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September 8, 2009

Tracy Egoscue
Executive Officer
California Regional Water Quality Control Board, Los Angeles Region
320 W. 4th St., Suite 200
Los Angeles, CA 90013

Re: Comments on the Colorado Lagoon OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals Total Maximum Daily Loads

Dear Ms. Egoscue:

On behalf of Heal the Bay, we submit the following comments on the Los Angeles Regional Water Quality Control Board's ("Regional Board") proposed TMDL for OC Pesticides, PCBs, Sediment Toxicity, PAHs, and Metals in Colorado Lagoon ("TMDL" or "Draft TMDL"). We appreciate the opportunity to provide comments.

Heal the Bay is generally supportive of the proposed TMDL. In particular, we support the seven-year deadline for compliance, and the choice of WLAs based on CTR criteria and sediment targets based on ERLs. Most importantly, we strongly support the inclusion of an explicit margin of safety. We urge the Regional Board to maintain these positive attributes of the TMDL.

However, we have several concerns that should be addressed. For instance under the proposed implementation plan, we question whether contamination will be prevented from reentering the Colorado Lagoon. In addition, we believe the special studies mentioned in the Draft Staff Report should be mandatory and should be included in the implementation schedule. Another concern is that the explicit margin of safety was not applied to all waste load allocations (WLAs). The basic tenet of the Clean Water Act TMDL program is "to attain and maintain" water quality standards. 33 U.S.C. § 1313(d). We feel these issues must be addressed in order for water quality standards to be attained.

These issues are set forth in detail below.

I. Implementation and Monitoring Plans

Will the increased tidal flow stemming from the cleaning of the culvert and the relocation of the Termino Avenue drain bring an increase of contaminants from the Marine Stadium?



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Under the proposed implementation plan, we are concerned that contamination may reenter the Colorado Lagoon via the proposed reopening of connections to Marine Stadium. The Staff Report mentions implementation strategies that would clean the existing culvert between the Colorado Lagoon and Marine Stadium or create an open channel or new underground culvert between the two waters. This is meant to increase tidal range and flushing in the lagoon and improve water and sediment quality. With an increased exchange between the lagoon and the marina, it is important to ensure that water entering the lagoon will serve the sole purpose of increasing circulation and will not contribute to further contamination of the lagoon. However, the Draft Staff Report provided no data or documentation to show that water and sediment within the Marine Stadium is not toxic or contaminated. Please provide this information in the TMDL to demonstrate that tidal circulation and runoff from the Termino Drain will not cause beneficial use attainment problems in the lagoon. In the event that data is not available, a special study should be required to characterize the pollutant contributions from these sources.

In the event that lagoon water and/or runoff are polluted, it is quite possible that by increasing circulation and tidal mixing between the Lagoon and the Marine Stadium, the project will allow contaminated water and sediment to be pushed back into the lagoon during flood tides. In addition, all three implementation scenarios presented in the Draft Staff Report include a project to redirect the Termino Avenue Drain to discharge to Marine Stadium instead of to Colorado Lagoon. In fact, the relocation of the Termino Drain opens up the possibility for that runoff to come back into the Lagoon during flood tides. What BMPs are in place to ensure that potentially poor water quality in Marine Stadium will not be pushed back into the lagoon during flood or high tides? It is important that this data be reviewed before these projects are considered effective implementation strategies.

The Regional Board should require special studies and include additional milestones in the implementation schedule in the proposed Basin Plan Amendment.

Several special studies are necessary for understanding source contributions, choosing appropriate TMDL implementation strategies, and protecting beneficial uses in Colorado Lagoon. The Staff Report describes a special study to investigate soil pollutant concentrations and identify ‘hot spots’ in the lagoon (Special Study #1) and a study to evaluate the effectiveness of sediment allocations in protecting the beneficial uses of Colorado Lagoon (Special Study #2). Language in the Draft TMDL infers that all special studies are optional. Given the uncertainty of the North Arm’s contribution to the lagoon’s impairment alone, these studies should be required. Further, the implementation schedule provided in the Draft Basin Plan Amendment does not give a timeframe for performing the special studies mentioned in the Draft Staff Report. Special studies should be completed no more than 2.5 years into the implementation schedule in order to allow responsible parties to have ample time to gather the information needed to determine if additional implementation actions shall be required to put implementation measures back on track for achieving final WLAs by the time the proposed seven-year timeframe is up. Submission of a sediment removal and disposal plan should also be added to the implementation schedule by the end of year 3. This plan should be formed taking into consideration the results from the special studies.



