



August 21, 2012

# 48

Charles R. Hoppin, Chairman and Members  
State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95814

c/o Jeanine Townsend, Clerk to the Board  
[commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)

**SUBJECT: COMMENT LETTER – POLICY FOR TOXICITY ASSESSMENT  
AND CONTROL**

Dear Chairman Hoppin and Members:

The Sacramento Stormwater Quality Partnership (SSQP) appreciates the opportunity to provide comments and input on the State Water Resources Control Board (State Board) June 2012 Policy for Toxicity Assessment and Control – Public Review Draft (Draft Policy). The SSQP appreciates the time that State Board members and staff have spent developing the Draft Policy and request that you further consider the comments provided in this letter.

The SSQP is comprised of the co-permittee group for the municipal separate storm sewer system (MS4) National Pollutant Discharge Elimination System (NPDES) permit (Order NO. R5-2008-0142 NPDES NO. CAS082597). Our general concern with the proposed policy is that the specific inclusion of MS4 urban runoff discharge testing is paired with specific recommendations and broad guidance to Regional Boards that will not benefit the SSQP goal of further quantifying program effectiveness and will require that resources are redirected from other critical stormwater services.

The SSQP has collected aquatic toxicity samples since the early 1990's. This work was useful in confirming organophosphorus pesticide and metals related toxicity in urban runoff and receiving waters in the 1990's and early 2000's. However, after more than twenty years of intense data collection and maturation of the MS4 stormwater program, the composition of urban runoff, including the primary causes of observed toxic effects (i.e. insecticides), is well known. Ongoing routine aquatic toxicity monitoring generates additional data that are not necessary to our characterization of stormwater discharges, but diverts considerable resources away from addressing known causes of toxicity. In addition, the inherent uncertainties of toxicity testing arising from complicating factors (e.g., pathogen interference, ephemeral and unreproducible toxicity, epibionts, etc.) has resulted in costly follow-up toxicity identification work that was inconclusive and provided little or no benefit of useful information to the SSQP. In a typical year aquatic toxicity monitoring costs more than \$100,000. While we do agree that there are specialized studies or investigations where targeted toxicity sampling is highly useful, our concern is that the Draft Policy and attached guidance will lead to routine but expensive data collection that does not add to our understanding of stormwater

composition. *The SSQP requests MS4 agencies be removed from the Draft Policy such that toxicity testing can be used in the proper context of targeted special investigations that are designed to provide additional information as necessary to guide our pollution control efforts.*

In addition to this general concern, the SSQP has provided several specific comments below.

**48.1 → APPROPRIATENESS OF REQUIRED URBAN RUNOFF DISCHARGE MONITORING**

Part B.2 of the Draft Policy applies to "...monitoring of storm water discharges from municipal separate storm sewer systems (MS4)...", and the Appendix E guidance document notes that there are several advantages of toxicity testing over chemical measurements alone and states "... toxicity tests can capture effects of unmeasured chemicals and variability in bioavailability." and "... scientists know that many toxicants can interact to create synergistic or antagonistic effects on test organisms." While these statements are not without merit, the constituents of concern for urban runoff are well known and although the registered pesticides may change, their presence in urban runoff is well understood. These other synergistic effects are best understood through special studies, not mandated urban runoff discharge monitoring. Furthermore, urban runoff discharges occur during periods of high background flow and urban runoff discharge monitoring alone is not sufficient to understand the environmental context (i.e., synergistic and additive effects) of any identified toxicity in the receiving water. *The SSQP requests that Part B.2 of the Draft Policy be revised to specify that toxicity testing should be considered case-by-case on a special study basis.*

**48.2 → FOLLOW-UP ANALYSIS OFF-RAMPS**

Part B.2 of the Draft Policy and the Appendix E guidance document do not provide explicit recommendations on the need for follow-up testing when the cause of toxicity is known or can be confirmed by analytical chemistry or "up-front" treatments. The guidance documents should allow for such off-ramps or targeted toxicity identification. *The SSQP requests that a mechanism (e.g. a decision tree or stepwise process diagram) be added to the guidance document to allow for toxicity identification evaluation (TIE) optimization or termination based on the toxicity "profile" matching previous or other well-known conditions, sample volume restrictions, non-persistent toxicity, or toxicity that can be confirmed with analytical chemistry.*

