



Staff Public Workshop #1: First Revised Draft of the Toxicity Provisions

Karen Mogus, Deputy Director
Division of Water Quality

State Water Resources Control Board
August 13, 2019



Purpose of the Workshop

1. Describe the changes made in the First Revised Draft of the Toxicity Provisions
2. Identify remaining topics for discussion at the third staff public workshop on August 28th

Send any questions to DWQ-IPSI@waterboards.ca.gov
for Q&A at the end

17 Main Issues from Comments

14 issues addressed in revised Provisions resulting in:

- Changes made to the Provisions
- No changes to the Provisions
- Proposed language for inclusion in the adopting resolution

3 issues with options for discussion

14 Issues from Comments

1. Test of Significant Toxicity (TST)
2. Analysis of Multi-Concentrations
3. Additional Test Species
4. Species Sensitivity Screening (SSS) Frequency
5. Species Sensitivity Screening (SSS): Non-Continuous Dischargers
6. Reasonable Potential Analysis (RPA): Acute Toxicity
7. MMEL Compliance Tests
8. Reduced Monitoring Frequency Eligibility
9. Reduced Monitoring Frequency During a Toxicity Reduction Evaluation (TRE)
10. Exemption: POTWs (Publicly Owned Treatment Works) Serving Small Disadvantaged Communities
11. Exemption: Pesticide Discharges
12. Exemption: Drinking Water Discharges
13. Exemption: Natural Gas Facilities Discharges
14. Storm Water Dischargers

3 Issues with Options for Discussion

- 15. Determining which dischargers will have effluent limitations and monitoring requirements for chronic toxicity
- 16. Reasonable Potential Analysis (RPA)
- 17. *Ceriodaphnia dubia* chronic reproduction tests

1. Test of Significant Toxicity (TST)

October 2018 (*IV.B.1.c, pg. 7*)

- Require the use of the TST statistical approach to analyze toxicity test data and determine compliance with the proposed water quality objectives

Public Comments

- Use the TST statistical approach
- Use the No-Observed-Effect Concentration (NOEC) statistical approach
- Use a point estimate statistical approach (EC₂₅, LC₅₀)
- Allow the Permitting Authority to determine the statistical approach

July 2019 (*IV.B.1.c, pg. 9*)

- No change

2. Analysis of Multi-Concentrations

October 2018 (*IV.B.1.b, pg. 7*)

- Labs must follow U.S. EPA toxicity test methods, which require multi-concentration tests
- The required TST statistical approach considers data only from the IWC and a control

Public Comments

- Allow the use of multi-concentration analysis to consider information from multiple concentrations

July 2019 (*IV.B.1.b, pg. 7*)

- No change
- Request Alternative Test Procedure (ATP)

3. Additional Test Species

October 2018 (*IV.B.1.b, pg. 6*)

- Table 1 of the Provisions lists test species that may be used to determine compliance with the numeric water quality objectives and effluent limitations
- The Permitting Authority has discretion to require additional testing (may use non-Table 1 species)

Public Comments

- Allow the use of other U.S. EPA tests species not listed on Table 1
- Provide a process for adding non-Table 1 test species to Table 1

July 2019 (*IV.B.1.b, pg. 8*)

- No change
- In the adopting resolution, direct staff to document the process for developing TST error rates to incorporate additional test species into Table 1

4. Species Sensitivity Screening (SSS) Frequency

October 2018 (IV.B.2.a, pg. 12)

- SSS is required either prior to, or within 18 months after the first issuance, reissuance, renewal, or reopening of any NPDES permit (and any subsequent) after the effective date of the Provisions
 - Minimum = once every 10 years

Public Comments

- Allow SSS data prior to the effective date of the Toxicity Provisions to be considered
- Require a new SSS with each issuance, reissuance, renewal, or reopening for any non-storm water NPDES permit

July 2019 (IV.B.2.a, pg. 13)

- No change
- Added clarifying language to allow the use of SSS data generated prior to the effective date of the Provisions only if the tests were conducted using the same protocols established by the Provisions

