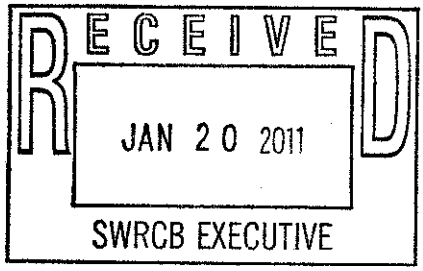
SAN MATEO COUNTYWIDE
Water Pollution Prevention Program
Clean Water. Healthy Community.

555 County Cent
Redwood City, CA



January 20, 2011

Ms. Jeanine Townsend
Attention: Brian Ogg
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Subject: "Comment Letter – Policy for Toxicity Assessment and Control"

Dear Mr. Ogg:

This provides the San Mateo Countywide Water Pollution Prevention Program (SMCWPPP)'s comments on the draft Policy for Toxicity Assessment and Control (Policy). This Policy would include a new method for determining the toxicity of effluents, establish statewide numeric water quality objectives for toxicity, and standardize the toxicity provisions contained in NPDES permits. The Policy would also supersede all toxicity testing provisions established in Regional Water Quality Control Plans.

We believe that there are alternative, better-tailored approaches for identifying and protecting aquatic beneficial uses from potential toxicity associated with municipal stormwater runoff than those offered by the draft Policy. One example is the comprehensive toxicity control policy and program established by the San Francisco Bay Regional Water Quality Control Board's TMDL for toxicity and pesticides control.

SMCWPPP previously commented on the preliminary draft version of the Policy in its letter dated August 6, 2010. This letter elaborates on our concerns and suggests changes to the Policy.

This letter is organized to first review our understanding of the reasons why the Policy is being proposed. Next is described our major concerns with the draft Policy. Finally, the letter summarizes our requested changes to the draft Policy.

Reasons for the Draft Policy

The draft Policy and the Policy's October 2010 staff report describe reasons why the State Water Board staff believes the Policy is needed. The draft Policy states that it "establishes minimum requirements to protect aquatic life beneficial uses." The staff report suggests that "numeric chronic toxicity effluent limitations may help reduce the effects of toxicity in urban stormwater runoff." Further, the staff report states the goals are "to: protect aquatic life beneficial uses; provide regulatory consistency; provide a basis for equitable enforcement; and fulfill the requirements of the State Water Board Resolution No. 2005-019" (which deals with adopting amendments to the State Implementation Plan and directs State Water Board staff to introduce an amendment for numeric limits for chronic toxicity in publicly-owned treatment plant NPDES permits by January 2006). In addition, the staff report finds that there are "current discrepancies between Basin Plans and permits that have resulted in regulatory gaps and inequities." Staff concludes that numeric toxicity objectives are an efficient regulatory tool, and it wishes to further standardize the toxicity provisions for NPDES permittees.

Concerns with the Draft Policy

The following describes four major concerns with the draft Policy.

Chronic Toxicity Water Quality Objective. The draft Policy proposes to establish numeric water quality objectives for chronic toxicity that apply to stormwater. Water quality objectives are "limits on levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses.[1]" Currently Regional Water Board Basin Plans contain narrative toxicity objectives.

It is unproven whether there is a connection between municipal stormwater chronic toxicity testing results and the protection of beneficial uses. Municipal stormwater has a "high variability among stormwater discharges" (page 48 of the staff report) and is transient in nature. The whole effluent toxicity (WET) chronic toxicity testing protocols developed by US EPA are based on continuous wastewater discharges, such as POTW discharges, not intermittent and highly changeable stormwater discharges.

As described in the California Stormwater Quality Association's comment letter dated January 20, 2011, under the standard EPA WET methods, test organisms are continuously exposed to discharge samples for extended periods ranging from 2 to 7 days compared with storm events that typically last from a few to a dozen hours. A further complication is that within a particular storm event, the characteristics of runoff from one part of the stormwater runoff hydrograph may be different from another part[2]. It is totally unclear whether an effect level, as defined in the draft Policy, found in a transient stormwater event indicates a detrimental effect on aquatic life beneficial uses in the receiving waters. It is also unclear whether the transient effects of stormwater create unreasonable effects on beneficial uses. Without this level of understanding establishing a chronic toxicity numeric objective for stormwater that is based entirely on bioassay testing of stormwater is not technically justified.

In addition to the highly variable nature of municipal stormwater runoff is the highly variable nature of the receiving waters. In many situations the receiving waters are ephemeral creeks with dry or mostly dry creek beds during the summer and fall through the beginning of the wet season. These types of creeks may not have surface flow until soils have become sufficiently saturated. The beneficial uses of ephemeral creeks and creeks that are nearly ephemeral change through different seasons, and these varying beneficial uses would be expected to have different levels of sensitivity to municipal stormwater. It is highly problematic to assign an IWC for the continuously varying receiving waters. The draft Policy's proposed solution of just assigning the IWC to be 100% stormwater effluent for purposes of chronic toxicity testing is overly conservative.

Prescribed Minimum Amount of Chronic Toxicity Testing. The draft Policy requires Water Boards to establish toxicity monitoring programs when permits are issued, reissued, or reopened two years or more after the effective date of the Policy. These toxicity monitoring programs at a minimum must require municipal stormwater dischargers to conduct four chronic toxicity tests each year. One "chronic toxicity test shall use samples from the first storm event of the wet season; a second chronic toxicity test shall use samples from a subsequent wet season storm event; and the two remaining chronic toxicity tests shall use samples obtained during the dry season." (Part III, Section B.3 of draft Policy). If adopted this amount of chronic toxicity sample collection, testing, and reporting in San Mateo County is estimated to cost about $300,000 per year. This exorbitant and unnecessary expenditure would represent a new unfunded state mandate.

