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October 24, 2011

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814
commentletters@waterboards.ca.gov

RE: Comment Letter – Amendments to the California Ocean Plan Regarding Model
Monitoring, Control of Commercial Vessel Discharges and Invasive Species, and Non-
Substantive Administrative Changes

Dear Ms. Townsend:


The California Department of Transportation (Caltrans) appreciates the opportunity to comment on the issues relevant to the proposed California Ocean Plan amendments related to model monitoring (Issue 1) and the Draft Substitute Environmental Documentation for proposed amendments. Caltrans highways State Route 1 (SR-1), State Route 101 (SR-101), and Interstate 5 are located along the California coast. They have been serving the public interest by providing mobility across California for the traveling public, facilitating the movement of goods and services, and are the primary (or only available) access to many coastal communities since the 1930s. Caltrans is concerned about the scope of the proposed amendments and their organization, how the monitoring requirements are related to monitoring associated with the Marine Protected Areas, regional monitoring, and the cost estimate.

Caltrans is also concerned that the monitoring will trigger provisions in MS4 permits regarding exceedances of water quality standards. Based on recent court decisions, these provisions will be interpreted as placing dischargers in non-compliance with the permits based on the proposed monitoring.

Our specific comments are attached. If you have any questions, please contact me at (916) 653-4446, or Keith Jones at (916) 653-4947.

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Sincerely,



G. SCOTT McGOWEN, P.E.
Chief Environmental Engineer
Division of Environmental Analysis
California Department of Transportation

Attachment

C: Vicky Whitney, Deputy Director, State Water Board
Bruce Fujimoto, Chief – Stormwater State Water Board
Keith Jones, Caltrans
Joyce Brenner, Caltrans

ATTACHMENT

Comments on Appendix III Standard Monitoring Procedures

General Comment

Appendix III Standard Monitoring Procedures (the draft policy) primarily focuses on establishing a monitoring strategy/framework to answer some fundamental questions regarding the state of the ocean and the impacts of stormwater discharges on the ocean, rather than on actual standard monitoring procedures. The appendix would greatly benefit in being reorganized to more clearly define the overarching questions being proposed and describing a progressive monitoring strategy (e.g., ocean monitoring to outfall monitoring to source tracking monitoring) to answer the study questions. There is confusion currently since some areas have already characterized the conditions of the ocean where the outfall occurs, while other areas are just beginning the process.

Specific Comments

1. Increased exposure to enforcement action – These proposed amendments will significantly increase effluent and receiving water monitoring. By so doing, these amendments will place MS4 permittees in jeopardy of not complying with their NPDES permits based of recent court interpretations of MS4 permit provisions.

MS4 permits typically contain a discharge prohibition stating:

Discharges from MS4s that cause or contribute to the violation of water quality standards are prohibited.

The MS4 permit Receiving Water Limitation may also contain an equivalent prohibition. Most of these permits contain a later permit provision stating that exceedances of water quality standards are to be addressed by an iterative process of improving best management practices (BMP).

In the past, this *iterative process* was considered by many, if not most, municipal stormwater systems (and possibly some Regional Water Boards¹) as presenting a shield against enforcement: if the MS4 was implementing the iterative process in response to detected exceedances, then the MS4 remained in compliance with the permit. However, the recent 9th Circuit Court of Appeals opinion

¹ "Even if water quality does not improve as a result of the implementation efforts, there is no violation of the permit's receiving water provision as long as a good faith effort is underway to participate in the iterative process." Los Angeles Regional Water Board letter and Q&A posted [here](#).

in NRDC vs. Los Angeles County Flood Control District, July 13, 2011, and the preceding trial court opinion appear to conclude that the iterative process is not a shield.² That is, the prohibition stands by itself and the discharge must comply with standards at all times or be in non-compliance with the permit. Thus stormwater system discharges cannot at any time cause or contribute to an exceedance of standards without a resulting permit violation. The Los Angeles Regional Water Board's amicus brief in this case also emphasizes that the prohibition stands alone and the iterative process is not a shield.

Caltrans and most other MS4 permittees are already implementing stormwater measures to control pollutants to the *maximum extent practicable* (MEP). Even advanced treatment, such as multi-media filters, cannot ensure compliance with water quality standards.³

The self-reported exceedances required by this proposed program will place the Water Boards or 3rd parties in an immediate position to bring suit to enforce the terms of the Permit. However, the dischargers have no feasible near or medium term pathway to come into compliance and will remain in apparent non-compliance.

