



THE CITY OF
BENICIA
CALIFORNIA

Mr. Bruce Wolfe
California Regional Water Quality Control Board,
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612

May 12, 2014

Public Works Department

Attention: Mr. John Madigan

**SUBJECT: COMMENTS ON TENTATIVE ORDER FOR CITY OF BENICIA
WASTEWATER TREATMENT PLANT, NPDES PERMIT NO.
CA0038091**

Dear Mr. Wolfe:

The City of Benicia (City) appreciates the opportunity to provide comments on Tentative Order No. R2-2014-XXXX, NPDES No. CA 0038091 ("Tentative Order"). The City appreciates the time and effort Regional Water Board staff has devoted to developing a permit with conditions reflective of the City's efforts to maintain and improve effluent quality. The City's primary comment regards requested reductions in Pretreatment and Biosolids monitoring frequencies.

The requested reduction in monitoring requirements is offered consistent with the intent of State Water Board Resolution No. 2013 "*Directing Actions in Response to Efforts by Stakeholders on Reducing Costs of Compliance While Maintaining Water Quality Protection*" (adopted September 24, 2013). That Resolution supported proposals by the NPDES wastewater stakeholder group that "When renewing or revising NPDES permits, consider removing overlapping monitoring requirements, reducing monitoring frequency for parameters consistently in compliance, encouraging surrogate monitoring, and eliminating unnecessary reports."

The City believes our limited public resources should be focused on monitoring that provides useful information on constituents of current and/or emerging concern. Most monitoring efforts focus on the 126 Priority Pollutants constituents that were identified by US EPA approximately 30 years ago. Much has been done since then to reduce or ban their use and prevalence.

The Tentative Order Monitoring and Reporting Program Table E-5 proposes monthly influent and effluent metals and semi-annual volatile organic compounds (VOC) and base/neutral and acid extractable organic compounds (BNA) monitoring frequencies. It is unclear how, if at all, the proposed monitoring data provides information useful for making management/enforcement decisions within the Pretreatment Program. Such decisions are typically based on individual Significant Industrial User (SIU) inspections and monitoring.

The City has only 10 SIUs in its service area, seven of which are zero discharge. Those include two wood cutting and assembly facilities and three hand blown glass manufacturing facilities. The three discharging facilities include a cleaning chemical blending facility with a batch discharge, a carbon dioxide production facility that discharges < 1,000 gpd, and a ravioli and sauce production facility that is classified in a 10,000 – 50,000 gpd discharge category. None of these discharges would be expected to contain significant amounts of toxic priority pollutants.

Permit Attachment H, Appendix H-4 contains general guidance and benchmarks for reduction of monitoring frequencies, based in part on the number of SIUs regulated by a Discharger's Pretreatment Program. In accordance with Appendix H-4, the City compiled in tabular form the last eight years of its influent, effluent, and biosolids data. There were 21 sampling events conducted from 2006 through 2013. Spreadsheets with these data were submitted to RWB staff during the permit development stage.

Summary information regarding the VOC (EPA 624) and BNA (EPA 625) influent and effluent data are provided below demonstrating how the data compare relative to the "very low level" and "consistently non-detect" benchmarks respectively, as cited in Appendix H-4 as guidance for evaluating monitoring frequency reductions. Results from 2006-2013 and 2009-2013 are presented separately since the 2006-2008 data are potentially less reliable given both the greater frequency of "qualified" results (e.g., lab blank contamination) for the BNAs and also due to the presence of constituents then that rarely showed up subsequently. Detected but not quantified values (DNQ or "J flagged") are included as detected values in the tables below.

Benicia WWTP VOC (Volatiles) Monitoring Results (EPA 624)				
	2006 - 2013		2009 - 2013	
	Influent	Effluent	Influent	Effluent
# Constituent Results	861	861	410	410
# Results Detected	39	84	11	23
% Results Detected	4.5	9.8	2.7	5.6

Benicia WWTP BNA (Semi-Volatile) Monitoring Results (EPA 625)				
	2006 - 2013		2009 - 2013	
	Influent	Effluent	Influent	Effluent
# Constituent Results	1,134	1,134	540	540
# Results Detected	63	22	25	9
% Results Detected	5.6	1.9	4.6	1.7

Historically, it can be seen that there has been a relatively small percentage of detected constituents in both of the 624 and 625 scans. The most frequent VOC in both the influent and effluent has been bis(2-ethylhexyl)phthalate (bis), commonly seen as a contaminant in samples from plastic tubing and plastic sample bottles. It was present at levels of 10 to 20 ug/l in the influent and 1-3 ug/l in the effluent, below the CTR WQO of 5.9 ug/L. Phenol was the second

most frequently seen VOC and present solely in the influent at levels of 5 to 10 ug/l versus the CTR WQO of 4,600,000 ug/L.

Chloroform, a disinfection byproduct (DBP), was the most commonly detected BNA present (3 to 5 ug/L) in most influent and effluent samples due to drinking water and effluent disinfection with chlorine. There is no CTR WQO for chloroform. Another DBP, bromodichloromethane was also commonly present primarily in effluent samples at levels of < 0.5 ug/L relative to the CTR WQO of 46 ug/L. Toluene (a gas additive, paint solvent, and petroleum bi-product) was present in several influent samples, particularly during earlier years at levels of 3 to 5 ug/L versus the CTR WQO of 200,000 ug/L.

