



COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

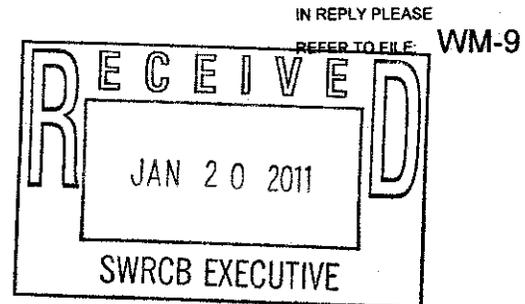
GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
<http://dpw.lacounty.gov>

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

January 20, 2011

Ms. Jeanine Townsend
Clerk to the Board
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812-0100



Dear Ms. Townsend:

COMMENT LETTER DRAFT POLICY FOR TOXICITY ASSESSMENT AND CONTROL

Thank you for the opportunity to comment on the State Water Resources Control Board's Draft Policy for Toxicity Assessment and Control. The enclosed comments are being submitted on behalf of County of Los Angeles and the Los Angeles County Flood Control District. We look forward to your consideration of these comments.

If you have any questions, please contact me at (626) 458-4300 or ghildeb@dpw.lacounty.gov or your staff may contact Ms. Rossana D'Antonio at (626) 458-4325 or rdanton@dpw.lacounty.gov.

Very truly yours,

GAIL FARBER
Director of Public Works

GARY HILDEBRAND
Assistant Deputy Director
Watershed Management Division

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**COMMENTS OF THE COUNTY OF LOS ANGELES AND THE LOS ANGELES
COUNTY FLOOD CONTROL DISTRICT ON THE PROPOSED TOXICITY
ASSESSMENT AND CONTROL POLICY**

On behalf of the County of Los Angeles and the Los Angeles County Flood Control District, the Los Angeles County Department of Public Works (LACDPW) has reviewed the *Draft Policy for Toxicity Assessment and Control* (Draft Policy) and associated *Staff Report* prepared by the staff of the State Water Resources Control Board (State Board). Based on our review and our extensive experience in toxicity monitoring, we have serious concerns regarding the Draft Policy and its potential impact on municipal stormwater programs statewide. In general, we believe the Draft Policy, if adopted in its current form, would significantly increase monitoring cost, expose permittees to unreasonable enforcement actions and citizen lawsuits, while doing little to achieve its stated goal of protecting aquatic life beneficial uses. We request that the Draft Policy be revised to reflect the complex nature of stormwater discharges including expressly barring the establishment of numeric effluent limitations for toxicity in stormwater permits. Our detailed comments are as follows:

- 1. The Draft Policy should address stormwater discharges separately from wastewater discharges;**
- 2. Toxicity numeric objectives must not be used as a compliance target for stormwater discharges;**
- 3. The Draft Policy's economic impact on stormwater dischargers must be evaluated.**
- 4. Chronic toxicity testing should not apply during wet weather events;**
- 5. Accelerated monitoring should not apply to wet weather samples;**
- 6. An alternative confirmatory testing program is needed to trigger accelerated monitoring and toxicity reduction evaluation for stormwater dischargers;**
- 7. The Draft Policy does not allow sufficient time for stormwater dischargers to develop toxicity reduction evaluation work plans;**
- 8. The Draft Policy should allow coordination between toxicity reduction evaluation and Total Maximum Daily Load efforts;**
- 9. Toxicity monitoring for stormwater dischargers should be conducted in the receiving water.**

Comment 1: The Draft Policy should address stormwater discharges separately from wastewater discharges.

Although Section B of the Draft Policy is intended to address stormwater discharges, it repeatedly references back to Section A, which addresses wastewater and point source discharges. The end result is a Draft Policy that essentially treats stormwater the same way as wastewater. Stormwater discharges differ from wastewater discharges in many aspects, including the extreme variability of stormwater compared to homogeneity of wastewater discharges. For example, any given Southern California rain storm can range from 0.01 inch to greater than 7 inches, resulting in a wide range of discharge volumes compared to the relatively constant and predictable discharge volume for wastewater.

In addition, the chemical composition of stormwater runoff is highly variable and dependent on the intensity, volume, and duration of the storm event, time between storm events, land use and coverage, anthropogenic activities in the area, and other topographic variability. As an example, observed total copper concentrations in Ballona Creek were found to range from 6 to 500 µg/L. Also, the toxicity statistical evaluation methods proposed in the Draft Policy are based on United States Environmental Protection Agency (USEPA) guidance (*National Pollutant Discharge Elimination System Test of Significant Toxicity Implementation Document*, 2010) developed through analysis of wastewater data. The guidance did not consider stormwater data.

Due to such significant differences between wastewater and stormwater discharges, and because stormwater data were not evaluated as part of the Draft Policy development, the stormwater portion (Section B) should be removed from the Draft Policy or otherwise rewritten to reflect the complexity of stormwater discharges.

Comment 2: Toxicity numeric objectives must not be used as a compliance target for stormwater discharges.