**48.3 → CHRONIC TOXICITY PERIOD IS NOT APPROPRIATE TO INTERMITTENT URBAN RUNOFF DISCHARGES**

Part B.2 of the Draft Policy recommends that "...stormwater dischargers implement a chronic toxicity monitoring program.", however, justification for a chronic exposure period is not provided. The Appendix E guidance document states that "Runoff flows and contaminant concentrations can change orders of magnitude in less than an hour.", and further describes the intermittent nature of urban runoff discharge. Mandating toxicity test chronic exposure periods that can be seven days or more is overly



48.3 → conservative. The recommended renewal strategy essentially simulates a seven day or longer storm event. *The SSQP requests that the Policy be modified to reflect that acute exposure periods are most representative of urban runoff flows and chronic exposure periods should be applied only to receiving waters when renewal water is collected in subsequent days following the original sampling event.*

48.4 → **NUMERIC OBJECTIVE**

The numeric objectives in the Draft Policy are not necessary and will lead to inappropriate impairment listings based on the acknowledged best-case 5% “false positive” rate, the numeric objective calculation, and the existing 303(d) listing criteria. Other groups have estimated that 34% of California’s non-toxic water bodies would be expected to be incorrectly listed as impaired based on an assessment of 24 samples. Ultimately, many of these inappropriate impairment listings will lead to unnecessary focus and use of resources for regulating agencies and the regulated community. While we understand the benefits to regulators in establishing a numeric objective, *the SSQP requests that the Policy establish narrative acute and chronic toxicity objectives, which are fully protective and allow the Water Boards flexibility in regulating different categories of discharges.*

48.6 → **RECOMMENDED SPECIES WITHOUT EPA APPROVED METHOD**

The Appendix E guidance document specifies several test species, including *Hyaella azteca*. However, there is no EPA promulgated test method for this species for whole effluent toxicity let alone urban runoff discharge. While water column testing is performed by a smaller subset of specialty laboratories, use of water column *Hyaella azteca* test should be limited to research endeavors. *Hyaella azteca* is included as a supplemental species in the “Methods Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms” (EPA 2002, Fifth Edition). In this context it is intended to validate the test species. No *Hyaella azteca* specific test, test parameters, or method development data were included in the test method development. While the *Hyaella azteca* water column testing is useful in research projects in its current development, it is not appropriate for permit mandated urban runoff discharge monitoring, especially given the potential for future impairment listings based on the Draft Policy numeric objectives. *The SSQP requests that the Draft Policy be modified to specify that urban runoff discharge mandated monitoring would only be required using fully vetted species in EPA promulgated methods.*

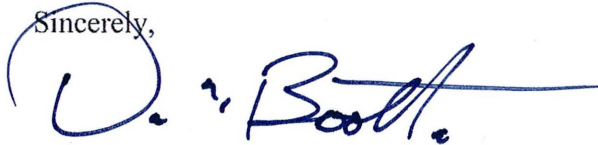
48.7 → **INACCURATE COST IMPACT ASSUMPTIONS**

The Economic Considerations of Proposed Whole Effluent Toxicity Control Policy for California document included as Appendix H to the Staff Report erroneously assumes that the cost impact to the SSQP would be zero. If urban runoff discharge monitoring is mandated as described and recommended in Part B.2 of the Draft Policy, significant additional testing would be required. Part B.2 of the Draft Policy and Appendix E guidance document do not clearly state how many urban runoff discharge locations would be tested, but the SSQP would estimate that at least our three current long-term sites would be added to our current seven receiving water locations that require toxicity

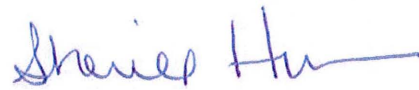
48.7 → testing. The SSQP estimates that the additional toxicity testing would add from \$20,000 to \$80,000 of additional annual cost, depending on the number of species and the extent of follow-up toxicity identification testing. *The SSQP requests that the Appendix H cost analysis be updated to reflect this more accurate SSQP cost impact estimate.*

If you have further questions or need clarifications on our comments please contact the SSQP monitoring contacts at the City of Sacramento (Delia McGrath, 916.808.5390) or at Sacramento County (Ken Ballard, 916.874.7173). Thank you for your consideration of these comments.

Sincerely,



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