In general the frequency of detection of VOCs and BNAs has decreased since 2006 and been low and fairly consistent since about 2011 with “bis” and the DBPs representing a majority of the detected constituents, with a scattering of other detects, often at the DNQ level.

Benicia believes that it is difficult and somewhat counter-intuitive to use the same “non-detect” or “near non-detect” benchmarks for VOCs and BNAs for evaluating metals monitoring reductions. This is based on the extensive efforts by dischargers and commercial laboratories over many years to achieve continually lower detection limits. Current detection limits are in the low part per billion or sub-part per billion range, depending on the constituent. As noted above for organics, for many years concentrations of effluent metals have remained well below the corresponding CTR WQOs, hence the absence of metals permit effluent limits, except for those having Basin Plan mandated effluent limits (copper, cyanide, mercury).

Benicia included times series plots of 2009 – 2013 influent and effluent metals concentrations with its 2013 Annual Pretreatment Report. Those plots show relatively consistent concentrations. Given that Benicia only has three SIUs that discharge any wastewater and that none of those discharges have the potential to contain significant metals concentrations, there is no reason to expect that these would or could cause concentrations to increase. Biosolids concentrations would be expected to track influent concentrations and remain similar to current low levels.

Benicia is a nearly built out, primarily residential community with a low probability of new commercial or industrial activity that would generate wastewater containing constituents of concern at levels of concern. The Benicia WWTP design flow is below the 5 mgd threshold requiring implementation of a Federal Pretreatment Program (current flows are around 2.3 mgd). The primary reason that Benicia has a pretreatment program was due to an asphalt plant associated with the former Exxon (now Valero) refinery that used to discharge oily waste to the Benicia collection system. That discharge terminated many years ago.

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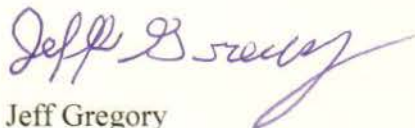
In conclusion, Benicia respectfully requests that the Table E-5 monitoring frequencies be reduced to the following:

- 1/5 years for influent and effluent VOC and BNA;
- 1/year for influent and effluent metals and other elements including chromium (VI);
- 1/year for biosolids metals and other elements including chromium (VI) and mercury.

The City will continue to monitor effluent more frequently for the small number of constituents with effluent limits (copper, mercury, cyanide, ammonia, and dioxin) per MRP Table E-3. Per the Effluent Characterization Study requirements (Permit Provision VI.C.2) the City would conduct effluent monitoring annually for Attachment G specified priority pollutants to support future Reasonable Potential Analyses (RPA).

Thank you for the opportunity to comment on the Tentative Order. Benicia believes that the above recommendations are technically sound, protective of water quality, make appropriate use of public funds, and can and should be included in the Tentative Order. Please contact me (Jeff.Gregory@ci.benicia.ca.us) or Dr. Tom Hall of EOA, Inc. if you have any questions.

Sincerely,



Jeff Gregory

Wastewater Treatment Plant Superintendent

JG:dg

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cc: Steve Solamon, Interim Public Works Director
John Madigan, RWB, jmadigan@waterboards.ca.gov
Tom Hall, EOA, twhall@eoainc.com

From: [Jeff Gregory](#)
To: [Madigan, John@Waterboards](mailto:Madigan_John@Waterboards)
Cc: [Tom Hall](#)
Subject: Benicia TO Minor Comments/Corrections
Date: Monday, May 12, 2014 11:14:03 AM

Hi John -

Below are some minor comments/corrections on the toxicity section of the TO. A formal comment letter will be forth-coming later today that focuses on requested reductions in Pretreatment and Biosolids monitoring frequencies that we had discussed during the AD TO review.

Thanks.

Minor comments on toxicity testing in the MRP:

- a. p. E-5. Because the EPA method names the test species as *Mytilus edulis*, but *Mytilus galliprovincialis* is the readily-available species, it is better to list the test species as "*Mytilus sp.*"
- b. The concentration series on p. E-6 of the TO is incorrect. The concentration series should include 10%, as recommended by the EPA method so the in-stream waste concentration (effectively 10% because of the 10 TUC trigger) is one of the concentrations in case you end up using the NOEC. See EPA 600/E-95/136 p. 225. The previous order had the correct dilution series of 40%, 20%, 10%, 5%, 2.5%.
- c. The method reference on p. E-6 is wrong - that is not the West Coast method reference and doesn't include *Mytilus*. Suggested correction:

In addition, bioassays shall be conducted in compliance with the most recently promulgated test methods, as shown in Appendix E-1. ~~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).~~

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- d. The standard appendices on the chronic toxicity screening requirement (E-1 and E-2) have been omitted.
- e. On p. E-4, the TO says that acute bioassays can be "manually adjusted" for pH, which isn't practical for flow-through tests. More workable language from the EBMUD permit is:

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.

Fact Sheet p. F-24 6.b

First sentence should read "quarterly" not annual chronic toxicity tests and for consistency with the above comment "*Mytilus sp.*"