The Draft Policy states that it "is not intended to require the establishment of numeric effluent limitations for toxicity in permits for Phase I and Phase II municipal separate storm sewer systems (MS4) and individual industrial stormwater dischargers" but goes on to grant each Regional Water Quality Control Board (Water Board) "the discretion to apply numeric effluent limitations for toxicity" in these permits. Granting the Water Boards the discretion to apply numeric effluent limitations for toxicity is inappropriate especially when the Staff Report recognizes the significant difficulty associated with numeric effluent limit compliance for MS4 discharges. The Staff Report also reiterates the finding of the State Board's own expert panel that numeric effluent limits are infeasible for MS4 permits. As such and for reasons discussed below, we strongly urge that the Draft Policy be revised to expressly remove the authority for applicable Water Boards to apply numeric effluent limitations for toxicity in the stormwater permits, or

otherwise require Water Boards to first establish that compliance with numeric effluent limitations for toxicity is reasonably achievable before including them in a MS4 permit.

Toxicity monitoring is an effective tool for assessing potential toxicity to aquatic life in receiving waters and as a trigger for management action. However, toxicity is a poor compliance target for stormwater because the potential cause(s) of toxicity in stormwater continually change and is therefore difficult to identify and control. For example, identification of the causes of *Ceriodaphnia dubia* toxicity in the Chollas Creek Watershed required several years of investigation, which ultimately led to a statewide ban on Diazinon that took several more years to implement. Since the ban, organophosphorus pesticides such as Diazinon have been replaced with synthetic pyrethroids. Several years of work were necessary to develop accurate testing methods to detect synthetic pyrethroids in receiving waters and identify their toxic effects. A recent study found pyrethroid pesticides to be the primary cause of toxicity in the Ballona Creek Estuary. However, currently there are neither established standards for pyrethroid pesticides nor effective best management practices to address them. This example demonstrates the complexity associated with addressing stormwater toxicity and the impracticality of using toxicity as a compliance target. We strongly urge that the Draft Policy be revised to expressly remove the authority for applicable Water Boards to apply numeric effluent limitations for toxicity in the stormwater permits.

Comment 3: The economic impact of the Draft Policy on stormwater dischargers must be evaluated.

Appendix H, Section 5, page 2 of the Draft Policy (under *Stormwater Dischargers*) states that the economic impact of the Draft Policy for stormwater dischargers is "uncertain due to a lack of details on monitoring requirements and locations for individual municipalities." This statement does not satisfy California Water Code Section 13241(d), which requires an economic impact analysis as part of adopting statewide policies. To the extent that economic considerations were not taken into account, the development of the Policy fails to meet the Water Code requirements.

Toxicity monitoring requirements and their cost are readily available from MS4 permittees statewide who have been required to monitor toxicity in the receiving water for over a decade. This information also has been submitted to the State and can easily be used to compare the cost of toxicity monitoring using existing approach versus the approach being proposed in the Draft Policy. Based on our experience, the proposed 12-week accelerated monitoring program would cost an estimated \$20,000 per exceedance for sample collection and analysis. Applying the accelerated monitoring as proposed in the Draft Policy to our toxicity data for the past five years as shown in Table 1, the total cost of accelerated monitoring during that time would have been \$700,000.

The cost to conduct a toxicity reduction evaluation (TRE) is more difficult to estimate as we are not aware of a TRE conducted for stormwater discharges. However we know that a TRE conducted by an industrial facility cost in excess of \$100,000. Due to their

complexity, it is reasonable to expect to cost to conduct a TRE for stormwater discharges to be significantly higher.

It is imperative that the Draft Policy be revised to include a detailed economic impact analysis to stormwater dischargers pursuant to California Water Code Section 13241(d).

Table 1. Estimated annual cost to conduct accelerated monitoring.

Monitoring Year	Ceriodaphnia Chronic Reproduction "Fails"		Sea Urchin Chronic Fertilization "Fails"		Number of Accelerated Monitoring Triggered by the Draft Policy	Estimated Annual Cost of Accelerated Monitoring
	TST	Original Results	TST	Original Results		
2005	7	3	6	6	7	\$140,000
2006	5	0	10	9	10	\$200,000
2007	4	1	12	12	12	\$240,000
2008	3	1	6	5	6	\$120,000
2009	no fails	no fails	no fails	no fails	0	\$0
Total					35	\$700,000

Comment 4: Chronic toxicity testing should not apply during wet weather events.

The Draft Policy recommends chronic toxicity testing for MS4 compliance monitoring and reasonable potential analysis to be conducted for both wet and dry weather events at the Regional Boards' discretion. This is the same procedure as that for wastewater discharges and does not take into account the complexities in stormwater discharges.

