



Heal the Bay

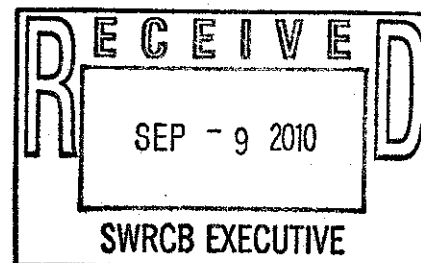
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September 9, 2010

Chair Hoppin and Board Members
State Water Resources Control Board
1001 I Street, 15th Floor
Sacramento, CA 95814
[Sent via email to commentletters@waterboards.ca.gov]



Re: Ocean Plan Triennial Review

Dear Chair Hoppin and Board Members,

On behalf of Heal the Bay, we submit the following comments on the Ocean Plan Triennial Review. We also incorporate by reference the comment letter submitted by the California Coastkeeper Alliance. Of note, the Public Notice mentions proposed amendments being considered by staff, but we were unable to find any such information on the State Board's website. Thus, we limit our comments to issues that we think are critical for the State Board to consider during this triennial review. We appreciate the opportunity to provide these comments.

The triennial review process for the Ocean Plan is critical to ensuring the health and vitality of California's coastal and marine ecosystems. In particular, we believe that amendments should be considered to include a numeric trash limit to ensure that marine life is not impacted by trash pollution. In addition, we urge the State Board to consider clarifications to the water contact standards and monitoring sections to ensure that human health is protected. These suggested amendments and others are discussed in detail below.

A Numeric Water Quality Objective should be added for Trash

The Ocean Plan should include a numeric water quality objective of "zero" for trash. Zero trash discharge is the only suitable limit for trash. Even small quantities of trash violate the Clean Water Act and Basin Plan requirements. Trash significantly impairs beneficial uses in the ocean. For instance, small amounts of trash can maim or kill wildlife that becomes entangled in, or ingests, the debris.

The Los Angeles Regional Board acknowledged that the zero trash discharge limit was appropriate when they adopted the original LA River Trash TMDL in 2001. Nine trash TMDLs have been adopted since that time with the same numeric limit. Plainly, a zero trash limit is the only water quality objective that will guarantee protection of the beneficial uses of the ocean environment with an appropriate margin of safety.

The Conversion from *E. coli* to fecal coliform should be Explicitly Discussed

There are a number of public agencies who monitor coastal water quality using a defined substrate test (Colilert®) by IDEXX Laboratories, Inc, to measure the amount of total coliform and *E. coli* bacteria in marine waters. Colilert® is US EPA-approved and is included in Standard



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Methods for Examination of Water and Wastewater. The total coliform numbers derived from this testing method are easily comparable to the standards listed in the Ocean Plan. However, the *E. coli* results from this method are impossible to compare to the Ocean Plan standards due to the 'conversion variability'.

Given that *E. coli* is a subset species of fecal coliform, measuring for *E. coli* captures only a fraction of all fecal coliform bacteria. As such, a conversion from *E. coli* to fecal coliform needs to occur before comparing the results to marine water quality standards. The problem is the absence of a standardized conversion value. Historically, a ratio value of 0.8 was used in determining the amount of *E. coli* in fecal coliform for marine waters. As such, using the 0.8 ratio value for marine waters would allow the conversion of an *E. coli* single sample value of 320 to be converted to a fecal coliform value of 400. Yet, there were never any studies or literature to support the use of this arbitrary number. In freshwater, the literature states that this ratio value can range from 0.5 to 0.95.

Unfortunately, the lack of a standardized conversion value, or criteria for determining a conversion value, has enabled public agencies to take advantage of this short-coming by applying a straight one-to-one ratio value. As such, an *E. coli* value of 320 is converted into a fecal coliform value of 320. By using the one-to-one ratio, the fecal coliform is underestimated and public health is unnecessarily placed at risk.

We recommend that the State explicitly state in the Ocean Plan one of three options to reconcile this mathematical shortcoming:

- Require all public agencies to measure fecal coliform instead of *E. coli* when monitoring coastal water quality; or
- Require all labs using Colilert® for marine waters to determine a conversion value for converting *E. coli* to fecal coliform--must provide rationale (data on lab or site variability) for determining conversion value; or
- Codify and Standardize the conversion value of .8 for converting *E. coli* to fecal coliform-- until more studies have been completed, before modifying the conversion value.

