



December 21, 2018

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Jeanine Townsend, Clerk to the Board  
State Water Resources Control Board  
1001 I Street, 24th Floor, Sacramento, CA 95814  
*Submitted via email to [commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)*

**SUBJECT: Comment Letter – Toxicity Provisions**

Dear Ms. Townsend:

The Sacramento Regional County Sanitation District (Regional San) appreciates the opportunity to comment on the proposed *Establishment of the Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California; and Toxicity Provisions* (proposed Toxicity Provisions), the *Draft Staff Report, including the Draft Substitute Environmental Documentation (draft Staff Report)*, for the proposed Toxicity Provisions that were released for public comment on October 19, 2018, and the Economic Considerations of the Proposed Whole Effluent Toxicity Control Provisions for California dated July 2018 by Abt Associates. Regional San provides wastewater conveyance, treatment, and reclamation for over 1.4 million residents in the Sacramento metropolitan area, and would be regulated by the proposed Toxicity Provisions for the NPDES permit associated with the Sacramento Regional Wastewater Treatment Plant. Regional San currently performs routine monitoring for chronic and acute toxicity associated with its effluent.

Regional San has provided comments on past versions and revisions to the proposed Toxicity Provisions, and has met on several occasions with staff from the State Water Board to discuss the content. We appreciate the efforts of the State Water Board in working with the affected dischargers during meetings, presentations, and workshops. We are also appreciative of revisions to the provisions that have been subsequently made to resolve certain issues.

Regional San is also currently participating in the Central Valley Clean Water Association (CVCWA) Toxicity Special Study for Wastewater Treatment Plants, which is a study that will provide valuable information related to effectively identifying low level chronic toxicity, evaluating test results, and identifying various factors that impact toxicity test results and toxicity investigations for Central Valley wastewater treatment plants. We encourage the State Water Board to work with CVCWA and others to discuss these studies, evaluate their findings, and work with dischargers to continue to improve toxicity testing, continue to develop a comprehensive understanding of toxicity testing issues, and to ensure that the tests and requirements are

representative, meaningful, and appropriate. These ongoing approaches to understand and improve the quality and value of toxicity data for regulatory purposes, in combination with the current use of narrative toxicity objectives with numeric triggers for accelerated monitoring and Toxicity Reduction Evaluations (TREs), are effective tools that are protective of beneficial uses in surface waters of California.

Regional San provides the following comments, recommendations, and proposed text changes to the proposed Toxicity Provisions and the draft Staff Report for the State Water Board's consideration. Recommended added text is shown in green underline, and proposed text deletions are shown in ~~red strikethrough~~.

### Comments to the proposed Toxicity Provisions

#### **Comment 1 – Regulatory Management Decision for Percent Effect.**

**Section III.B.2.a Numeric Chronic Aquatic Toxicity Objective** (page 2). – It would be helpful to clarify how the percent effect can be interpreted in relation to the Regulatory Management Decision (RMD) given that compliance with the proposed toxicity WQOs are statistically evaluated exclusively through the Test of Significant Toxicity (TST). It seems that the null hypothesis can be accepted and the effluent sample is determined to 'Fail' when the numeric percent effect is less than the 25% RMD for a chronic endpoint (<20% for an acute endpoint). For example, a chronic *C.dubia* reproduction test with 17% effect<sup>1</sup> can be concluded to Fail, depending on the data variability, based on the TST spreadsheet tool<sup>2</sup> currently available from the State Water Resources Control Board (Beta version 1.8 updated 12/31/13). Such a failed test can be driven by a single mortality in one of the 10 effluent replicates at the critical concentration. In fact, the TST Test Drive reported that effects <10% can be found by the TST to Fail, albeit infrequently. There has been some confusion by reviewers who interpreted the proposed Toxicity Provisions to mean that only effects greater than the RMD can trigger violations. Please provide an example of data and conclusions in Appendix B where the percent effect is less than the RMD (i.e., <25% for a chronic test and <20% for an acute test) and the TST determines a "Fail" and indicate whether such results are determined to be a violation.