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The Regional Board should maintain quarterly monitoring and require more monitoring in the North Arm of the Colorado Lagoon

A comprehensive monitoring plan with an adequate collection frequency is essential to assess progress towards meeting the WLAs and ultimate compliance with the WLAs. We agree with the general components of the monitoring program included in the draft TMDL, including ambient monitoring and compliance assessment monitoring. We also are supportive of the Board outlining specific monitoring frequencies and locations within the Basin Plan Amendment. Although this allows some flexibility for responsible parties to further develop details of the MRP, it outlines the structure of a monitoring regime that will ensure lagoon conditions are adequately captured.

The TMDL requires monitoring at the West, Central, and North Arms, at the outlet of the lagoon to Marine Stadium, and at the outlet of the storm drains discharging to the lagoon. We recommend that the Regional Board also require the sediment samples within in the Lagoon to be positioned in the deepest portion of the West Arm, North Arm, and Central Lagoon where the most sediment is likely to accumulate. In addition, sediment cores should be collected for these monitoring efforts to better understand the extent and depth of any contamination. Of note, the staff report states that contamination is found at 5 feet depth in some areas. Also, the TMDL implies that additional monitoring is necessary in the North Arm, as it has not yet been determined that dredging will be needed in this location, but does not require increased monitoring efforts in the North Arm. The Regional Board should not only require more monitoring in the North Arm, but should also require source removal action in this area. According to the Staff Report uncertainty associated with this arm contributed to the need for a margin of safety. The Staff Report states, “Assumption of natural removal of sediment at the bottom of the lagoon especially at the northern arm of the lagoon where dredging is not currently planned to remove contaminated sediment may not result in compliance with the sediment quality objectives.” (Page 65). The Regional Board addressed the issue of legacy pollutants quite differently in the recently adopted Calleguas TMDL for organochlorine pesticides and PCBs, which calls for the removal of contaminated sediment. The Regional Board Staff Memorandum for the Calleguas TMDL states, “Attenuation may be occurring in the Calleguas watershed, but it is neither adequate nor reliable as the sole method for removal, due to the slow degradation rate. Also, flushing to the ocean does not represent attenuation; rather, it represents transfer of the problem to another site...When these [hotspot] areas are identified, removal and proper disposal will be implemented.” It is unclear why the sediment management approach would be any different for the Colorado Lagoon TMDL. Natural attenuation of legacy chlorinated organics (not to mention metals) in sediment can take a significant period of time—decades, if not centuries. Indeed, the slow rate of attenuation is even more significant in the lagoon where there is infrequent flushing of sediment. Thus, the pollutants at issue are not likely to degrade measurably or get transported elsewhere within the compliance timeframe of the TMDL. Instead, it is highly likely that these contaminated sediments will remain there for a long time, thus preventing the attainment of beneficial uses.



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The TMDL proposes quarterly sediment monitoring in the first year, and annual monitoring thereafter. To further ensure conditions are appropriately measured, we recommend the Regional Board require quarterly monitoring to continue after the first year to ensure variability in the lagoon is adequately captured. If the data demonstrates that annual sampling is sufficient, responsible parties can submit this change for approval by the Executive Officer. The Regional Board should also require any proposed changes to the monitoring program to be approved by the Executive Officer prior to implementation. In addition, the Regional Board should allow for public review of the Monitoring and Reporting Plan submitted to the Board for Executive Officer approval.

II. Margin of Safety (“MOS”)

The Regional Board must go further to incorporate an explicit margin of safety into the TMDL waste load allocations (“WLAs”).

