



Heal the Bay

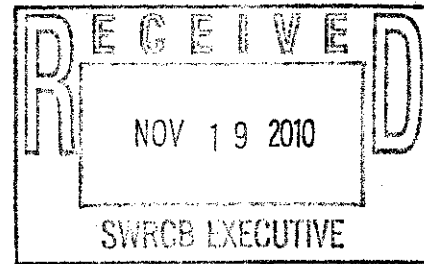
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November 19, 2010

Chairman Charles R. Hoppin and Board Members  
State Water Resources Control Board  
1101 I Street, 24th Floor  
Sacramento, CA 95814  
Sent Via Email [commentletters@waterboard.ca.gov]



**Re: Comment Letter – draft framework for assessing the effectiveness of the Phase I Municipal Separate Storm Sewer System (MS4s) program (“Effectiveness Assessment Document”)**

Dear Chair Hoppin and Board Members:

On behalf of Heal the Bay, we submit the following comments on the draft framework for assessing the effectiveness of the Phase I Municipal Separate Storm Sewer System (MS4s) program (“Effectiveness Assessment Document” or “Assessment Document”). We appreciate the opportunity to provide these comments.

In general, we strongly support the use of measurable targets, performance standards and other metrics in assessing the effectiveness of stormwater programs. Current MS4 permits have clearly not been fully effective given the hundreds of waterbodies impaired due to stormwater discharges, and it is critical that permits and programs be evaluated before ineffective permits are reissued. The most critical metric in ensuring effectiveness of a stormwater program is that water quality standards are attained.

As a member of the State Water Board’s Stormwater Advisory Task Force, we participated in meetings and discussions regarding this document. There are several positive elements included as a result of the input from Task Force members. For instance, we strongly support the inclusion of “Design Standards for Structural Controls” within the “Guidance for MS4 Monitoring Program Design” section. One of the most effective ways to ensure the success of stormwater programs and the attainment of water quality standards is to require performance-based criteria. Flow based design criteria are simply not adequate to ensure that water quality standards are consistently met because flow, and corresponding BMP size, is but one factor determining BMP effectiveness. We also strongly support the inclusion of core monitoring elements in the section “Considerations for Receiving Water Assessment.” Although as we describe below, more detail is necessary to ensure proper program assessment.

As an overarching comment, we are concerned that the document is not “user-friendly” and contains more conceptual thoughts than concrete actions and suggestions for permit writers to ensure the stormwater programs are effective. We suggest that the State Board include additional concrete measureable targets and metrics in the Assessment Document.



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At a minimum, several sections should be strengthened to ensure that the document fulfills the goals outlined in AB 739 and actually moves the state forward in water quality standards attainment. The specific concerns are outlined below.

**The goal of the Assessment Document should be expanded.**

The stated purpose of the Assessment Document is to "... assist the State Water Board and Regional Water Boards in establishing effectiveness assessment requirements in municipal storm water permits and programs." This goal should be expanded to suggest that it also serve as a tool for the State Board and regional boards to use in self-evaluation of their regulatory program implementation. For example, has the regional board inspected the MS4 appropriately and has enforcement been pursued on chronic violations? These are questions that the agency must ask itself.

In addition, State Board should make clear that, while the Assessment Document serves as "guidance" to permit writers, many of the elements such as monitoring requirements are critical (and some legally required) in order to move the stormwater program forward and should become standard in MS4 permits.

**State Board should include additional detail regarding receiving water and outfall monitoring.**

The Assessment Document appropriately identifies outfall monitoring, mass emission monitoring, receiving water monitoring, bioassessment monitoring, toxicity monitoring and beach water quality monitoring as important components in evaluating program effectiveness. Without proper monitoring, the regional board will not know if water quality standards are truly attained and therefore will not know the effectiveness of the stormwater program. Although the document is "guidance", the State Board should go a step further and highly recommend that these monitoring elements are included in all MS4 permits.