Additionally, **Section III.B.2.a** is inconsistent with the definition of a RMD to impose violations on dischargers based on toxicity test results where the percent effect is <25% for a chronic test and <20% for an acute test when the RMD is  $\geq 25\%$  effect level for a chronic test and  $\geq 20\%$  for an acute test. The draft Staff Report (see definition of Water Quality Objectives; page vii) describes RMDs as thresholds that would result in an unacceptable risk to aquatic life. Therefore, effects <25% for chronic endpoints and <20% for acute endpoints are not unacceptable. We understand that the TST can statistically conclude that a sample result is a Fail when the data are insufficient to reject the null hypothesis. However, the RMD has been specifically described as  $\geq 25\%$  for a chronic toxicity endpoint and  $\geq 20\%$  for an acute toxicity endpoint. Therefore, violations based on percent effects less than those defined

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<sup>1</sup> Example with neonates/female in the Control: 36, 30, 30, 26, 31, 32, 28, 35, 35, 34; Critical Concentration: 25, 0, 29, 32, 28, 29, 31, 30, 29, and 28.

<sup>2</sup> [https://www.waterboards.ca.gov/water\\_issues/programs/state\\_implementation\\_policy/tx\\_ass\\_cntrl.html](https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/tx_ass_cntrl.html)

by the RMD are inconsistent with the basis of this threshold for unacceptable toxicity. We request that the State Water Board use the TST to determine the need for Median Monthly Effluent Limitation (MMEL) compliance testing but require a percent effect that meets the RMD (i.e., >25% for a chronic test and >20% for an acute test) to conclude that an MMEL violation has occurred, if numeric limits for toxicity are retained.

**Comment 2 – Ceriodaphnia dubia Reproduction, Variability and Non-Toxicity-Related Response.**

**Section IV.B.1.b Toxicity Test Methods** (page 5) states “*CHRONIC TOXICITY TESTS shall be conducted using one or more of the test species in Table 1 selected by the PERMITTING AUTHORITY in accordance with the TOXICITY PROVISIONS...*”. **Table 1 Bioequivalence Values (b), Test Species Tier Classification, and False Negative Rate ( $\alpha$ -error) for toxicity test methods** includes *Ceriodaphnia dubia* (water flea) survival and reproduction as a listed Chronic Freshwater Method. The use of *C. dubia* reproduction as an indicator of toxicity has been identified as problematic. This issue has been presented to the State Water Board and staff in various forums. Variability and uncertainty associated with the use of this species have been documented in studies performed by the California Association of Sanitation Agencies, CVCWA, Southern California Coastal Water Research Project, and California wastewater agencies. *C. dubia* reproduction tests (compared to other toxicity testing and species) appear to be potentially impacted by factors unrelated to toxicity, resulting in false positives that are not completely understood. This species also has a higher intra- and inter-laboratory variability than the other two freshwater test species. This is illustrated by a recent inter-laboratory comparison study among California labs where *C. dubia* reproduction was found to have up to 60% effects in non-toxic laboratory dilution water<sup>3</sup>. The reported variability among labs for copper spiked and runoff samples ranged up to 100%. These data reconfirmed that *C. dubia* whole effluent toxicity (WET) test results have low precision and are not very reproducible among laboratories.

Due to the uncertainty of the *C. dubia* method, variability, and other issues identified, Regional San requests that this species should not be used as the basis for evaluating a Numeric Effluent Limit (NEL). While we are appreciative of additional flexibility that has been incorporated into the proposed Toxicity Provisions, including consideration of multiple test failures to trigger a MMEL, it is our position that this does not adequately address the multiple issues surrounding this species. The White Paper prepared by Larry Walker Associates, Inc. for the California Association of Sanitation Agencies dated November 28, 2018, addresses additional and detailed concerns with the use of *C. dubia*. We encourage the State Water Board to seriously consider this study and other related studies and comments.

Regional San supports the concept of a partnered study for this species and is willing to work with other agencies including dischargers, wastewater industry organizations, industry experts, and the State Water Board to further evaluate the species sensitivity and its effective use in evaluating toxicity. A partnered study could help to resolve the issues related to the sensitivity of *C. dubia* reproduction endpoint test results, false positives, and high variability in duplicate sample test results. This type of partnered study could be used to augment and

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<sup>3</sup> Schiff, K.C. and D. Greenstein. 2016. Stormwater Monitoring Coalition: Toxicity Testing Laboratory Guidance Document. Southern California Coastal Water Research Project Technical Report 956. December.

supplement other studies performed for *C. dubia* that have been completed or are currently in progress. We strongly encourage the State Water Board to defer the use of the *C. dubia* reproduction toxicity test until such time that issues associated with this species can be studied further and better understood. Additional studies could be used to inform future use of this species as an indicator of toxicity, and to reduce test interferences.