Recommendation – Caltrans requests that adoption of the model monitoring amendment be postponed until the Water Boards have been able to modify the existing MS4 permits so that the monitoring program does not place all dischargers in immediate non-compliance.

2. Monitoring Questions

The stated goal of the monitoring effort, as noted in the second sentence of the Introduction section, is that “monitoring should be question-driven rather than just gathering data.” The draft policy then goes to great length to establish a number of questions that will guide the monitoring effort. The draft policy also specifies a monitoring program to support these questions. While in concept this is a reasonable approach and consistent with other stormwater monitoring programs⁴ the proposed monitoring program has little relationship to the stated questions.

As an example, Section 4.2 Storm Water, lists the questions to be addressed for indicator bacteria and it states

4.2. Storm Water

Primary questions to be addressed:

1. Does the receiving water comply with water quality standards?

² The revised opinion by the U.S. 9th Circuit Court of Appeals regarding the LA County stormwater permit is posted [here](#).

³ See UCSD report on San Diego/Scripps ASBS discharges; table 3-10, pages 29, 30, posted [here](#)

⁴ Model Monitoring Program for MS4s in Southern California, Stormwater Monitoring Coalition, August 2004.

2. Is the condition of the receiving water protective of contact recreation and shellfish harvesting beneficial uses?
3. What is the extent and magnitude of current or potential receiving water indicator bacteria problems from storm water runoff?
4. Are the indicator bacteria levels in receiving water getting better or worse?
5. What are the sources of indicator bacteria in runoff?
6. What is the relative runoff contribution to the receiving water indicator bacteria wasteload?

To answer these questions, core monitoring for indicator bacteria shall be required periodically on storm water discharges representative of the area of concern. At a minimum, for municipal storm water discharges, all receiving water at outfalls greater than 36 inches in diameter or width must be monitored (ankle depth, point zero) at the following frequencies:

- a. During wet weather with a minimum of three storms per year, and
- b. When flowing during dry weather, and if located at an AB 411 beach, at least five times per month. (An AB 411 Beach is defined as a beach visited by more than 50,000 people annually and located on an area adjacent to a storm drain that flows in the summer. [Health and Safety Code §115880])

A closer review of this section clearly indicates that the proposed monitoring effort will address only a few of the questions being proposed. As an example, how does monitoring receiving water assist in answering questions about the outfall (questions 3, 5 and 6)? This pattern of disconnect between questions and monitoring is found throughout the document. The proposed monitoring effort does not correlate with the monitoring questions. Thus as guidance, the document provides limited insights and actually adds confusion as to what is being required. Are the monitoring questions more relevant than the proposed monitoring requirements or vice versa?

More importantly, a research project will be required to answer the questions being proposed for each pollutant. Fundamentally, the draft policy is overreaching in its scope. The draft policy attempts to encompass all efforts at once and then leaves it to the Regional Boards to sift through the competing requirements. As a result, this complexity creates an opportunity for the Regional Board to specify expensive experiments without consideration of costs and benefits. The State Board should decide what questions should be focused on initially (e.g., are water quality standards being complied with in the receiving water near stormwater outfalls) and allow a logical, progressive approach to address issues as they arrive from the initial monitoring effort (e.g., if water quality standards are being exceeded, to what extent).

In addition to the disconnect between question-driven monitoring and the proposed monitoring requirements, the current draft policy is confusing and contradictory as to the monitoring specifics (e.g., monitoring locations). Referring to the example from section 4.2 above, a closer examination of this language shows a contradiction. The first sentence (“...core monitoring for indicator bacteria

shall be required periodically on storm water discharges representative of the area of concern.”) states that the discharges will be monitored (i.e., outfalls). Conversely, the second sentence (“At a minimum, for municipal storm water discharges, all receiving water at outfalls greater than 36 inches in diameter or width must be monitored.”) states monitoring will occur in the receiving water. In addition, the amendment does not exclude stream crossings of any type (i.e., bridges, culverts, etc.) from its definition of outfalls for the purposes of this monitoring program.