The Water Contact Recreation Section should be Clarified

There are two clarifications that are needed for the water contact recreation sections of the Ocean Plan. The Ocean Plan provides water-contact standards based on a "30-day geometric mean". The State Board should clarify that this is a "rolling" 30-day geometric mean. We think this is the intent, as a later section of the Ocean Plan states that "[t]he geometric mean shall be calculated using the five most recent sample results." However, this should be clarified throughout the Ocean Plan. A rolling 30-day geometric mean, rather than a calendar month average, allows for tracking and investigation of changes in recent water quality. From a compliance perspective, it is extremely important that a 30-day geometric mean be calculated and compared to objectives on a weekly basis so poor water quality trends can be addressed in a timely manner. Exceedances should not be disregarded simply because we turn over the month in our calendars. Unfortunately, we've seen permits that rely on a calendar month geometric mean rather than the more protective 30 day rolling geometric mean. Clarification in the Ocean Plan will ensure a consistent approach to protecting recreational water contact beneficial uses.



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The second issue is that the water contact standards implementation section requires that “[w]eekly samples shall be collected from each site” without any further discussion. The State Board should clarify that weekly samples are the *minimum* requirement and that they should be collected on a year-round basis. In California beach-goers recreate frequently and on a year-round basis. Thus the State Board must ensure that monitoring is sufficient to understand beach water quality on a year-round basis. Thus we suggest the following language revision:

“At a minimum, weekly samples shall be collected on a year-round basis from each site.”

The Reasonable Potential Analysis should be Eliminated

Appendix VI of the Ocean Plan outlines the procedure for a Reasonable Potential Analysis (“RPA”) to determine “the need for an effluent limitation.” We urge the State Board to eliminate the RPA approach for determining effluent limits in the Ocean Plan, as this approach has proven unsuccessful since its inception and has actually led to decreases in water quality.

The RPA approach is bad public policy for several reasons. This approach often weakens permits. In fact, the RPA approach typically greatly reduces the number of effluent limits and the monitoring frequencies of constituents in an NPDES permit. The current practice of the RPA approach favors dropping constituents and weakening the monitoring programs from the current permits, creating progressively less protective permits with every permitting cycle.

The RPA approach should not grant dischargers “free exceedances” of the priority pollutants and other constituents without a risk of enforcement. Further, including additional effluent limits in permits would provide no additional burden to the Permittee, as they would only need to maintain current discharge performance. Even if the Permittee does not have a problem meeting the remaining effluent limits, the State and regional boards should include these limits in the Permit as a safety net to ensure that objectives are met in the future. This is particularly important because the toxicity limits are given a large dilution credit, which would have otherwise provided a safety net capturing potential impacts from the synergistic effects of low concentration of multiple contaminants and impacts of contaminants that are not given limitations in a permit. In addition, numeric effluent limits for priority pollutants are often given a large dilution factor. Also there is often great variability in influents and effluents at a POTW. The State Board should use an adaptive management approach to the RPA issue. In other words, the State has tried the RPA approach and it has not been successful in maintaining high water quality. NPDES permits for POTWs shouldn’t only contain a dozen pollutants and refineries shouldn’t have permits that don’t include BTEX and PAH limits. Thus, the State Board should remove this allowed approach from the Ocean Plan.

Dilution Credit should not be applied to Toxicity

The Ocean Plan provides a dilution credit in calculating effluent limits. The Plan provides some separate calculations for toxicity but still provides for a dilution credit. Applying a dilution credit to acute and chronic toxicity is improper. By allowing for a dilution credit for toxicity testing, the State Board is basically allowing for all the biota in the zone of initial dilution to



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suffer from chronic toxicity effects or the acute outcome of mortality. We urge the State Board to modify the Ocean Plan (Section III.C.3.) language as follows:

“Effluent limitations shall be imposed in a manner prescribed by the State Water Board such that the concentrations set forth below as water quality objectives shall not be exceeded in the receiving water upon completion of initial* dilution, except that objectives indicated for radioactivity *and acute and chronic toxicity* shall apply directly to the undiluted waste* effluent.”