However, if the State Water Board continues with the proposed use of *C. dubia* for evaluating NELs, flexibility should be added to this section to allow the option for dischargers to work with the Regional Water Board to identify and select an additional test species from **Table-1** that would be used to confirm any chronic toxicity effects. Toxicity test failures and violations should be assessed based on evaluation of both species and not solely on *C. dubia* until such time that interferences and variability with this test can be resolved.

### **Comment 3 –*Hyalella azteca* Method Promulgation.**

**Section IV.B.1.b Toxicity Test Methods Table 1** (page 6) lists *Hyalella azteca* (amphipod) as a species that may be used for Acute Freshwater Methods. Specifically, WET testing methods for *H. azteca* are not described in the listed reference nor are they promulgated in 40 CFR 136.3<sup>4</sup>. “*Hyalella* spp.” and other species are included in the Supplemental List of Acute Toxicity Test Species in Appendix B of EPA’s acute WET test guidance<sup>5</sup>, but no methodology, test duration, test acceptability criteria, or endpoint for testing is described. We are therefore not aware of how we would conduct an effluent toxicity test with this species. While 40 CFR 136.3 Table IB – List of Approved Inorganic Test Procedures - includes specific acute WET test methods from EPA (2002), the appendices are not included, so it appears that this is not a federally approved test species for WET. We request that *H. azteca* be removed from **Table 1** and recognize that toxicity testing with *H. azteca* could be required by the permitting authority under the discretion allowed for additional toxicity testing (Section IV.B.2.h) which does not require standard methods or species listed in **Table 1**. This issue has been raised by several dischargers and related affiliated organizations.

### **Comment 4 – Invalid or Indeterminate Tests.**

**Section IV.B.1. c. Test of Significant Toxicity** (page 8): USEPA (2002, 2000)<sup>6</sup> WET test guidance identifies many issues that may make a particular test invalid, indeterminate, or rejected. A component is needed in Step 2 of the Test of Significant Toxicity to allow for a conclusion that a toxicity test is invalid or indeterminate before proceeding with the calculations. Invalid or indeterminate tests include events such as; an apparent problem noted with the condition of the test organisms that is not caused by toxicity, receiving water toxicity,

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<sup>4</sup> <https://www.federalregister.gov/documents/2017/08/28/2017-17271/clean-water-act-methods-update-rule-for-the-analysis-of-effluent>

<sup>5</sup> USEPA. 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater Organisms. 5th edition. EPA-821-R-02-012. October.

<sup>6</sup> USEPA. 2000. Method Guidance and Recommendations for Whole Effluent Toxicity (WET) Testing (40 CFR Part 136). EPA 821-B-00-004. Washington, DC. Office of Water Management. USEPA. 2002. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater Organisms. 5th edition. EPA-821-R-02-012. October.

pathogenic organism interference, unexpected failure of test equipment; and exposure of test organisms to unanticipated events that would result in test interference. Regional San suggests insertion of the following text as the last sentence in Step 2:

*“Tests that are determined to be invalid, indeterminate, or rejected will be reported as described in Section IV.B.1.e Reporting. Where possible and practicable, any items determined to interfere with the test will be identified, corrected, or resolved as soon as practicable so that testing may be completed as required.”*

Additionally, Comment 6 below addresses consideration for additional time that is necessary to complete tests for certain reasons, including having invalid or indeterminate tests.

**Comment 5 – Deferral of NPDES Permit Requirements until Completion of Upgrades and Other Events that would Significantly Change Effluent Characteristics.**

**Section IV.B.2. Implementation for Non-Storm Water NPDES Dischargers and IV.B.2.a Species Sensitivity Screening, subsections i and ii** (page 12) for chronic and acute toxicity state that the implementation section requirements and species sensitivity screening shall occur upon NPDES permit issuance, reissuance, renewal, or reopening (after the effective date of the provisions). We recommend adding an exception to defer incorporation of the new requirements in NPDES permits for wastewater treatment plants that are in the process of constructing treatment plant upgrades, and for facilities that are performing major repair or replacement activities or undergoing significant operational changes that would reasonably be expected to change the effluent characteristics. Effluent characteristic changes that occur after these types of events will likely invalidate previous findings related to species sensitivity. This issue, and the associated cost of conducting additional rounds of species-screening tests and potential changes required for laboratory test mechanisms, could be avoided by amending the proposed Toxicity Provisions to allow Permitting Authorities to grant an exception for conducting the sensitive species-screening tests when the effluent is unrepresentative for the reasons described above. Existing toxicity monitoring for these types of facilities would be expected to continue. The following text is suggested as an added final paragraph in **Section IV.B.2;**

