxaphene (to 0.5 µg/L)
6. Page E-17, Table E-11, Attachment E section IX.C.3. Added footnote 2 which states, "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." Footnote 2 applied to "Parameter" column heading of Table E-11.

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7. Page 1 of Tentative Order. Changed the discharge point latitude in Table 2 from 40° 39' 22"~~N~~ to 40° 39' 22".
 8. Page F-5, Fact Sheet section II.B. The following language was added:
 5. Treated municipal wastewater may also be discharged to on-site Facility spray irrigation fields at Discharge Point 003, Monitoring Location LND-001.
 9. Page F-47. Fact Sheet section IV.C.3.d.iv. Nitrite Plus Nitrate, contains the following statement, "Recent toxicity studies have indicated a possibility that nitrate is toxic to aquatic organisms."

The following reference was added to the above statement as a footnote:

¹Camargo, Julio A., Alvaro Alonso, Annabella Salamanca, "Nitrate toxicity to aquatic animals: a review with new data for freshwater invertebrates". Accepted 25 October 2004-Chemosphere 58 (2005) 1255-1267; Canadian Council of Ministers of the Environment, National Guidelines and Standards Office, "Canadian Water Quality Guidelines for the Protection of Aquatic Life". 2012; Minnesota Pollution Control Agency, "Developing Surface Water Nitrate Standards and Strategies for Reducing Nitrogen Loading". December 2010.