The California Department of Fish and Game is in the process of establishing Marine Protected Areas as required by the Marine Life Protection Act. As a part of the non-substantive changes in Issue 3, the Ocean Plan amendments incorporate maps identifying the locations of the Marine Protected Areas into the Ocean Plan. However, the model monitoring amendments in Issue 2 do not describe how the monitoring to comply with the Marine Life Protection Act is integrated or related to the monitoring being requested by the model monitoring amendments. The monitoring required as proposed by the Ocean Plan amendments is already in addition to what is required by discharge permits, and the Marine Life Protection Act’s required monitoring that is not yet determined will be in addition to this monitoring based on available information. In order to maximize the use and efficiency of limited financial resources, the Ocean Plan amendments should be revised to clarify that the monitoring conducted for discharge permits and the Ocean Plan can also be submitted to meet the requirements of the Marine Life Protection Act.

Caltrans requests the draft policy be revised to clearly state the specifics of the monitoring effort (especially location) and to clarify the relationship between the proposed Marine Protected Areas and the monitoring framework. In addition, clarify that stream crossings of any type (i.e., bridges, culverts, etc.) are not defined as outfalls for this monitoring program.

3. Monitoring Requirements

The following table attempts to summarize the monitoring requirements and highlights inconsistencies in the policy. A similar table, once populated, would greatly assist agencies and the Regional Board in developing their ocean monitoring programs.

Summary of Stormwater Monitoring Requirements

Descriptor	Bacteria	Chemical	Sediment	Toxicity	Bio-accumulation	Receiving Water
Location	Not clear whether it is outfalls or receiving water	10% of outfalls $\geq 36"$	Around outfalls (not specified), unknown number of outfalls	10% of outfalls $\geq 36"$ and receiving water	Not specified	Receiving water at 10% of outfalls
Frequency	<ul style="list-style-type: none"> • 3 wet weather events/year • For AB411 beaches 5 dry weather events per month 	1x/year	1x/permit term	1x/year	1x/permit term (for Phase 1 MS4 only)	1x/year
Size	See comment above about location	Outfalls $\geq 36"$	See comment above about location	Outfalls $\geq 36"$	Not specified	Not specified
Constituents	<i>E. Coli</i> , Enterococci, Total and fecal coliform	TSS, O&G, TOC, pH, temp., BOD, turbidity, Table 1 metals, PAHs, Pesticides	Acid volatile sulfides, OP Pesticides, Table 1 metals,	Table 1 ^a Acute and Chronic toxicity	OP Pesticides, Table 1 metals, PAHs, chlorinated hydrocarbons, pyrethroids	Turbidity, color, DO, pH, nitrate, phosphate, ammonia

a. Table 1 refers to Table B in the current Ocean Plan.

4. Regional Monitoring

The draft policy attempts to set up a policy that would encourage regional monitoring. Such encouragement is welcomed. However, if a discharger chooses not to participate in a regional program (or there is not a regional program available to participate in), then there should be some flexibility built into the policy that allows the Regional Board and discharger to design a monitoring program that meets the scope and ability of the discharger to participate. In other words, there should be some provisions that allow the discharger and Regional Board to reduce the components of a monitoring program if applicable to reflect the size of the tributary area and land use. As currently drafted, the policy requires mandatory monitoring for all constituents.

Caltrans requests the draft policy be revised to prioritize and limit the initial monitoring effort to receiving water monitoring only. The draft policy should also be revised to describe a sequential process for assessing the impacts of stormwater on the receiving waters, similar to the process used with the SMC model stormwater monitoring program. A summary table should be prepared that more clearly defines the proposed monitoring program for each type of discharge and pollutant.

5. Cost Estimate

Another issue is the Staff Report cost estimate for the proposed monitoring program. Our review of the assumptions would indicate that the Board staff did not include the labor for mobilizing crews, collecting the samples, and compiling the data. Rather the cost estimate appears to only include the analytical costs. Most, if not all, stormwater dischargers will need to either retain outside contracting services or redirect their own existing staff to mobilize and collect the samples. This cost does not appear to be accounted for in the Staff report. As an example, the cost for the bacteria is shown as \$90 per sample, which marginally covers the analytical cost for *E. coli*, and fecal and total coliform. Thus, the cost estimate in Table 2 appears to significantly underestimate the actual program costs.

Caltrans requests the draft policy be revised to include costs that are reasonable for Caltrans and other MS4s to comply with the proposed monitoring framework. The cost estimate should be revised to include the labor cost for mobilizing field crews, collecting samples, and compiling the data.