*“The PERMITTING AUTHORITY may defer the requirements for inclusion of the requirements in this section for implementation and associated SPECIES SENSITIVITY SCREENING for chronic toxicity in NPDES permits for facilities that are in the process of constructing treatment plant upgrades, performing major repair or replacement activities, or undergoing significant operational changes that would reasonably be expected to change effluent characteristics until after the completion of those activities.”*

**Comment 6 – Flexibility in Calendar Month Duration for Routine Chronic Monitoring.**

**Section IV.B.2.c MDEL and MMEL Compliance Monitoring** (pages 16-19). This section specifies requirements related to the initiation and duration of the chronic and acute routine monitoring, and discretion of the permitting authority for specifying items including, the day of the month that the routine test(s) begin, the start of the calendar quarter, etc. in the NPDES

permit. Certain subsections are written to allow flexibility, such as sections within IV.B.2.c.i. (A) and IV.B.2.c.ii that state on pages 17-19, “*To the extent feasible, ROUTINE MONITORING tests shall be evenly distributed across the CALENDAR YEAR or period of seasonal or intermittent discharge.*” and “*The PERMITTING AUTHORITY has discretion to or not to specify the exact dates or time period in which a sample for ROUTINE MONITORING shall be taken...*”.

Regional San recommends the incorporation of similar flexibility at the discretion of the permitting authority for certain instances when a discharger is unable to comply with the timelines for completion of the monthly compliance monitoring included in section IV.B.2.c for either chronic or acute routine monitoring.

A discharger’s ability to perform multiple monthly chronic and acute routine monitoring tests within the time requirements specified in the proposed Toxicity Provisions might be impacted by several factors, and at times it may be impossible to meet the required timeline. (Some specific examples are identified in Comment 4 above.) Each test requires scheduling, collection of test water, obtaining and acclimating organisms, set-up and performance of the test, analysis, receipt of notification of test results, and reporting. An initial fail for a chronic routine monitoring test will require up to three tests during that calendar month. Eight to ten days is a typical time required for a single routine monitoring test. If ten days is required for test #1 and that test fails, tests #2 and #3 would need to be performed simultaneously or with significant test overlap to ensure that the calendar month requirement is met. If one of the three required tests is delayed or is determined to be invalid, indeterminate, or inconclusive, a fourth monthly test may need to be conducted.

The following are examples of circumstances that may delay the completion of the required routine chronic or acute toxicity testing within a 30 day time frame:

- Receiving water toxicity
- Laboratory or sample collection system upset or failure (mechanical, electrical, leakage, contamination, etc.)
- Indeterminate, invalid, or inconclusive test based on test criteria or other interference
- Impacts to test organisms that are not related to toxicity (i.e., salinity, health of species received)
- Unavailability or delayed receipt of test organisms – some vendors cannot provide organisms on certain days, weekends, holidays
- Effluent diversion or cessation of discharge, when effluent is not available for test completion
- Unavailability of laboratory personnel or staffing limitations, or lab capacity.

When test failures do occur, and multiple tests are required during a single month, dischargers may be required to plan for and perform overlapping tests to meet the specified monthly routine monitoring requirements. In this situation, tests that are performed by a facility’s onsite laboratory would require increasing staff time for standby, potentially expanding the number of test facilities, and / or having on-call contracts for outside lab assistance. The costs and testing complications are compounded when both chronic and acute testing are required in the same month and when one month’s test overlaps the next month’s routine testing.

Additional flexibility is recommended for the calendar month requirement to allow dischargers the ability to collect and analyze samples without the jeopardy of receiving a violation.

The additional flexibility could avoid unnecessary and incidental violations / penalties associated with the MDEL or MMEL. It would also avoid imposing inadvertent requirements to routinely prepare for overlapping toxicity tests (including provision of sample organisms for repeat tests which would need to be ordered and delivered monthly) before an initial test failure was confirmed, which would in turn minimize sacrificed specimens that might not be required for testing if the initial test were passed.

