

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION**

RESPONSE TO WRITTEN COMMENTS

on Tentative Order for
City of Benicia, City of Benicia Wastewater Treatment Plant
Benicia, Solano County

The Regional Water Board received written comments on a tentative order distributed on April 11, 2014, for public comment from the following:

City of Benicia (May 12, 2014, by letter and email)

Regional Water Board staff has summarized the comments below in *italics* (quoted where possible or paraphrased for brevity) and followed each comment with staff's response. For the full content and context of the comments, please refer to the comment letters. This document also contains a staff-initiated revision.

All revisions to the tentative order are shown with underline text for additions and strikethrough ~~text~~ for deletions.

City of Benicia (letter)

Benicia Comment 1: *The City requests a reduction in its pretreatment monitoring frequencies to once every five years for volatile organic compounds (VOC) and base/neutral extractable compounds (BNA) in influent and effluent; and annually for metals and other elements in influent, effluent, and biosolids, excluding pollutants with effluent limits.*

Over 90 percent of the VOC and BNA priority pollutant analyses since 2006 have been non-detect. Those compounds detected have been below water quality objectives, and frequently detected but not quantified. Metals, while detected consistently, have also been below water quality objectives and, except for cyanide, have not generated reasonable potential. The City has only 10 significant industrial users in its service area, seven of which are zero discharge. The remaining three are a cleaning chemical blending facility, a carbon dioxide production facility, and a food processing facility, with a combined maximum discharge of about 50,000 gallons per day. None of these three facilities would be expected to discharge significant amounts of priority pollutants. At a design capacity of 4.5 million gallons per day (MGD), the City's facility is below the 5 MGD threshold requiring a federal Pretreatment Program; the City's pretreatment program exists primarily due to an asphalt plant formerly operated by the Valero (then Exxon) Refinery that discharged to the City's sewer system, a discharge that has since been terminated.

Response: We agree. While Attachment H specifies the once per five years minimum monitoring only for programs with less than five significant industrial users (SIUs), Attachment H, section F, states that the Executive Officer "may require more or less frequent monitoring [than that required in Appendix H-4] on a case by case basis." The spirit of that cutoff pertains to

the number of discharging SIUs. In this case, the City has less than five discharging SIUs; thus, it is appropriate to require monitoring once every five years. We revised permit Attachment E (the Monitoring and Reporting Program [MRP]), Table E-5, as follows:

Table E-5. Pretreatment and Biosolids Monitoring

Constituents	Sampling Frequency			Sample Type	
	Influent INF-001 ^[1]	Effluent EFF-001 ^[1]	Biosolids BIO-001	Influent and Effluent	Biosolids
VOC ^[2]	2/Year 1/5 Years	2/Year 1/5 Years	1/5 Years	Grab	Grab ^[7b]
BNA ^[3]	2/Year 1/5 Years	2/Year 1/5 Years	1/5 Years	Grab	Grab ^[7b]
Metals and Other Elements ^[4]	1/Month 1/Year	1/Month 1/Year	2/Year 1/Year	C-24 ^[7a]	Grab ^[7b]
Chromium (VI) ^[5]	1/Month 1/Year	1/Month 1/Year	2/Year 1/Year	Grab	Grab ^[7b]
Mercury ^[6]	1/Month	1/Month	2/Year 1/Year	Grab	Grab ^[7b]
Cyanide, Total	1/Year	1/Month	—	Grab	--

We also revised Fact Sheet Table F-8, Monitoring Requirements Summary, accordingly.

City of Benicia (email)

Benicia Comment 2: *The City requests that MRP section V.B.1.b, be revised to refer to the chronic toxicity test species as Mytilus sp. While the U.S. Environmental Protection Agency (U.S. EPA) names the test species Mytilus edulis, the readily available and commonly used species on the West Coast is Mytilus galloprovincialis, so it is better to list the test species as Mytilus sp.*

Response: We agree. The two species are taxonomically nearly identical and *Mytilus galloprovincialis* is the species typically used in this area. Furthermore, the applicable method for this species (see Benicia Comment 4) refers to four *Mytilus* species (*M. edulis*, *M. californianus*, *M. galloprovincialis*, and *M. trossulus*) collectively as *Mytilus sp.* We revised MRP section V.B.1.b as follows:

Test Species. The test species shall be the ~~Mediterranean~~ mussel (*Mytilus galloprovincialis sp.*) unless a more sensitive species is identified.

