



December 13, 2018



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:

Subject: Comment Letter– Toxicity Provisions

Thank you for the opportunity to comment on the State Water Resources Control Board's (State Board) Toxicity Provisions and associated Draft Staff Report (Provisions). The City of Dana Point (City) is committed to protecting and improving water quality in our region and are supportive of measures to maintain and enhance environmental quality.

The City 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 provide enhanced consistency in methods to assess toxicity State-wide, but leaves some flexibility at the Regional Board level for site-specific considerations. The City is supportive of the approach centered on incorporating the use of the improved Test of Significant Toxicity (TST) statistical approach for permitted discharges, and revised compliance monitoring approach leading to a Toxicity Reduction Evaluation (TRE) should persistent toxicity be observed. However, there remains some concerns of which we have provided comments and recommendations in the attached table for your thoughtful consideration.

Thank you kindly again for this opportunity to comment on the Toxicity Provisions. If you have additional questions, please contact Lisa Zawaski at 949-248-3584 or lzawaski@danapoint.org.

Respectfully,

Lisa Zawaski
Senior Water Quality Engineer
City of Dana Point

Attachment: Toxicity Provisions Comment Table

Section-Specific Comments:

DRAFT TOXICITY PROVISIONS				
#	Page	Section	Topic	Comments
1	14	IV.2.b	Reasonable Potential Analysis	To reiterate a number of comments submitted to the State Board in 2011 and 2012, the current process for determining “Reasonable Potential” for toxicity is still not justified and overly restrictive. A statistically insignificant 10% difference in response from a given control is common in toxicity tests given the inherent variability in biological responses. It is unlikely that any discharge or receiving water sample will pass four rounds of 3-species chronic tests (12 tests total with 1-2 endpoints each) without at least one not having a 10% difference from control for a single endpoint due to natural variability alone. The City along with several other agencies thus continues to feel strongly that the strict use of a 10% effect criteria for a single test outcome as outlined in the Provisions to establish Reasonable Potential continues to be too restrictive. The City also recognizes the need to be extra protective during assessment of reasonable potential. An alternative simple approach recommended to enhance both confidence and maintain protectiveness would be a requirement to achieve an <u>average</u> 10% difference from control among all tests performed during the RPA, with no single result exceeding a 15% difference from control, and no tests failing the TST. Available historical data should also be considered for this determination as well as now included in the Provisions.
2	14	IV.2.b	Reasonable Potential Analysis	Under the draft Provisions RPA for non-storm water NPDES dischargers, except POTWs, requires evaluation of both acute and chronic toxicity; POTWs only need to conduct RPA for chronic toxicity. This rationale is described briefly in the Staff Report (page 77), but there are no specific examples to show that an acute RPA is needed when chronic toxicity is also evaluated at the same instream waste concentration (IWC) for compliance. Chronic toxicity tests are more sensitive and should be protective of acute effects at a given test concentration. An acute RPA would be warranted however when the IWC differs from that required for chronic toxicity. Furthermore, some acute survival endpoints (e.g. fish or mysid survival) may be derived from the same chronic test setup. In this case the chronic endpoint should nearly always be more sensitive. Suggested clarifications to the Provisions are as follows for non-storm water discharges: 1) An acute RPA is required when the IWC differs between acute and chronic tests; and 2) An acute RPA is not required if acute survival is derived from a chronic test using the same species at the same IWC.

DRAFT TOXICITY PROVISIONS				
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3	5	IV.B.1.a.	Testing Sample & Location	As written, the dilution and control water should be obtained from an area unaffected by the discharge in the Receiving Water (RW). Standard lab dilution water, as defined by the EPA test methods, can be used if the RW source exhibits toxicity or if approved by the Permitting Authority. To achieve valid test results, the lab must meet or exceed critical Test Acceptability Criteria (TAC) with the control or dilution water. As a standard compliance testing procedure the City recommends using standard lab water (made according to the EPA test methods) as the primary control and dilution source as there may be unknown confounding factors and substantial variability in physical and chemical characteristics over time in natural receiving waters. In many cases, particularly in southern California, there may not be an appropriate RW anywhere near the discharge location. In those fewer cases where a known clean RW source might exist, dilutions with this sample are appropriate, however The City still would recommend including a standard lab control for comparison and TAC.
4	12	IV.B.2.a.	Species Sensitivity Screening	The Provisions state that Species Sensitivity Screening should be conducted at the beginning of a new permit cycle (typically at least a 5-year period). The screening tests should be conducted four times over a calendar year. Screening tests are required quarterly for continuous discharges, or spread out over the first year of a permit to the extent feasible for non-continuous discharges. However, for those Dischargers that are required to test their effluent on a monthly basis, it is not clearly stated whether they shall conduct these screening tests quarterly, or for the first four months of the year which we assumes is the case. Please confirm and clarify.