The following text addition is proposed for consideration to allow time extensions for the tests required in Section IV.B.2.c:

*“When more than one routine monitoring test is required in a single month, Regional Water Board staff shall have the authority to make reasonable extensions to the calendar month time requirements in this section for ROUTINE MONITORING and/or for COMPLIANCE TESTS as necessary to allow adequate time for test completion.”*

In addition to the above proposed change, Regional San recommends State Board staff also clarify how the MMEL would be interpreted when a discharger is unable to initiate or complete three or more valid test results within a calendar month as required.

#### **Comment 7 – Dilution Ratios.**

**Part IV.B.2.d Mixing Zones and Dilution Credits** (page 20). The last 3 paragraphs on page 20 are contradictory and confusing as to the use and application of a mixing zone and dilution credits, and the use of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP). An Instream Waste Concentration (IWC) is described in this section as the inverse of 1 plus the dilution credit ( $IWC = 1 / (1+D)$ ; D is the dilution credit), where the dilution credit can be determined through environmentally relevant approaches (e.g., modelling or a mixing zone study). The IWC is also described, for the purpose of toxicity tests, as not less than the inverse of 1 plus the dilution ratio: “For the purpose of toxicity tests, in no case shall the Permitting Authority set the IWC at less than the inverse of 1 plus the DILUTION RATIO.” (proposed Toxicity Provisions, p. 20). In this later case, the dilution ratio is determined strictly based on critical flows (as shown in the proposed Toxicity Provisions, Table 3) and the qualification on the value of the IWC (not less than the inverse of 1 plus the DILUTION RATIO) would apply to ALL discharge scenarios. This is not consistent with the SIP, because a mixing zone study to determine the dilution credit may need to account for site-specific factors that render the critical flows, and thus the dilution ratio, inapplicable (i.e., seasonal discharge, permit-required dilution, etc.). In such cases, an IWC based on a dilution credit, while being protective of beneficial uses, would be lower than if based on the dilution ratio. Therefore, the qualification on the IWC only applies to the Completely Mixed Discharges scenario of the SIP, when it is not necessary to account for site-specific factors for such discharges (see Section 1.4.2 of the SIP for when a dilution ratio is applicable for establishing a dilution credit).

Regional San recommends that the following statement be removed from Section IV.B.2.d (page 20);

~~***“For the purpose of toxicity tests, in no case shall the Permitting Authority set the IWC at less than the inverse of 1 plus the DILUTION RATIO.”***~~

Additionally, the last sentence on page 20 states *“The DILUTION RATIO shall be determined using the parameters specified in Table 3.”* However, **Table 3: Parameters for Calculating a Dilution Ratio** on page 21 does not seem appropriate for use with the proposed Toxicity Provisions. This table compares a ratio of a 10-year critical low flow in the receiving waters to a maximum calendar year daily flow for discharge effluent. This ratio would rarely, if ever, occur for wastewater treatment plants. The use of this stringent and environmentally improbable flow comparison will require the performance of toxicity testing at significantly higher effluent concentrations than those that exist in the receiving water, unduly increasing the risk of test failure, violations, and penalties. A more realistic scenario would be instances in which high receiving water flows occur concurrently with high discharge effluent flows during wet weather, and lower receiving water flows occur concurrently with low discharge effluent flows during dry weather. If minimum receiving water flows are used in a ratio with maximum discharge effluent flows, we suggest the use of ratios that more accurately reflect the true ratios, such as comparing the minimum monthly or seasonal receiving water flow to a corresponding maximum monthly or seasonal discharge effluent flow. This could be accomplished by using seasonal or monthly calculation flows for receiving waters and effluent discharges.

**Table 3** also states for the Chronic Toxicity Objective, *“Four-day average of daily maximum flows (i.e., the average of daily maximums taken from the data set in four-day intervals.) during period of discharge.”* It is unclear which “data set” and which “period of discharge” are being referred to. This should be clarified.

If the IWC and use of mixing zones in the proposed Toxicity Provisions are modified, those changes should be included and/or clarified in Section **III.B.3 Interaction of Toxicity Provisions with Basin Plans and the SIP** (page 3).

