

Assessment of the Potential Impacts of Toxicity Intercalibration Results to Listing Waterbodies as Impaired

Proposal to the Stormwater Monitoring Coalition

November 21, 2016

Background

The 2012 USEPA 303(d) list includes 260 impaired water bodies for Toxicity in California, of which 92 fall within the watersheds of SMC member organizations. These statewide impairments include 83 sites for sediment toxicity, 58 for general toxicity, and 119 for unknown toxicity.

Recent toxicity intercalibration work funded by the SMC has identified poor comparability with Toxicity testing particularly between laboratories and within individual laboratories. One of the most concerning revelations was related to the *Ceriodaphnia dubia* reproduction test where a blind sample of laboratory dilution water, prepared in accordance with standardized guidance and expected to be nontoxic, was found to be toxic by some of the participating labs. This prompted a review of test methods and standardization of protocols prior to a second round of testing. The results of the second round of interlaboratory testing also identified toxicity in the dilution water sample and relative low comparability of the laboratories between testing events. The results of the SMC intercalibration did not identify the cause of the low comparability and will potentially be followed up in a future study with an expanded scope of work.

The ramifications of potential false positive toxicity results include the possibility of unimpaired waterbodies being included in 303(d) listings or the initiation of unnecessary TRE investigations. Both of these potential outcomes are costly and time consuming.



Scope of Work

The purpose of this project is to assess the potential impact that corrected laboratory analysis (based on the findings of the SMC toxicity intercalibration work) could have on the number and scale of impaired waterbodies in California and specifically for southern California SMC member organizations. This assessment will include an evaluation of a subset of impaired representative waterbodies where the original toxicity results will be reviewed to determine if a false positive could have affected the resulting

regulatory action. The findings of this investigation will be presented to the SMC and included in a letter / white paper with the EPA and State Board as a target audience.

Deliverable: The final deliverable will be a letter / white paper with the EPA and State Board as a target audience presenting the findings of this investigation, the potential impacts, and SMC organization's suggestions on pathways to address the identified issues.

Budget: \$20,000 for site selection, data collection / analysis, and preparation of a white paper.

Schedule: Deliverables to be submitted to SMC Executive committee prior to the March 7th meeting.

Payments will be made 50% at inception of the project and 50% at submission of the final draft of the white paper deliverable.

References

http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2012.shtml