DRAFT TOXICITY PROVISIONS				
#	Page	Section	Topic	Comments
5	16	IV.B.2.c.	MDEL and MMEL Compliance Monitoring	The objective of conducting a Sensitivity Screening (testing three different species) is to determine which single species is most sensitive to the effluent. The Provisions then state that the “ <i>most sensitive species</i> ” shall be used to determine compliance with the MDEL and MMEL (effluent limits). According to this definition, “ <i>only routine monitoring and compliance testing of the most sensitive species applies to the MDEL and MMEL.</i> ” Therefore, the initial four sets of Species Sensitivity Screening tests do not apply to these effluent limits. If this is not correct, please explain how to apply the results of the screening tests to the effluent limits? If there is a violation or “Fail” with the TST analysis during the screening phase, is there a requirement to conduct additional MMEL testing with the most sensitive species and subsequent TRE if a second sample fails the MMEL? Or, will compliance monitoring and follow up occur only after completion of the 3-species screens? During the public workshop at SCCWRP on October 29 th , 2018 it was clarified 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. Please confirm and clarify.
6	7	IV.B.1.b.	Test Methods - Salinity	The Provisions state that “ <i>if water has a salinity less than 1,000 mg/L (1 ppt), a freshwater test species will be used. If the salinity is greater than 1,000 mg/L, a marine test species will be used.</i> ” There is also flexibility for the Permitting Authority to make a determination as to which test species will be required based on historic data and other site-specific factors. This determination should also clearly include what test species is most appropriate and representative of species that might be exposed in the receiving water environment. For example there are a number of inland locations in California with naturally elevated conductivity (salinity >1 ppt) where the use of a marine species would be inappropriate; however certain standard freshwater species (e.g. <i>Ceriodaphnia dubia</i>) will also be impacted due to natural salinity alone. In these circumstances a freshwater species that can tolerate the elevated conductivity (e.g. <i>Hyaella azteca</i>) would be more representative and appropriate. For these unique circumstances, with concurrence from the local Regulatory Authority, the City recommends including an allowance for the use of alternative representative freshwater species that are able to withstand elevated conductivity and discourage the use of marine species for locations that do not discharge to a true marine environment.

DRAFT TOXICITY PROVISIONS				
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9	21-22	IV.2.e	Storm water Dischargers and Nonpoint Source and other Non-NPDES Dischargers	<p>The City appreciates the acknowledgement by the State Board that numerical effluent limitations for storm water and other nonpoint source runoff sources without an NPDES Permit may be inappropriate given the diffuse and transient nature of these discharges. The current Provisions will thus not apply to these discharge sources with the exception of the TST statistical approach. Although there is some discussion on this topic in the Staff Report there is no discussion or rationale provided in the Provisions. As currently stated "<i>The Permitting Authority shall have discretion to require toxicity monitoring using any test method.</i>"</p> <p>The City recommends that the Provision be amended to include further clarity that chronic toxicity is inappropriate for end-of-pipe monitoring of storm water and other episodic discharges, but may be appropriate for receiving waters in dry weather ambient conditions. Current whole effluent toxicity (WET) guidance was developed for continuous point source discharges. Alternative test procedures that better mimic storm water exposures should be considered to more appropriately assess compliance and potential impacts to receiving waters. The City recommends revising the language in this section as follows: <i>The Permitting Authority shall have discretion to require toxicity monitoring using any test method provided that the test is appropriate for the event conditions (i.e., stormwater vs ambient monitoring) and that the test methods used are approved by the State.</i> Along these lines the City also agrees with CASQA's comment that a statement be included in this section that indicates that the future development of water quality objectives (WQOs) should also use good science and account for the differences between short-term episodic exposures and continuous discharges and that only the acute WQOs should be applied to wet weather samples for assessment purposes.</p>