#### **Comment 8 – Reduced Routine Monitoring during Toxicity Reduction Evaluation.**

The proposed Toxicity Provisions are not clear in the flexibility for reduction of routine monitoring during a Toxicity Reduction Evaluation (TRE). The Regional Water Board staff should have flexibility in allowing a reduction in routine monitoring to allow a fully functional TRE. The requirement to continue routine tests during a TRE places an undue burden on a discharger who is trying to determine the source of toxicity or if toxicity exists in the effluent. Regional San recommends changes to the following two sections:

**Section IV.B.2.c.i.(B) - Reduced Routine Monitoring Schedule for Chronic Toxicity** (page 18) states *“The PERMITTING AUTHORITY may also approve a temporary reduction in the frequency of the ROUTINE MONITORING specified in Section IV.B.2.c.i.(A) for dischargers conducting a TRE.”* However, Section IV.B.2.c.i.(A) doesn’t appear to clearly

support reduction in testing frequency during a TRE. We recommend the addition of the following text in Section IV.B.2.c.i.(B) for clarification:

*“The PERMITTING AUTHORITY may approve a reduced frequency ROUTINE MONITORING schedule from one CHRONIC TOXICITY TEST per CALENDAR MONTH, as required in Section IV.B.2.c.i.(A) to a maximum of one per CALENDAR QUARTER or a minimum of two per calendar year for dischargers conducting a TRE, at the discretion of the Regional Water Board.”*

Also, **Section IV.B.2.f Toxicity Reduction Evaluation** (page 23) should be revised to state *“ROUTINE MONITORING, as specified in Section IV.B.2.c, shall continue during a TRE but may be reduced at the discretion of the Regional Water Board.”* This revision would more clearly allow a reduction in the frequency of routine monitoring during a TRE.

If these changes are accepted, then the references to Sections IV.B.2.c. and IV.B.2.c.i.(A) should be deleted from Section IV.B.2.c.i.(B) and IV.B.2.f to avoid confusion.

#### **Comment 9 – Median Monthly Effluent Limitation.**

**Appendix A:** The Glossary includes the definition *“MEDIAN MONTHLY EFFLUENT LIMITATION (MMEL): For the purposes of chronic and acute aquatic toxicity, an MMEL is an effluent limitation based on a maximum of three independent toxicity tests, analyzed using the TST, as described in Section IV.B.2.e.”* A median is mathematically determined by the middle number when there is an odd number of results, or from the average of the two middle results when there is an even number of values. It’s unclear how a median would be calculated if: routine monitoring results in a fail and either both MMEL compliance tests were invalid; if one MMEL compliance test results in a pass while the other is invalid; or if a third test isn’t possible if effluent flow doesn’t occur during the time period for test #3. Clarification should be provided, such as an allowance for using a mathematical average for this instance when a median cannot be used. Alternatively, the discharger could utilize data from the following month’s testing to determine the MMEL. Note that the draft Staff Report **Table 2-3 MMEL Compliance** does not include these types of compliance test scenarios.

Additionally, the MMEL may not be based on test results obtained within a calendar month as defined in the glossary. Specifically, sampling must occur prior to the start of the month if the test initiation is defined as the first day of the calendar month. Also, sampling and testing may continue beyond the calendar month if a test is initiated on the last day of the calendar month. The calendar month’s cycle of testing could exceed 38 days. In general, the use of the term calendar month is confusing. This should be explained and/or clarified within the proposed Toxicity Provisions.

**Comments to the Draft Staff Report, Including Substitute Environmental Documentation.**

**Comment 10 – Environmental and Economic Impacts Unknown at this Time.**

The environmental impacts of the proposed Toxicity Provisions to wastewater treatment facilities discussed in Section 7 and the Economic Considerations discussed in Section 9.1.4 are difficult to assess. Regional San cannot, at this time, evaluate the accuracy of predicted impacts to the Sacramento Regional Wastewater Treatment Plant Environmental Lab. We request that the impacts of the proposed Toxicity Provisions be revisited after implementation to determine the overall impacts and costs to Non-Stormwater NPDES dischargers. However, we do offer the corrections and comments in the following comments as an attempt to improve the accuracy for items addressed in the draft Staff Report and also the July 2018 document titled *Economic Considerations for Proposed Whole Effluent Toxicity Control Provisions for California*.