Heal the Bay strongly supports the Regional Board’s inclusion of an explicit margin of safety into the mass-based load allocations for this TMDL. There are precedents for applying explicit margins of safety to a TMDL within EPA Region 9. The Pinto Creek Copper TMDL that was established by EPA included an explicit margin of safety equal to 10% of the loading capacity available for some target sites and equal to 20% of the loading capacity available for allocation for target sites containing more uncertainty in potential source areas. The mass based WLAs for ammonia in the Calleguas Creek Nitrogen and Related Effects TMDL include a 10% explicit margin of safety to account for uncertainty concerning the relationships between WLAs and attainment of the water quality standards addressing algae and other listed stressors associated with nutrient loads. Thus, in keeping with these precedents, the Regional Board’s decision to include an explicit margin of safety in the proposed TMDL is reasonable and justified.

From conversations with Staff, we understand the explicit MOS was applied to the mass-based TMDLs. However, even after inspecting staff calculations, it is not apparent in the Basin Plan Amendment where the 10% explicit MOS was applied. Staff’s calculated total MS4 WLAs differ from those present in the Draft Basin Plan Amendment. The Regional Board should clarify which load allocations have this explicit margin of safety. We encourage the Regional Board to include a 10% explicit margin of safety to both mass-based and concentration-based WLAs.

In establishing the margin of safety in this TMDL, the Regional Board acknowledged some uncertainties in the calculation of the TMDL, such as the uncertainty brought on by the use of the simplifying assumption that the relationship between OC pesticides and PCBs concentrations in fish tissue and sediments is linear. In addition, the use of models to estimate contaminant concentrations in receiving water and estimation of atmospheric deposition further contribute to the amount of uncertainty. We believe an explicit MOS is the only way to ensure that an adequate margin of safety is provided in a TMDL, and believe the Board must go further to protect the lagoon by incorporating an explicit MOS into all WLAs, especially to concentration-based sediment WLAs, which address legacy contamination causing impairments in the lagoon. Staff maintains that there is an implicit margin of safety



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in the choice of CTR human health criteria and ERLs as numeric targets and load allocations for the sediment. We support these targets, but we do not agree they provide an adequate MOS. CTR criteria themselves have associated uncertainties. For instance, as described in the Federal Registry, “[a]n aquatic life criterion derived using EPA's CWA section 304(a) method might be thought of as an **estimate** of the highest concentration of a substance in water which does not present a significant risk to the aquatic organisms in the water and their uses.” (45 FR 79341.) ... EPA's 1985 Guidelines attempt to provide a reasonable and adequate amount of protection with only a small possibility of substantial overprotection or **underprotection**. The approach EPA used is believed to be as **well balanced** as possible...[**emphasis added**]” 40 CFR part 131. We support the Regional Board's use of Effects Range-Low (ERL) values as the numeric targets for sediment within the Colorado Lagoon because the ERLs are easily measured numeric values that can function as effective indicators of healthy sediments. However, ERLs do not account for any synergistic effects of multiple pollutants or effects related to bioaccumulation, which are both significant problems in the lagoon due to the number and type of impairing pollutants present. In addition, the ERL represents a level below which toxicity is observed in one or more species and, therefore, leaves no margin of safety. Also, some Colorado Lagoon species could be more sensitive to pollutants targeted in this TMDL than the species observed in the development of the ERL values. Use of CTR criteria and ERLs is not a conservative assumption that provides an implicit margin of safety, but it is good policy.

In conclusion, we are generally supportive of this TMDL, but we urge the Regional Board ensure contamination from Marine Stadium does not reenter the Colorado Lagoon, include special study milestones on the implementation schedule, and further ensure the effectiveness of the monitoring program by requiring sample points to be positioned in the most critical locations. Also, the Regional Board must apply an explicit MOS to all WLAs in this TMDL. If you have any questions or would like to discuss any of these comments, please feel free to contact us at (310) 451-1500. Thank you for your consideration of these comments.

Sincerely,

Mark Gold, D. Env.
President

Kirsten James, MESM
Water Quality Director

W. Susie Santilena, MS, E.I.T.
Water Quality Scientist