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Sent via email to: commentletters@waterboards.ca.gov

Ms. Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Dear Ms. Townsend: Re: Comments on Toxicity Provisions

On behalf of the Riverside County Flood Control and Water Conservation District (District), I want to thank the State Water Resources Control Board (State Board) for the opportunity to comment on the Establishment of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California; and Toxicity Provisions (Provisions). The District is committed to protecting and improving water quality in our region and is supportive of measures to maintain and enhance environmental quality.

The District would like to thank the State Board for addressing and incorporating many of the comments provided on the 2012 Draft Policy for Toxicity Assessment and Control. The revised Provisions establish greater consistency in methods to assess toxicity Statewide and provide flexibility at the Regional Board level for site-specific considerations.

Thank you again for the opportunity to comment on the Toxicity Provisions. If you have additional questions, please do not hesitate to contact the District's Monitoring Programs Manager, Rebekah Guill, at rguill@rivco.org or me at eequinon@rivco.org.

Very truly yours,

Edwin Quinonez

EDWIN E. QUINONEZ
Chief of Watershed Protection Division

Attachment

c: Mr. Chris Stransky

RG:mc

COMMENTS OF THE RIVERSIDE COUNTY FLOOD CONTROL DISTRICT ON DRAFT TOXICITY PROVISIONS

I. Introduction

The Riverside County Flood Control and Water Conservation District ("District") appreciates this opportunity to make the following comments on the State Water Resources Control Board's (State Water Board) proposed establishment of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California; and Toxicity Provisions (hereafter "Provisions").[1] The District would like to thank the State Board for addressing and incorporating many of the comments provided on the 2012 Draft Policy for Toxicity Assessment and Control. These revised Provisions establish greater consistency in methods to assess toxicity State-wide and provide greater flexibility at the Regional Board level for site-specific considerations.

The District continues to have concerns regarding certain requirements in the Provisions, and those concerns, along with accompanying comments and recommendations of the District, are set forth below.

The District also has reviewed the comments of the California Stormwater Quality Association regarding the Provisions, and agrees with those comments.

II. Comments on the Draft Toxicity Provisions from the MS4 Perspective

Stormwater Dischargers

The District has the following concerns regarding stormwater dischargers, as referenced in the Provisions ***[Section IV.2.e (Provisions) (pg. 21-22)]***:

The District appreciates the State Board's acknowledgement that numerical effluent limitations for stormwater dischargers may be inappropriate given the diffuse and transient nature of these discharges. As the Staff Report states:

> While the issue of the appropriateness of numeric effluent limitations for storm water discharges continues to evolve, at this stage in the regulation of storm water it is inappropriate to impose a blanket requirement for chronic toxicity effluent limitations for all such discharges. There are significant difficulties associated with numeric effluent limitations calculations and compliance monitoring. While a compliance schedule would aid implementation efforts, the highly variable nature of storm water, coupled with the multitude of point sources within a municipality, continues to caution against a blanket policy of imposing numeric effluent limitations.
>
> Staff Report at 111; Section 5.5.1

Accordingly, the Provisions indicate that its requirements will not apply to stormwater discharge sources except for the requirement for stormwater dischargers to undertake the Test of Significant Toxicity (TST) statistical approach. Provisions, IV.B.3.

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[1] Draft Amendments to the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California, Division of Water Quality State Water Resources Control Board and the California Environmental Protection Agency, October 19, 2018.

This section gives the Permitting Authority "discretion to require toxicity monitoring using any test method." While the District believes that flexibility in the test method selection by a Permitting Authority is appropriate, some further clarification would ensure that the test method selected was appropriate for the discharge.

In particular, monitoring for chronic toxicity is not appropriate in the context of end-of-pipe monitoring of stormwater or other episodic discharges. Such monitoring may, however, be appropriate for receiving waters in dry weather ambient conditions. For example, current whole effluent toxicity (WET) guidance was developed for continuous point source discharges and is not an accurate method for assessing the dynamic nature of stormwater discharges. Alternative test procedures, such as a Pulse Toxicity Test approach,[2] that better mimic storm water exposures, should be considered to more appropriately assess compliance and potential impacts to receiving waters.

In light of these distinctions, the District recommends revising the first sentence of Section IV.B.3 as follows (new language in *italics*):

> The Permitting Authority shall have discretion to require toxicity monitoring using any test method, *provided that the test method is appropriate for the event conditions (i.e., taking into account the duration and magnitude of exposure at the point of compliance in the receiving water) and that the test methods required are approved by the State.*

Reasonable Potential Analysis

The District has the following comments and recommendation regarding the requirements concerning Reasonable Potential Analysis ("RPA") in the Provisions ***[Section IV.2.b (pg. 14)]***:

The District believes that the Provisions' current process for determining "Reasonable Potential" for toxicity runs a significant risk of requiring action by dischargers when it is not justified by the actual character of the discharge. The Provisions now indicate that a sample with a Percent Effect of greater than 10 would be defined as a "Fail" whether or not it was significantly different from the control sample when using the TST or other statistical approach. The District believes that the use of a >10% effect criteria for a single test outcome ignores natural variability. A statistically insignificant +10% difference in response from a given control is common in toxicity tests, given the inherent variability in biological responses. Due to natural variability alone, it is unlikely that any discharge or receiving water sample would pass four rounds of 3-species chronic tests (12 tests total with 1-2 endpoints each) without at least one sample having a 10% difference from control for a single endpoint.