DRAFT TOXICITY PROVISIONS				
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10		Section IV. (New Proposed Section)	303d Listing Approach	Consistent with comments provided by CASQA the City also recommends including a new section in Section IV (Programs of Implementation) of the Toxicity Provisions entitled " <i>Evaluating Waters for Placement of the Section 303(d) List</i> ". The current 303d listing binomial approach continues to rely on a standard two sample t-test comparison between the lab control and test sample. To enhance confidence and reduce both false positive and false negative results, the 303d listing Policy should mirror the Toxicity Provisions sequential approach of using the MDEL followed by an MMEL test (if the MDEL fails) to enhance confidence in results prior to an impairment listing. A listing would only be applied if the TST for an MMEL test is exceeded.

STAFF REPORT				
#	Page	Section	Topic	Comments
11	84	5.4.3	Issue F. What Water Quality Based Effluent Limitations Should be used for Toxicity in the State of California	Clarification request – The last sentence of the first paragraph on page 84 states “ <i>An MDL, which is measured by a grab sample would be toxicologically protective of acutely (higher magnitude) toxic impacts.</i> ” Ideally samples collected for compliance monitoring are more representative than a single grab sample. Flow or time-weighted composite samples collected over a 24-hour period are recommended in the EPA whole effluent toxicity test method protocols and is required in many NPDES Permits. Furthermore a single grab sample will not necessarily be more protective and capture a most critical condition unless specifically targeting a known critical time period. Grab samples rather will have the potential of missing critical conditions that occur at other times. Thus composites are always recommended when possible to provide more representative samples for toxicity testing.
12	101	5.4.5	Issue H. How Should Mixing Zones and Dilution Credits be Determined?	At the top of page 101 the Staff Report states that “ <i>The requirements of the SIP for mixing zones and dilution credits are more suited to priority pollutants and may be difficult to apply to aquatic toxicity.</i> ” This statement is not quite accurate. Because toxicity tests take into account chemical bioavailability which will vary based on a multitude of water quality characteristics and other chemicals present, and toxicity accounts for the many chemicals not measured, toxicity is in fact a more protective and superior measure for the establishment of appropriate mixing zones. There is no reason an appropriate mixing zone cannot be derived using a combination of toxicity tests and physical/chemical measures. The use of toxicity tests to validate a dilution credit should also be encouraged.
13	105	5.4.6	Issue I. How Should we Determine When a Toxicity Reduction Evaluation is Required?	Clarification request – In the 5 th paragraph on page 105, the Staff Report states the following “ <i>If a Discharger were to conduct both acute and chronic toxicity tests in a given month and both the acute and chronic toxicity test results resulted in MMEL violations, the discharger would be required to conduct a TRE.</i> ” In some cases acute survival may be derived from the same chronic toxicity test using the same dilution series. An effect on acute survival will most likely guarantee an effect on chronic survival. In this case it seems that counting both acute and chronic survival effects as an MMEL violation is duplicative and thus not appropriate. Please consider adding this condition and clarification to the Provisions Section IV.c.iv – MMEL Compliance Tests.

14	108 (Issue Description & Option 1)	5.5.1	Issue J. What should be required of storm water dischargers?	<p>The City requests that the State Board recognize the current significant efforts related to the development of the statewide Urban Pesticides Amendments. These amendments will employ a multi-agency approach with participation from the Water Boards, municipalities, and state and federal pesticide regulators. The goals of the Urban Pesticides Amendments are to:</p> <ol style="list-style-type: none"> 1. Achieve water quality objectives for pesticides and toxicity in urban receiving water and prevent or readily address future water quality impairments through implementation of a statewide program for urban pesticides source control, acting as an alternative to TMDL development to address pesticide and pesticide-related toxicity impairments in individual water bodies. 2. Establish consistent statewide requirements for MS4 dischargers to manage their causes and contributions to pesticide and pesticide-related toxicity impairments. 3. Create a comprehensive, coordinated statewide monitoring framework for pesticides and toxicity in urban runoff and receiving water that improves resource efficiency, usefulness of data, and coordination of data collection to support management decisions. <p>The Draft Toxicity Provisions should include a statement in the Staff Report under Issue J that any elements which conflict with the Urban Pesticides Amendments be superseded by the Urban Pesticides Amendments when they become effective.</p>
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