**Comment 11 – Correction to Vehicle Distance.**

**Table 7-2. Vehicle Mileage for Sample Dischargers** (draft Staff Report pages 165-166) is used as a basis to evaluate the impacts from monitoring based on the use of vehicles to and from the sample locations and to the laboratory. Page 166 should contain an additional row for Regional San, since Pacific EcoRisk is utilized for offsite routine monitoring. Other monitoring is performed onsite at the Regional San Environmental Laboratory as indicated on the table. The following correction should be made to Table 7-2:

<b>Discharger</b>	<b>Laboratory</b>	<b>Distance Apart (Miles)</b>	<b>Potential Change in Number of Trips</b>	<b>Maximum Potential Distance Change (Miles, Annually)</b>
Sacramento Regional CSD WWTP 8521 Laguna Station Road Elk Grove, CA 95758	Onsite	0	0	0
<u>Sacramento Regional CSD WWTP 8521 Laguna Station Road Elk Grove, CA 95758</u>	<u>Pacific EcoRisk 2250 Cordelia Rd Fairfield, CA 94534</u>	<u>53.5</u>	<u>Undetermined</u>	<u>Undetermined</u>

The distance apart is a driving distance, while each test requires 3 trips between the Regional San Environmental Laboratory and Pacific EcoRisk by courier. ). Regional San has not offered a correction for the columns titled “Potential Change in Number of Trips” and “Maximum Potential Distance Change (Miles, Annually)” since it’s unclear how those values were calculated.

**Comment 12 - Environmental Impacts Corrections.**

**Table 7-6. Environmental Impacts of Provisions to Sample Facilities** (draft Staff Report Pages 219-222) lists annual totals for test chambers – it’s unclear what is meant by the numbers used for Regional San (1504 test chambers for the Baseline Requirements for Acute and Chronic Toxicity and 720 test chambers for the Provisions for Acute Toxicity and Chronic Toxicity). The derivation or calculation of these numbers should be explained. Regional San disagrees with the statement of “No Impact” for its facilities on this table as indicated in the comments below.

**Comment 13 – Facility Costs**

**Table 9-1. Potential Incremental Costs for Sample Facilities** (page 245) lists the following costs for Regional San;

Name	Monitoring	Compliance Actions	Total
Sacramento Regional County Sanitation District WWTP	-\$77,200	\$500	-\$76,700

A narrative description of the costs included in **Table 9-1** precedes the table, however detailed costs are not provided. Regional San disagrees with the cost indicated in this table, but we are unable to prepare an estimate of cost impacts at this time due to uncertainty about items such as:

- The most sensitive species that will be used for chronic and acute toxicity monitoring
- The potential that a Regional Water Board will require testing for more than one species or to perform special studies
- The number of replicates that will be required for each
- A potential expansion of the laboratory facility to accommodate more than one species if the most sensitive species cannot be determined or if the Regional Water Board requires additional testing or studies
- A potential expansion of the laboratory facility to accommodate additional replicates and overlapping sampling as described in comment 5 in this letter
- Cost increases due to potential increased use of offsite laboratories
- Cost impacts to offsite laboratories based on the proposed Toxicity Provisions
- Potential monetary penalties assessed for violations of the numeric effluent limits.

Note also on this table, it’s unclear what is included in the column titled “Compliance Actions” and how the value of \$500 was calculated or derived. Note 2 attempts to explain this column, but it is not clear. Regional San recommends that this section be expanded to show

actual calculations and detailed explanations, and also address the items noted in the bullet list above.

We also recommend a re-evaluation and update of the document titled *Economic Considerations of Proposed Whole Effluent Toxicity Control Provisions for California* dated July 2018 after the Toxicity Provisions are incorporated into NPDES permits for a substantial number of freshwater dischargers.

**Comment 14. Correction to 2013-2018 Facilities Funding.**

**Table 9-3 Funding for Projects that Include Advanced Treatment Upgrades for Water Treatment Facilities, 2013-2018** included in the draft Staff Report on pages 247- 248 includes only three of the eight projects funded through the Clean Water State Revolving Fund for Regional San’s EchoWater Program that provides advanced wastewater treatment upgrades for the Sacramento Regional Wastewater Treatment Plant.

It is unclear how the listed facility upgrades are used to determine costs associated with implementation of the proposed Toxicity Provisions, or how each listed upgrade would impact toxicity. This should be clarified. However, if used, the following corrected and complete table below that includes all of the required projects for Regional San should be included in the draft Staff Report. Page 247 indicates “(The total costs of the projects are not included.)” For Regional San’s EchoWater Program, each of the listed projects is a necessary component of the overall construction required to complete the upgrades. Segments 1-7 were financed or are being financed from 2013-2018. The last project Segment #8 includes approximately \$105,431,451 that is scheduled to be financed after 2018. We recommend corrections to the table as follows;