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[1] Porter-Cologne Water Quality Control Act § 13050. Definitions

[2] M. Kayhanian, C. Stransky, S. Bay, S.L. Lau, and M. Stenstrom. Toxicity of Urban Highway Runoff with Respect to Storm Duration. 2008. Science of the Total Environment 389: 386-406

The draft Policy's required chronic toxicity monitoring does not answer specific stormwater management questions that could lead to improved municipal stormwater management programs. A better use of US EPA's WET toxicity testing protocols would be for chronic toxicity testing of receiving waters rather than on transitory MS4 stormwater runoff.

Requiring very expensive chronic toxicity testing of dry weather non-stormwater discharges from MS4s is poorly conceived. Other than rising groundwater that in some locations may infiltrate the seams of storm drain culverts, the types of water commonly found in storm drain systems in the dry season are from potable water sources. These particularly transient sources of potable water do not merit this amount of testing, and it is inconsistent with the draft Policy's drinking water exceptions referenced in Part III, Section A.9.b as allowed by its inclusion in Part III, Section B.5.b.

A better model for creating an effective toxicity control program for stormwater is offered by the San Francisco Bay Regional Water Quality Control Board's Diazinon Water Quality Attainment Strategy (Attainment Strategy) and TMDL for Diazinon and Pesticide Related Toxicity in Urban Creeks. The Attainment Strategy and TMDL are incorporated into the San Francisco Bay Region's Basin Plan, and its implementation is included in the municipal regional stormwater permit (MRP) along with requirements for implementing other TMDLs and controlling pollutant of concern. The Water Quality Attainment Strategy is comprehensive and addresses the roles and responsibilities of numerous agencies that need to collaborate to prevent toxicity in local waterways. The Attainment Strategy efficiently focuses on measures to control the ubiquitous occurrence of toxicity in receiving waters associated with the use of pesticides[3].

The 76 copermittees covered by the MRP have used the option allowed by the MRP to form a regional monitoring coalition to meet the permit's monitoring requirements. This regional monitoring coalition is a cost effective way to implement the MRP's comprehensive monitoring requirements. These requirements consist of status monitoring of rotating watersheds and monitoring pollutants of concern to establish long term trends. The status monitoring includes monitoring of receiving waters and sediment toxicity. The MRP has triggers that, if exceeded, require the initiation of additional monitoring projects. The pollutants of concern and long-term trends monitoring is conducted to quantify the impacts of the MRP's management actions, and this monitoring also includes toxicity monitoring of both receiving waters and sediment. The MRP's monitoring requirements focus on using the results of toxicity testing and other monitoring results to evaluate the effectiveness of the MRP's required pollutant control actions and to identify where additional actions are needed. The overall result will be much more useful than what would be achieved by requiring each one of 76 copermittees to conduct chronic toxicity testing four times each year.

Compliance Schedules. The draft Policy would allow the use of compliance schedules "with the exception that the duration of the compliance schedule may not exceed two years from the date of permit issuance, reissuance, or reopener. Phase I and Phase II MS4 dischargers and individual industrial storm water dischargers with existing toxicity monitoring requirements are not eligible to receive a compliance schedule." (Section III.B.4 of draft Policy). MS4 dischargers that are implementing requirements from one or more TMDLs that are intended to correct the occurrence of toxicity in stormwater should be allowed the full implementation period contained in the TMDL for a compliance schedule to remedy the occurrence of toxicity.

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[3] The State Water Board's Summary of Toxicity in California Waters: 2001-2009 (November 2010) reports that 44 of 45 of the specific compounds shown to cause toxicity in water from California waterbodies were pesticides with half of the incidents caused by chlorpyrifos and diazinon, which EPA has banned for home use.

Technical Concerns. CASQA and CASA Tri-TAC have provided numerous substantive technical concerns with the proposed policy. Some of these concerns include the likelihood that there will be too many false positive testing results; the Test of Significant Toxicity (TST) approach has not been peer reviewed and included as an applicable test for NPDES permits in 40 CFR 136; and the proposed effect levels are arbitrary and set too low.

Requested Changes to Draft Policy

The following describes changes requested to the draft policy that will address the concerns listed.

1. **Draft toxicity water quality objective**. Clarify that the chronic toxicity water quality objective expressed by the formulaic null hypothesis testing of an effect level does not apply to MS4 discharges. Another option would be to develop a uniform narrative chronic toxicity water quality objective.

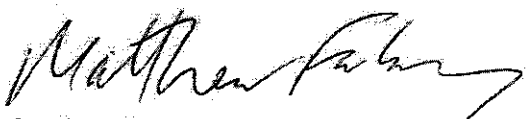
2. **Prescribed minimum amount of chronic toxicity testing.** Add an option that allows the minimum amount of chronic toxicity testing described in the draft Policy's Part III, Section B.3 could be substituted where a comprehensive multi-agency collaborative monitoring program has been required by a Water Board. Specifically cite in the Policy the approach used by the San Francisco Bay Regional Water Quality Control Board as an alternative approach that will be substituted for the minimum amount of chronic toxicity testing.

3. **Compliance schedules.** Allow the Water Boards the discretion to use longer compliance schedules where TMDLs for constituents and characteristics that affect toxicity are in the process of being implemented through NPDES permit requirements.

4. **Technical Issues.** Continue to work with stakeholder groups to assist the State Water Board staff to resolve the numerous technical issues posed by the draft Policy.

We appreciate your consideration of our comments. I can be reached at (415) 508-2134 or via email at mfabry@ci.brisbane.ca.us.

Sincerely,



Mathew Fabry, P.E.
Program Coordinator
San Mateo Countywide Water Pollution Prevention Program