5. SSS: Non-Continuous Dischargers

October 2018 (*IV.B.2.a.iii, pg. 13*)

- SSS consists of four sets of tests completed within a one-year period, evenly distributed across the discharge season

Public Comments

- Allow seasonal and intermittent dischargers to use fewer than four sets of SSS tests to determine the most sensitive species

July 2019 (*IV.B.2.a.iii, pg. 14*)

- Require one SSS test per quarter of discharge, with a minimum of two sets of tests within one year
- Examples:
 - Discharge during 1 quarter → 2 sets
 - Discharge during 2 quarters → 2 sets
 - Discharge during 3 quarters → 3 sets
 - Discharge during 4 quarters → 4 sets

6. Reasonable Potential Analysis (RPA): Acute Toxicity

October 2018 (IV.B.2.b.ii, pg. 14)

- The Permitting Authority determines which POTWs are required to conduct RPA for acute toxicity
- All other non-storm water NPDES dischargers are required to conduct a RPA for acute toxicity

Public Comments

- Require all non-storm water NPDES dischargers, including POTWs, to conduct a RPA for acute toxicity
- Require a POTW to conduct a RPA for acute toxicity only in specific situations listed in the Provisions and require all other non-POTWs to conduct a RPA for acute toxicity
- Give the Permitting Authority full discretion to require a RPA for acute toxicity

July 2019 (IV.B.2.b.ii, pg. 17)

- The Permitting Authority determines when a discharger is required to conduct RPA for acute toxicity

7. MMEL Compliance Tests: Start of Calendar Month

October 2018 (*IV.B.2.c, pg. 16*)

- The Permitting Authority specifies the start of the calendar month

Public Comments

- Start the calendar month once the routine monitoring test is initiated
- Start the calendar month at the discretion of the discharger or laboratory instead of the Permitting Authority

July 2019 (*IV.B.2.c, pg. 19*)

- No change
- Require the Permitting Authority to consider scheduling constraints identified by the discharger and applicable laboratories

7. MMEL Compliance Tests: Time Period

October 2018 (*IV.B.2.c.iv, pg. 19*)

- If a routine monitoring test = “fail” at the IWC, the discharger is required to initiate up to two MMEL compliance tests within the same calendar month as the initial Routine Monitoring test

Public Comments

- Allow a 45-day or six-week compliance time period to complete MMEL compliance tests
- Provide regulatory relief to the discharger if failure to initiate the MMEL compliance tests results from issues outside of dischargers’ control

July 2019 (*IV.B.2.c.v, pg. 24*)

- No change
- Require a new test to be conducted to replace the test that did not meet Test Acceptability Criteria

8. Reduced Monitoring Frequency Eligibility

October 2018 (*IV.B.2.c.i(B), pg. 17*)

- The Permitting Authority may reduce a discharger's chronic toxicity routine monitoring, if, for the prior five consecutive years, these conditions have been met:
 1. No MDEL or MMEL exceedances
 2. The Provisions in the applicable NPDES permit(s) have been followed

Public Comments

- Allow a reduced monitoring frequency in the first permit reissuance, renewal, or reopening after the effective date of the Provisions if:
 - Over the past five years, no test using the TST resulted in a "fail" and,
 - Minimum of 10 tests

8. Reduced Monitoring Frequency Eligibility

July 2019 (IV.B.2.c.i(B), pg. 21)

- No change
- Provide an additional option for dischargers without an existing MDEL and MMEL to be eligible for a reduced monitoring frequency if:
 1. Toxicity requirements in the NPDES permit(s) have been followed
 2. Use the TST to analyze all toxicity test data collected within the past five years, minimum = 10 tests
 3. No “fails” at the IWC

9. Reduced Monitoring Frequency During a Toxicity Reduction Evaluation (TRE)

October 2018 (IV.B.2.c.i(B), pg. 18)

- The Permitting Authority may grant a temporary reduced monitoring frequency during a TRE; minimum = 2 chronic tests per year
- Must return to regular schedule within one year or when TRE is complete (whichever comes first)