Constituents of Emerging Concern should be Incorporated

As an outgrowth of the Water Recycling Policy, the State Board convened a task force on Constituents of Emerging Concern (CEC). The Ocean Plan should require annual monitoring for CECs, consistent with the recommendations and constituent list that the Science Advisory Group develops. Further, this group of pollutants should be analyzed in samples collected during the toxic identification evaluation (TIE) process that is undertaken after toxicity exceedances.

Specifically, it is critical that pyrethroids and brominated flame retardants (PBDE) are included in monitoring. Recent work by SCCWRP and the City of Los Angeles demonstrated that the predominant source of the toxicity in Ballona Creek sediments was pyrethroids. Concern over the impacts of pyrethroids is growing as use of these pesticides is on the rise as a replacement for organophosphates and organochlorides. PBDE, used primarily as a flame retardant, is being detected at increasingly high levels in the environment and should also be monitored.

Benthic Community Health Monitoring should be Reconsidered.

In the 2007 Ocean Plan scoping, the State Board recommended including benthic community monitoring, but these amendments were not approved in the last triennial review. We urge the State Board to revisit this previous proposal. The diversity and sensitivity of the various species within a habitat are important indicators of waterbody health. Specifically, we urge the State Board to require annual benthic infauna community monitoring for both POTW and MS4 discharges. Of note, the NPDES monitoring program for the Los Angeles County Sanitation Districts' Joint Water Pollution Control Plant and the Hyperion Treatment Plant have required annual benthic infauna community monitoring for decades.

The Biological Objectives and Chemical Characteristics Sections should be updated to account for Climate Change Impacts

Due to increased carbon dioxide levels in the atmosphere, our ocean environment is at great risk. Acidification of the seas is caused by the increased carbon dioxide in the ocean reacting with the water to create carbonic acid, thereby lowering ocean water pH. Organisms that use calcium carbonate to make shells, skeletons and calcareous plates, such as shellfish, corals and coccolithophores, cannot do so in an acidic environment. In areas where the ocean has become more acidic, the acid is dissolving or thinning the shells and skeletons of many invertebrates and phytoplankton that already have them. Thus in order to account for this threat to beneficial uses, we recommend that the Biological Objectives (Ocean Plan section II.E.3) and Chemical Characteristics (Ocean Plan section II.D.2) should be modified as follows:



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“The concentration of organic materials in fish, shellfish* or other marine resources used for human consumption shall not bioaccumulate to levels that are harmful to human health. *The concentration of constituents in the ocean shall not reach levels that are detrimental to shellfish and other calcium carbonate-dependant organisms.*”

“The pH shall not be changed at any time more than 0.2 units from that which occurs naturally *or in amounts that negatively impact calcium carbonate-dependant organisms.*”

The Phrase “Objectionable Aquatic Growth” should be Defined

The Ocean Plan provides a narrative objective for nutrients and algae: “Nutrient materials shall not cause objectionable aquatic growths or degrade indigenous biota.” As you know excess nutrients can lead to excess algal growth, which can smother habitat and reduce dissolved oxygen levels. The Ocean Plan should more clearly define what is considered “objectionable aquatic growth” as this term is very subjective as written.

Of note, a peer-reviewed study conducted in 2000 developed algae cover guidelines for environmental managers to use in freshwater quality assessments. B. Biggs, New Zealand Ministry for the Environment, New Zealand Periphyton Guideline: Detecting, Monitoring and Managing Enrichment of Streams (2000). This study determined that 30% is the maximum cover of visible filamentous algae that will support recreation and habitat. *Id.* While this study focused on streams, it raises the point that a numeric threshold for algal growth can prove useful in waterbody management.

* * *

The last round of amendments to the Ocean Plan was very basic and non-substantive, yet there are numerous sections of the Ocean Plan that need revision. Thus, we urge the State Board to consider the critical amendments to the Ocean Plan that are discussed above.

Thank you for the opportunity to provide these comments. If you have any questions, please do not hesitate to contact us at 310-451-1500.

Sincerely,

Kirsten James
Water Quality Director

Mark Gold, D. Env
President