Benicia Comment 3: *The City requests that the chronic toxicity testing dilution series in the MRP, section V.B.1.e, be revised to 40%, 20%, 10%, 5%, and 2.5%, consistent with U.S. EPA guidance in “Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms,” first edition, EPA 600/R-95/136, p. 225.*

Response: We agree and revised MRP section V.B.1.e as follows:

Dilution Series. The City shall conduct tests at 40%, 16%, ~~6.4%~~, ~~2.6%~~, and 1% ~~20%~~, 10%, 5%, and 2.5%. The “%” represents percent effluent as discharged. . .

Benicia Comment 4: *The City comments that MRP section V.B.1.d refers to an incorrect chronic toxicity method, and should refer instead to the West Coast method (“Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuarine Organisms,” first edition, EPA 600/R-95/136) referenced in Appendix E-1, which, unlike that cited, includes Mytilus sp.*

Response: We mostly agree. The reference cited in the tentative order does not include *Mytilus sp.*, while the West Coast method does. However, the West Coast method, and other methods appropriate for other species, are listed in Appendix E-2, not E-1 (Appendix E-1 refers to Appendix E-2 for species and methods.) We revised MRP section V.B.1.d as follows:

... In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-2, Tables AE-1 and 2 †. These are *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms*, currently third edition (EPA 821-R-02-014). . . .

We also revised MRP Table AE-1 as follows:

Table AE-1. Critical Life Stage Toxicity Tests for Estuarine Waters

Species	(Scientific Name)	Effect	Test Duration	Reference
⋮	⋮	⋮	⋮	⋮
Abalone	(<i>Haliotis rufescens</i>)	Abnormal shell development	48 hours	2
Oyster Mussel	(<i>Crassostrea gigas</i>) (<i>Mytilus edulis</i> -sp.)	Abnormal shell development; percent survival	48 hours	2
Echinoderms - Urchins Sand dollar	(<i>Strongylocentrotus purpuratus</i> , <i>S. franciscanus</i>) (<i>Dendraster excentricus</i>)	Percent fertilization	1 hour	2
⋮	⋮	⋮	⋮	⋮

Benicia Comment 5: *The City comments that standard chronic toxicity MRP attachments E-1 and E-2 are omitted.*

Response: We agree and added the missing attachments.

Benicia Comment 6: *The City comments that MRP section V.A.4 says acute toxicity bioassays can be “manually adjusted” for pH, but this is not practical for the flow-through tests the City performs. The City requests more workable language such as that in the recent EBMUD permit.*

Response: We agree and revised MRP section V.A.4 as follows:

... Written acknowledgement that the Executive Officer concurs with the Discharger’s demonstration and that the adjustment will not remove the influence of other substances must be obtained prior to any such adjustment. ~~The Discharger may manually adjust the pH of whole effluent acute toxicity samples prior to performing bioassays to minimize ammonia toxicity interference. The Discharger is authorized to adjust the effluent pH in order to suppress the level of unionized (free) ammonia. This adjustment shall be achieved by continuously monitoring test tank pH and automatic addition of analytical grade acid as needed, using a continuous pH sensor/analyzer and pump.~~

Benicia Comment 7: *The City requests that Fact Sheet section IV.C.6.b refer to the chronic toxicity test species as Mytilus sp instead of Mytilus edulis, similar to Comment 2. Also, this section refers to the City conducting annual chronic toxicity tests. The City conducted quarterly tests.*

Response: We agree. We revised Fact Sheet section IV.C.6.b as follows:

Reasonable Potential Analysis. The Discharger conducted ~~annual~~ quarterly chronic toxicity tests during the previous order term using the mussel, *Mytilus edulis* sp....

Regional Water Board Staff-Initiated Changes

We deleted from Fact Sheet section I.B the following, because the Water Code 1211 requirement does not apply to the City’s discharge:

B. The Discharger is regulated pursuant to National Pollutant Discharge Elimination System (NPDES) Permit No. CA0038091. It was previously subject to Order No. R2-2008-0014 (previous order), which was adopted on March 12, 2008, and expired on May 30, 2013. The Facility discharges wastewater to Carquinez Strait, a water of the United States within Suisun Basin. Attachment B provides maps of the area around the Facility. Attachment C provides a plant flow schematic.

~~The Discharger must file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights, and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of a watercourse. The State Water Board retains the jurisdictional authority to enforce such requirements under Water Code section 1211.~~