Public Comments

- Do not allow reduced monitoring frequency during a TRE
- Require the Permitting Authority to reduce monitoring frequency during a TRE
- Allow a temporary reduced monitoring frequency during a TRE to extend beyond one year
- Allow staff of a Permitting Authority, rather than the Executive Director/Officer, to approve a reduced monitoring frequency during a TRE

9. Reduced Monitoring Frequency During a Toxicity Reduction Evaluation (TRE)

July 2019 (IV.B.2.c.i(B), pg. 22)

- No change
- Add a qualification that reduced monitoring frequency is only allowed when toxicity testing will be conducted as part of the TRE

10. Exemption: POTWs Serving Small Disadvantaged Communities

October 2018 (*IV.B.2.j.i, pg. 24*)

- The Permitting Authority may exempt POTWs serving small disadvantaged communities from some or all of the Provisions if the discharge will have no RP to cause or contribute to an exceedance of the toxicity water quality objectives

Public Comments

- Remove exemption and instead, provide resources to such facilities to achieve compliance
- Only allow an exemption for small disadvantaged communities that discharge less than a certain volume (Example: 1 MGD)

10. Exemption: POTWs Serving Small Disadvantaged Communities

July 2019 (IV.B.2.j.i, pg. 24)

- Remove this exemption
- Permitting Authority may exempt some communities as insignificant discharge exemption
- No change to insignificant discharge exemption

11. Exemption: Pesticide Discharges

October 2018 (N/A)

- No specific provisions for exempting pesticide application discharges
- The Permitting Authority may grant a variance to meeting the water quality objectives
- The Permitting Authority may allow short-term or seasonal exceptions from meeting the water quality objectives for resource or pest management

Public Comments

- Add an exemption for pesticide discharges permitted under the NPDES pesticide general permits

July 2019 (IV.B.2.j.ii, pg. 30)

- The Permitting Authority may exempt pesticide discharges from some or all of the Provisions if it makes a finding that for toxicity, it is infeasible to establish effluent limits

12. Exemption: Drinking Water Discharges

October 2018 (N/A)

- The Permitting Authority may exempt insignificant discharges that are deemed “a very low threat to water quality”
- Drinking water discharges are not explicitly identified as insignificant

Public Comments

- Add an exemption for drinking water discharges permitted under the Drinking Water Discharge NPDES general permit

July 2019 (IV.B.2.j.iii, pg. 30)

- The Permitting Authority may exempt drinking water discharges from some or all of the Provisions when no RP exists, or when RP exists only due to discharges of chlorine and chlorine effluent limits are included in the permit

13. Exemption: Natural Gas Facilities Discharges

October 2018 (N/A)

- The Permitting Authority may exempt insignificant discharges that are deemed “a very low threat to water quality”
- Natural gas facility discharges are not explicitly identified as insignificant

Public Comments

- Add an exemption for natural gas facilities discharges permitted under the natural gas facilities NPDES general permit

July 2019 (IV.B.2.j.iv, pg. 31)

- The Permitting Authority may exempt discharges from hydrostatic testing and dewatering of natural gas facilities from some or all of the Provisions when no RP exists, or when RP exists only due to discharges of chlorine and chlorine effluent limits are included in the permit

14. Storm Water Dischargers

October 2018 (IV.B.3, pg. 25)

- Storm water dischargers that are required to conduct aquatic toxicity tests using Table 1 species must assess their data using the TST approach and report their results

Public Comments

- Add monitoring requirements and effluent limitations for storm water dischargers
- Remove requirements for storm water dischargers, including the TST
 - Instead, allow the Permitting Authority to specify requirements in their basin plans or permits, or
 - Address toxicity monitoring in storm water through a separate project such as the Strategy to Optimize Resource Management of Storm Water (STORMS) program

July 2019 (IV.B.3, pg. 31)

- No change
- Include language in the adopting resolution to direct staff to address implementation of Provisions in storm water permits through the STORMS program

15. Determining which dischargers will have effluent limitations and monitoring requirements for chronic toxicity

October 2018 (*IV.B.2.c.i, pg. 14*)