Per the USEPA's *Short-term methods for estimating the chronic toxicity of effluents and receiving waters to freshwater organisms* (1994) and *Short-term methods for estimating the chronic toxicity of effluents and receiving waters to west coast marine and estuarine organisms* (1995), chronic tests require an exposure of test organisms to water samples for a period of up to seven days (e.g., *Ceriodaphnia dubia* reproduction), typically with multiple (two to four) renewals. On the other hand, Southern California storm events have a typical duration of less than 12 hours. Therefore, chronic toxicity tests and water quality objectives should not apply to stormwater during wet weather events. If necessary, acute toxicity tests with short-exposure duration (e.g., 24 to 48-hours) would be more representative of wet weather conditions.

Comment 5: Accelerated monitoring should not apply to wet weather samples.

The Draft Policy requires six accelerated samplings over a 12-week period following each failed test during routine toxicity monitoring. This is the same procedure as that for wastewater discharges and does not take into account the complexities in stormwater discharges. Unlike for wastewater, a 12-week accelerated monitoring program is unreasonable for episodic discharges such as wet weather events. This is

because if toxicity is observed during wet weather, sample collections for a subsequent accelerated monitoring program would likely occur during non-storm or dry weather conditions. Given that conditions in receiving waters during wet weather differ from those during dry weather, conducting accelerated monitoring for 12 weeks following a wet weather event would not provide meaningful results and would place an unnecessary financial burden on stormwater dischargers. For example, Southern California Coastal Water Research Project found that in the San Gabriel River, no toxicity to *Ceriodaphnia dubia* was observed during wet weather conditions; however, 19 percent of the samples exhibited toxicity during dry conditions (*Wet and Dry Weather Toxicity in the San Gabriel River*, 2006). The Draft Policy should be revised so accelerated monitoring does not apply to wet weather samples.

Comment 6: An alternative confirmatory testing program is needed to trigger accelerated monitoring and TRE for stormwater dischargers.

The proposed trigger for a comprehensive TRE in the Draft Policy is a failure during toxicity monitoring followed by a failure of any one of six accelerated monitoring tests. Again, due to the complexity and variability of stormwater, accelerated monitoring is not an appropriate TRE trigger for the current stormwater dischargers, particularly for wet weather events. The current Los Angeles County MS4 permit provides a more reasonable approach, employing a step-wise progression from a failed initial test, to a Phase I toxicity identification evaluation (TIE), and potentially a TRE, including recommendations for Best Management Practices (BMPs), only after three TIEs identify the same causative agent at the same sample location. The Draft Policy should be revised to use this TRE Trigger for stormwater dischargers during wet weather.

During dry weather, the Draft Policy should be revised to use two consecutive failures (i.e., a monitoring sample and a subsequent confirmatory sample) as a trigger to initiate the accelerated monitoring, where a passing test on the confirmatory sample would put a discharger back on the regular schedule. Two or more failures out of the six accelerated monitoring tests could be defined as necessary to trigger a TRE. By comparison, the San Diego County MS4 permit requires that two out of three samples exhibit toxicity before a TIE is conducted.

Finally, in consideration of the significant amount of time and resources required to conduct a TRE, the Draft Policy should be revised to limit the number of TREs a permittee is required to initiate in each permit cycle.

Comment 7: The Draft Policy does not allow sufficient time for stormwater dischargers to develop toxicity reduction evaluation work plans.

A 30-day schedule to submit a TRE work plan is impracticable for stormwater dischargers. The Draft Policy requires that a TRE work plan include "the roles and responsibilities of the TRE team; a complete list of data to be analyzed; a detailed outline of the proposed actions to address and resolve toxicity; and a schedule for conducting the TRE and reporting progress to the applicable Water Board. (p. 11)" The

process for the work plan seems very similar to Total Maximum Daily Load (TMDL) implementation planning which typically take years to complete.

We recommend that the schedule to submit a TRE work plan for stormwater dischargers be changed to one year at minimum to be more consistent with similar programs such as TMDL implementation planning.

Comment 8: The Draft Policy should allow coordination between TRE and TMDL efforts.

Most water bodies in the Los Angeles Region either already have a TMDL or are expected to have a TMDL in the near future. Some of the pollutants that these TMDLs address could potentially be the cause of toxicity. Implementation of these TMDLs typically takes 10-20 years as is the case for the Marina del Rey Harbor toxics TMDL, Los Angeles River Metals TMDL, and the Ports of Los Angeles and Long Beach Toxics TMDL. In situations where a TRE identifies a pollutant that is part of a TMDL for that water body, it is logical that the TRE implementation and associated BMP recommendations should correspond to the TMDL implementation/compliance schedule. The Draft Policy should be revised to encourage coordination between TRE and TMDL implementation efforts.

Comment 9: Toxicity monitoring for stormwater dischargers should be conducted in the receiving water.

The Draft Policy does not specify whether toxicity monitoring will be conducted in the receiving water or at the end-of-pipe. The toxicity monitoring under the current Los Angeles County MS4 permit is conducted in the receiving water, as is the case for all MS4 permits in California. The purpose of toxicity monitoring is to protect the aquatic life in the receiving water, therefore, toxicity tests for stormwater should account for dilution effect and should be conducted in the receiving water. We request that the Draft Policy be revised to specify that toxicity monitoring for stormwater discharges is conducted in the receiving water.