



## Public Utilities

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Date: July 24, 2014

Mr. Ken Harris, Executive Officer  
Central Coast Regional Water Quality Control Board  
895 Aerovista Place, Suite 101  
San Luis Obispo, CA 93401

**Subject: City of San Luis Obispo Tentative Order R3-2014-0033 (NPDES No. CA0049224)**

Dear Mr. Harris:

The City of San Luis Obispo (City) appreciates the opportunity to review the Tentative Order for the renewal for the City's Water Resource Recovery Facility (WRRF) National Pollutant Discharge Elimination System (NPDES) Permit. We truly appreciate the work your staff has done providing the City a dialogue during the development of the Tentative Order over the past year. In general, the City is in agreement with the requirements of the Tentative Order. The City has a few remaining comments presented below regarding permit effluent limits, chronic toxicity test species and date alignment of the annual report deadline.

### **Effluent Limits**

#### *N-Nitrosodimethylamine (NDMA)*

Table 4 of the Tentative Order (p. 4) contains final effluent limitations for NDMA. An effluent limitation for NDMA is being applied due to a single data point exceeding the water quality criteria and the minimum level listed in Appendix 4 of the SIP<sup>1</sup>. Between 2008 and 2013, five of six samples were not detected at detection limit of 0.14 µg/L, with one detected value at 12 µg/L which is approximately two orders of magnitude greater than the detection limit. NDMA is rarely detected in POTW effluent and when it is, concentrations are typically much lower than the observed value for the City's effluent. A review of NDMA in wastewater observed a median concentration of 0.046 µg/L and maximum concentration of 0.38 µg/L secondary effluent for six POTWs (five in California and one in Arizona).<sup>2</sup> Typically higher levels of NDMA (>0.01 µg/L) are associated with disinfection using chloramines or higher ammonia effluent concentration (>20 mg/L) and chorine

<sup>1</sup> State Water Resources Control Board, 2005. Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California. February 2005.

<sup>2</sup> Sedlak, et.al., Sources and Fate of Nitrosodimethylamine and Its Precursors in Municipal Wastewater Treatment Plants. Water Environment Research, Vol. 77, No. 1. January/February 2005.

disinfection. Because there has been only one detected value and this value is much higher than typically seen in POTW effluent, the 12 µg/L detected value is questionable and does not appear to be representative of the City WRRF's effluent.

The SIP states that "The RWQCB shall have discretion to consider if any data are inappropriate or insufficient for use in implementing this Policy. Instances where such consideration is warranted include,... evidence that a sample... is not representative of the effluent or ambient receiving water quality...." Therefore, the Regional Board has the discretion to consider this data point to be not representative of the City's WRRF effluent. As such, the City requests that the effluent limit for NDMA be removed but that the additional monitoring required in the MRP remain the same.

#### *Mass Effluent Limitations*

In Section IV.B.2 of the Fact Sheet (p. F-12-13), the mass effluent limitations for BOD presented in Table 4 of the Permit are stated to be calculated based on the average dry weather daily flow which is set equal to the maximum permitted flow of 5.1 MGD. During wet weather, due to higher flows, the concentration based limits in Table 4 would be met but the mass limitations may be exceeded and beneficial uses will not be impacted. Therefore, the City requests that mass limitations not apply during wet weather as is a common practice in other parts of California (e.g., Central Valley and Los Angeles regional water boards). For example, Central Valley wastewater NPDES permits typically contain the following paragraph in the Compliance Determination Section:

If the effluent flow exceeds the permitted average dry weather flow during wet-weather seasons, the effluent mass limitations contained in Final Effluent Limitations IV.A.1.... shall not apply. If the effluent flow is below the permitted average dry weather flow during wet-weather seasons, the effluent mass limitations do apply.<sup>3</sup>

The City requests that this statement be added to Section VII of the Tentative Order.

#### **Chronic Toxicity Test Species**

In Section V.B.1.c. of Monitoring and Reporting Program, Attachment E (p. E-6-7), the City is required to conduct a 3-month toxicity screening test to identify the most sensitive species from fathead minnow, water flea and alga (i.e., *Selenastrum capricornutum*). Based on recent experience of other dischargers, the City believes that *Selenastrum* is not a suitable test species.

Other Dischargers have found that toxicity results using *Selenastrum* may, in fact, represent false positive tests. Because of these observations, Pacific EcoRisk (a California based toxicity testing laboratory) has been working with various dischargers related to the occurrence of false positive chronic toxicity tests using *Selenastrum*, and has found that

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<sup>3</sup> City of Davis, Order R5 2013-0127

EPA-approved variations in the following components of the test method for *Selenastrum* have been observed to affect the results of the toxicity bioassay (Clark, 2011)<sup>4</sup>:

1. Variation in cell counts observed among various acceptable cell counting methods;
2. Adhesion of cells to side of bioassay vessel resulting in undercounting of cells;
3. Adhesion of cells to bottom of bioassay vessel (a process called “plating”) resulting in undercounting of cells;
4. Alga shows decreased growth in the presences of high salt concentrations;
5. Increased stimulatory effect on control due to use of control water containing nutrients and minerals at concentrations allowed by the USEPA test method; and
6. Clumping of cells caused by polymers or other compounds present in wastewater effluent that cause cell aggregation and result in undercounting of cells.

Therefore, the City requests that the requirement be limited to using fathead minnows and water fleas for the screening test. Alternatively, the City requests that text stating the City’s concern regarding the potential for false positives associated with *Selenastrum* toxicity test results be added to Section VI.C. of the fact sheet and that the potential for false positives be considered when selecting the most sensitive test species upon which to base testing following the screening period.

### **Annual Self-Monitoring Report Date**

We appreciate the change of submittal date from February 1 to February 15 for the Annual Self-Monitoring Summary Report as listed in Table E-6 of Attachment E, X.B.5.c (p. E-17). For consistency with Table E-6 of Attachment E the City would appreciate revisions to several other locations in the Tentative Order where February 1 is referenced. The reporting deadline in Section VIII.D.8 of Attachment D (p. D-13) should be changed to February 15 or footnoted to indicate that the date for this Permit is February 15. The reporting deadline in Section VI.C.3.a.iv. of the Tentative Order (p. 11) would also need to be changed to February 15.

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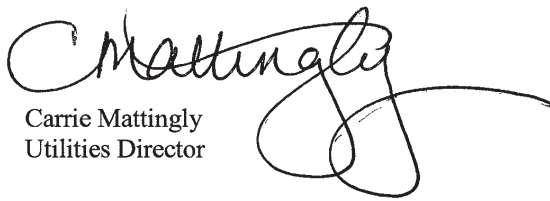
<sup>4</sup> Clark, S. L. (2011). Personal communication with Vice President/Special Projects Director at Pacific EcoRisk, Fairfield, CA. Phone conversation regarding issues that can cause false positive results in chronic toxicity tests using *Selenastrum*. June 28.

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The City appreciates this opportunity to provide comments regarding the proposed Tentative Order. We are committed to the protection of water quality, human health and the environment while providing efficient and effective services for our community. If you have any questions regarding the comments presented in this letter, please contact David Hix at (805) 781-7039 or via email at [dhix@slocity.org](mailto:dhix@slocity.org).

Sincerely,

  
Carrie Mattingly  
Utilities Director

Cc: Katie DiSimone, Central Coast Water Quality Control Board  
Tess Dunham, Somach Simmons and Dunn