- POTWs that discharge at a rate ≥ 5 MGD are not required to do RPA and have required chronic toxicity monitoring requirements and effluent limitations
- All other non-storm water NPDES dischargers must do RPA to determine if they have RP and are subject to routine monitoring and effluent limitations

Public Comments

- No RPA for chronic toxicity and all non-storm water NPDES dischargers have chronic routine monitoring requirements and effluent limitations

15. Determining which dischargers will have effluent limitations and monitoring requirements for chronic toxicity

Option #1

- No change; establish chronic monitoring requirements and effluent limitations for larger POTWs (≥ 5 MGD) and require RPA for larger non-POTWs and small dischargers

Option #2

- Establish chronic monitoring requirements and effluent limitations for all non-storm water NPDES dischargers

Option #3

- Require chronic RPA to determine monitoring requirements and effluent limitations for all non-storm water dischargers

16. Reasonable Potential Analysis (RPA)

October 2018 (IV.B.2.c.iii, pg. 15)

- RP exists if any chronic or acute toxicity tests = “fail” at the IWC or percent effect is > 10%
 - Use toxicity test data within five years of permit issuance, reissuance, reopening; minimum of four tests using Table 1 species, conduct at the IWC, analyze using the TST

Public Comments

- Determine chronic and acute RP with “pass” and “fail” data
 - Any toxicity test resulting in a “fail” would result in RP
- Determine chronic and acute RP with a different percent effect threshold
 - Examples: average percent effect, 15%, 20%

16. Reasonable Potential Analysis

Option #1

- No change; determine RP on any “fail” at the IWC or a percent effect $> 10\%$

Option #2

- Determine RP on any “fail” at the IWC or a higher percent effect
 - Example: 15% or 20%

Option #3

- Determine RP solely on any “fail” at the IWC

17. *Ceriodaphnia dubia* Chronic Reproduction Test

October 2018 (IV.B.1.b, pg. 6)

- *C. dubia*, when identified as the most sensitive species, should be used to determine compliance with chronic toxicity effluent limitations

Public Comments:

- Remove the *C. dubia* chronic reproduction test from Table 1
- Do not use *C. dubia* as the most sensitive species until:
 - *C. dubia* reproductive test methods for chronic toxicity are re-evaluated to verify the accuracy of the test, or
 - Improvements can be made to increase the accuracy and reduce interlaboratory variability

17. *Ceriodaphnia dubia* Chronic Reproduction Test

Option #1

- No change; use *C. dubia* to assess compliance with effluent limitations
- Conduct a study to determine whether any modifications to the method or the use of *C. dubia* are needed

Option #2

- Use *C. dubia* as a monitoring/TRE trigger but not for compliance and use the second most sensitive species to assess compliance
- Include a date in Provisions when *C. dubia* would be used again for compliance with effluent limitations to incentivize completing the study timely

Option #3

- Do not use *C. dubia* as a monitoring/TRE trigger or for compliance until the end of the study or until a specified future date

Project Timeline

August 13, 2019

First Staff Public Workshop

August 16, 2019

Second Staff Public Workshop

August 28, 2019

Third Staff Public Workshop

October 3, 2019

Public Board Workshop

Fall 2019

Release of Response to Comments

December 2019

State Water Board Consideration (Tentative)

Agenda Items for August 28th Workshop

- Determining which dischargers will have effluent limitations and monitoring requirements for chronic toxicity
- Reasonable Potential Analysis
- *Ceriodaphnia dubia* chronic reproduction tests

Any other issues to discuss?

Contacts

Zane Poulson, Supervisor, Inland Planning, Standards, and Implementation Unit
Division of Water Quality, State Water Resources Control Board
Zane.Poulson@waterboards.ca.gov, (916) 341-5488

Rebecca Fitzgerald, Manager, Water Quality Standards and Assessment Section
Division of Water Quality, State Water Resources Control Board
Rebecca.Fitzgerald@waterboards.ca.gov, (916) 341-5775

Documents & Additional Information Available at:
https://www.waterboards.ca.gov/water_issues/programs/state_implementation_policy/tx_ass_cntrl.html



Questions?