As required in SB72 (Kuehl), minimum monitoring requirements should be conducted by each MS4 permittee. Despite the fact that this law was approved over a decade ago, the State Board has not developed these minimum monitoring requirements to date; therefore in the meantime, Permit writers should consider the following monitoring program elements, at a minimum, in order to properly assess pollutant concentrations over time and ensure that storm water dischargers do not cause or contribute to violations of water quality standards:

- **Mass Emission Monitoring.** A minimum of four monitoring events should occur each year at mass emission stations (3 storm events and 1 dry season event). Each mass emission station should at a minimum be analyzed for pathogen indicators, hardness, pH, temperature, DO, TSS, TDS, nutrients and all California Toxics Rule (CTR) Priority Pollutants.
- **Outfall Monitoring.** A minimum of four monitoring events should occur each year at outfall monitoring locations (3 storm events and 1 dry season event). Each



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outfall monitoring station should at a minimum be analyzed for pathogen indicators, hardness, pH, temperature, DO, TSS, TDS, nutrients, total metals (Cd, Cr, Cu, Pb, Ni, Zn, Hg), semi-volatile organics, and pesticides. At a minimum, enough outfalls should be monitored to capture runoff from over 50% of the urbanized drainage area that discharges to receiving waters. A representative area that contains land uses that contribute greatest to pollutant loads (industry, transportation and commerce) should be included.

- **Receiving Water Monitoring.** A minimum of four monitoring events should occur each year at receiving water monitoring locations (3 storm events and 1 dry season event). Each receiving water monitoring station should at a minimum be analyzed for pathogen indicators, hardness, pH, temperature, DO, TSS, TDS, nutrients, total metals (Cd, Cr, Cu, Pb, Ni, Zn, Hg), semi-volatile organics, and pesticides.
- **Toxicity Monitoring.** Both outfalls and receiving water monitoring locations should be monitored for chronic and acute toxicity at a minimum of four monitoring events each year (3 storm events and 1 dry season event). In the event toxicity is found, the excess sample volume should go through a Toxicity Identification Evaluation. Identifying the cause of toxicity is critical for effective stormwater management responses.
- **Beach Water Quality Monitoring.** Beach bacteria indicator monitoring should be conducted at least on a weekly, year-round basis at beaches that have a stormwater outfall. In many cases local health agencies already conduct this monitoring, so the MS4 can coordinate with local agencies and utilize these existing datasets when available.

In the event that stormwater causes or contributes to receiving water standards exceedances, the municipality must immediately develop and implement an action plan to identify and abate the sources of contaminants to receiving waters. This should include a complete evaluation of the current program. Also the regional board should move forward with compliance assurance actions.

### **Low Impact Development**

The Assessment Document correctly asserts that "...the capability of a storm water program to ensure that LID features and facilities are thoroughly incorporated in the early planning of development and redevelopment projects and are properly designed and constructed is of great consequence to this aspect of the program's overall effectiveness." Low Impact Development is a critical component of stormwater management and should be included with quantitative standards in all MS4 permits. These permit requirements must be above and beyond SUSMP. Regional boards have begun to incorporate LID requirements into recent MS4s (i.e. Ventura County MS4) and this should become standard practice.



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The Assessment Document should include additional detail regarding key components of successful LID strategies in MS4 programs. First, retention standards are a key to any effective program. Also, effective LID programs account for at least the SUSMP storm (85th percentile 24-hour runoff event or volume from 3/4 inch storm). Without ensuring that LID BMPs have the capacity to handle the design storm, they could simply overflow into the storm sewer system without infiltration or capture.

Ultimately water quality standards being met is the key metric for LID as well as the entire stormwater program. Also effectiveness of a local stormwater program in implementing LID can be assessed by reviewing the planning, design, and construction of recently approved land development and re-development projects early in the design process and having Permittees calculate the effective impervious areas for each development and re-development project. A measure of success for a LID program is the surface area rendered "ineffective". Scientific analyses have demonstrated that the threshold for negative effects on streams in semi-arid regions of California is 2-3% EIA.<sup>1</sup> Also we have seen a movement towards requiring the infiltration and capture of 100% of the SUSMP storm, which is another effective option. These characteristics of LID requirements are critical to an effective stormwater program and should be specified.

### Miscellaneous

- The beach water quality monitoring is defined as "...monitoring of receiving waters adjacent to beaches that have a high number of daily users." It is critical that all beaches influenced by stormwater are monitored, regardless of the number of users. Public health is compromised regardless of the popularity of a beach. Thus, this phrase should be deleted.

If you have any questions, please contact us at 310-451-1500.

Sincerely,

Kirsten James  
Water Quality Director

Mark Gold, D. Env  
President

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<sup>1</sup> Horner, Richard. "Investigation of the Feasibility and benefits of Low Impact Site Design Practices for Ventura County." (2007). Report at A-1 to A-2.