6. Excessive monitoring

Caltrans is concerned that the monitoring program goes far beyond what is necessary for NPDES compliance for MS4 permits. This unnecessarily adds costs and complexity. For comparison, the USEPA recently reissued the MS4 permit for Washington DC.⁵ This permit requires effluent monitoring to address waste load allocations for TMDLs. Monitoring is required for only 9 parameters at 6 outfall locations in the entire city. These parameters are TSS, nitrogen, phosphorous, zinc, copper, lead, cadmium, *E. coli.*, and trash. The permit has a narrative requirement for receiving water assessment.⁶

The proposed Ocean Plan model program includes many more parameters and they are required regardless of TMDL allocations. Presumably, TMDL monitoring would be additive to the model program. Justification should be provided for going beyond the monitoring required to implement TMDLs. If the model program continues to include effluent monitoring beyond that based on TMDLs, justification should be provided for the following:

- Hexavalent chromium – The Table B instantaneous criterion is for hexavalent Cr., however, total chromium is generally monitored. Total Cr sometimes is found at levels

⁵ The USEPA Region III permit for Washington DC is posted [here](#).

⁶ “Evaluate the health of the receiving waters, to include biological and physical indicators such as macro-invertebrates and geomorphologic factors. Number of samples, frequencies and locations must be adequate to ensure data are statistically significant and interpretable for long-term trend purposes (not variation among individual years or seasons)”

exceeding the hexavalent Cr criterion. However, the possibility of Cr6 being found at levels of concern is low.

- Arsenic, selenium – if these are included as metals (rather than metalloids), they are typically not present at levels of concern in stormwater.
- Biochemical oxygen demand (BOD) and total organic carbon (TOC) are not normally significant in stormwater.
- Oil & Grease – Oil and grease are almost always below levels of concern based on comparison with effluent limits for other dischargers such as POTWs.
- pH – The ocean is well buffered and it is unlikely that stormwater pH will provide significant information.
- Temperature – Discharges are typically buoyant because they are freshwater and less dense. They will tend to float on the saltwater until mixed. It is not clear what value is provided by measuring temperature.

Similarly, why would receiving water monitoring include pH, nitrate, phosphate, and ammonia? These parameters are not of concern except in very rare circumstances. Dissolved oxygen, would also not be of concern except perhaps in dead-end sloughs or similar locations.

As discussed above, Caltrans requests that effluent monitoring be eliminated unless necessary to support TMDL implementation. All monitoring should be based on pollutants of concern to stormwater and should take into account site-specific needs. For example, the monitoring needs for an enclosed rocky shoreline are very different from an open sandy shoreline with strong currents. Monitoring for non-POCs should be eliminated unless a specific need is identified.

7. Inconsistency with other California MS4 monitoring including the Small MS4 permit

It is not clear why the monitoring for the ocean should differ so substantially from the monitoring required for inland waters, including bays and estuaries. In general, inland waters are more susceptible to adverse effects from pollutants because of limited or no dilution. The proposed Small MS4 permit, for example, does not include effluent monitoring. Many Phase I MS4 permits similarly do not include effluent monitoring (see the Bay Area Municipal Regional Permit⁷). Why would stormwater discharged to the ocean require extensive effluent (discharge) monitoring but not stormwater discharged to San Francisco Bay? Why would acid volatile sulfides, for example, be monitored in ocean sediments, generally subject to significant currents, but not in inland waters? Another question concerns compatibility with the proposed Policy for Toxicity Assessment and Control.⁸ Will the

⁷ Municipal Regional Stormwater NPDES Permit , Order R2-2009-0074, NPDES No. CAS612008
October 14, 2009, posted [here](#)

⁸ Draft Policy for Toxicity Assessment and Control, posted [here](#)

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Ocean Plan toxicity monitoring and required response be the same as the Policy's "Section B. Storm Water Dischargers Regulated Pursuant to NPDES Permits"?

Caltrans requests that statewide consistency be maintained within the MS4 program to the extent possible. It does not make sense to require a more intensive ocean monitoring program – particularly for pollutants *not* of concern – in contrast to monitoring requirements for inland waters, including bays and estuaries. In addition, toxicity monitoring for the ocean should be consistent with the Toxicity Policy when it is adopted.

Reference: [Proposed Amendments](#) to the California [Ocean Plan](#)