<b>Applicant</b>	<b>Project Name</b>	<b>Population Served by the Project</b>	<b>Financed Project Costs</b>
<u>Sacramento Regional County Sanitation District</u>	<u>EchoWater Project – Segment 1 – Site Preparation</u>		<u>\$41,828,976</u>
<u>Sacramento Regional County Sanitation District</u>	<u>EchoWater Project – Segment 2 – Flow Equalization</u>		<u>\$138,672,372</u>
<u>Sacramento Regional County Sanitation District</u>	<u>EchoWater Project – Segment 3 – Main Electrical Substation Expansion</u>		<u>\$2,861,737</u>
<u>Sacramento Regional County Sanitation District</u>	<u>EchoWater Project – Segment 4 – Disinfection Chemical Storage</u>		<u>\$21,465,759</u>

Sacramento Regional County Sanitation District	EchoWater Project – Segment 5 – Nitrifying Sidestream Treatment	1,404,145	\$53,490,845
Sacramento Regional County Sanitation District	EchoWater Project – Segment 6 – Biological Nutrient Removal Facility EchoWater Project – Segment 8 – Tertiary Treatment Facility & <b>Closeout Projects</b>	1,404,145	<b>\$533,142,603</b> <del>\$534,869,431</del>
<b><u>Sacramento Regional County Sanitation District</u></b>	<b><u>EchoWater Project – Segment 7 – Return Activated Sludge Pumping Station</u></b>		<b><u>\$35,696,952</u></b>
Sacramento Regional County Sanitation District	EchoWater Project – Segment 8 – Tertiary Treatment Facility & <b>Closeout Projects</b>	1,404,145	\$564,657,506

These additional and corrected project costs represent a significant public investment and account for an additional \$238,798,968 of funding through 2018 for the areas served by Regional San. **This is an increase of 75% (\$170 per person) over the average cost per person that’s stated as the value in the draft Staff Report.**

Additionally, the title of Table 9-3 should be corrected to “**Table 9-3. Funding for Projects that include Advanced Treatment Upgrades for Wastewater ~~Water~~ Treatment Facilities, 2013-2018.**”

The first paragraph on page 247 that summarizes the financed project costs should also be updated based on cost revisions accordingly.

**Comment 15 – Costs that Appear to be Missing from the Cost Analysis.**

In reviewing the proposed Toxicity Provisions, the draft Staff Report, and the *Economic Considerations of the Proposed Whole Effluent Toxicity Control Provisions for California* (July 2018), the following costs do not appear to be included, but would impact costs:

- Adding replicates, sample collection, and shipping costs which have been specifically excluded from the costs as stated on page 4-15 of the July 2018 Economic Considerations document developed by Abt Associates.
- Constructing changes to or expansion of laboratory facilities as required to accommodate any changes required for tested species or special studies.

- Adding standby or associated utilized staff costs, or the utilization of outside laboratory services for overlapping tests as described in comment 6.
- Assessing costs associated with monetary penalties and violations.

A complete costs analysis should be performed that includes all of these items. We also recommend a further evaluation of costs after implementation of the final provisions.

### **Closing Comments**

In general, Regional San is supportive of the comments provided by the Central Valley Clean Water Association and the California Association of Sanitation Agencies, in particular related to the issues of *C. dubia* testing and its use for numeric effluent limits.

We appreciate the efforts of the State Water Board and staff in attempting to resolve several key issues associated with this Policy and encourage you to continue to work with the discharger community to ensure that the conclusion of this effort is successful. We recommend a periodic report-back and discussion with affected dischargers related to the successes and issues associated with the use of the Toxicity Provisions.

If you have any questions or concerns regarding our comments, please contact me directly at 916-876-6092 or [mitchellt@sacsewer.com](mailto:mitchellt@sacsewer.com), or contact Rebecca Franklin at 916-876-6030 or [franklinre@sacsewer.com](mailto:franklinre@sacsewer.com). Per our recent dialogue with State Water Board staff, we are willing to provide additional detail for any of our comments included in this letter, or provide other assistance with technical items associated with the proposed Toxicity Provisions and their implementation.

Sincerely



Terrie Mitchell  
Manager, Legislative and Regulatory Affairs

cc: Prabhakar Somavarapu, District Engineer  
Ruben Robles, Director of Operations  
Christoph Dobson, Director of Policy and Planning  
Lisa Thompson, Chief Scientist  
Mitch Maidrand, Principal Civil Engineer  
Bob Seyfried, Senior Civil Engineer  
Rebecca Franklin, Environmental Program Manager