To account for natural variability, but still maintaining a protective approach, the District recommends an alternative process where under a "Pass" would require an average 15% or less difference from control among all tests performed during the RPA, with no single result exceeding a 20% difference from control, and no tests failing the TST. This approach would enhance the confidence of the analysis yet still maintain the protectiveness sought in the RPA.

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[2] ESTCP, 2018. Derivation and Demonstration of an Environmentally Relevant Approach for Stormwater Toxicity Testing Compliance Monitoring. ESTCP Project #ER-201727. Environmental Restoration Project. Demonstration Plan, June 2018.

Test Methods – Salinity

The District has the following concern and recommendation regarding species requirements based on salinity as described in the Provisions ***[Section IV.B.1.b. (pg. 7)]***:

The Provisions state that freshwater test methods shall be used in receiving waters where salinity is less than 1,000 mg/L (1.0 ppt) at least 95 percent of the time, and marine test methods when the salinity in the receiving water is equal to or greater than 1.0 ppt at least 95 percent of the time. The Permitting Authority also has discretion to make a determination as to which test species will be required based on historic data and other site-specific factors.

While the District appreciates inclusion of the "at least 95 percent of the time" and historic data qualifiers, we believe that a geographical qualifier is also appropriate. For example, within Riverside County, the nearest inland waterbody to marine water (in this case, a coastal estuary) is nearly thirty miles inland. Several of these inland surface waters have been observed to have rising groundwater as their main source of dry weather flow. Minerals and salts in the natural geology can cause an increase to the salinity of groundwater, resulting in receiving water salinity that may be slightly above the freshwater/marine water criteria (e.g., 1.01-1.5 ppt).

However, using a marine species that would never be found in such receiving waters, such as sea urchin larvae, is inappropriate, especially that as a common practice, the laboratory must artificially increase the salinity to ensure marine species survival and comparability with the control sample to demonstrate an artificially induced marine condition within an inland water body sample.

To address this issue, the District proposes an amendment to the Provisions as follows (with new language in *italics.*):

> Freshwater test methods shall be used for receiving waters in which salinity is less than 1,000 mg/L at least 95 percent of the time *and where proximate receiving waters would support freshwater species*, and marine test methods shall be used for receiving waters in which salinity is equal to or greater than 1,000 mg/L at least 95 percent of the time *and where proximate receiving waters would support marine species.*

Such language would be useful in standardizing toxicity monitoring approaches employed by the regional boards. Currently, a threshold of 1.0 ppt salinity is used to determine if a marine species will be tested as part of the monitoring program under the San Diego Water Board's regional MS4 permit, which has led to the need to artificially increase salinity in the laboratory.

III. Other General Comments and Recommendations on the Draft Toxicity Provisions

Test Control and Dilution Water Source

The District has the following comments regarding test control and dilution water sources as referenced in the Provisions ***[Section IV.B.1.a. (pg. 5)]***:

The Provisions require that dilution and control water should be obtained from an area unaffected by the discharge in the Receiving Water ("RW") but that, at the discretion of the Permitting Authority or if the RW exhibits toxicity, standard lab dilution water, as defined by test methods can be used.

To achieve valid test results, the lab must meet or exceed critical Test Acceptability Criteria ("TAC") with the control or dilution water. To ensure that the TAC is achieved, the District therefore recommends that the option of relying on a standard lab dilution control for comparison and TAC be available.

The District recommends that the Provision be revised to state that laboratories may alternatively use standard laboratory grade water (as defined by EPA test methodology) as the primary control and dilution source. This will prevent potential confounding effects from dilution waters captured from mixed complex receiving waters that may have substantial variability in physical and chemical characteristics over time.

The District thus recommends the following changes to the second sentence of the third paragraph of Section IV.B.1.a., with the new language in *italics*:

> Dilution and control water should be obtained from an area unaffected by the discharge in the receiving waters *or should be made up of standard laboratory-prepared dilution water, as defined by the test methods*.

The last sentence of the third paragraph of IV.B.1.a. would be deleted.

Maximum Daily Effluent Limitations (MDEL) and Maximum Monthly Effluent Limitations (MMEL) Compliance Monitoring.

The District has the following request for clarification regarding MDEL and MMEL Compliance Monitoring as set forth in the Draft Toxicity Provisions ***[Section IV.B.2.c. (pg. 16)]***:

The Provisions state that the "most sensitive species" shall be used to determine compliance with the MDEL and MMEL. To determine the single species most sensitive to the effluent, Sensitivity Screening (involving the testing of three different species) must be done. One question that the District has had relates to whether the screening tests are considered routine compliance tests using the MDEL and MMEL follow up approach.

On October 29th, 2018, during a public workshop at SCCWRP, a question arose regarding the application of the most sensitive test species for compliance. Karen Mogus, Deputy Director for Water Quality for the State Board, stated that MDELs and MMELs will apply only to the most sensitive species during the screening period. This would suggest that screening tests will count towards compliance. However, the objective of conducting a Sensitivity Screening (testing three different species) is to first determine which single species is most sensitive to the effluent, suggesting that the first four screening tests may not be MDEL and MMEL compliance tests.

The District requests that the Provisions be revised to reflect Ms. Mogus' comment at the public workshop. Please consider adding the following language to the end of the second paragraph on page 16 of the Provisions: *Results obtained during the three-species screening period will count towards compliance; however, only the most sensitive species will be evaluated should follow up MMEL testing be required.*