



CENTRAL COAST LONG-TERM ENVIRONMENTAL ASSESSMENT NETWORK

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July 12, 2011

Mike Higgins and Karen Worcester
State Water Board, Central Coast Region
895 Aerovista, Suite 101
San Luis Obispo, CA 93401



RE: Proposal for Adaptive Management of Central Coast Long-term Environmental Assessment Network (CCLEAN)

Dear Mike and Karen:



On June 20, 2011, the CCLEAN Steering Committee met to discuss program objectives and clarify the duties and responsibilities of program participants as stewards of water quality along the Central California coast. Following a review of program history, a discussion of program objectives suggested additions to the objectives in order to clarify the importance of the program to wastewater dischargers. One program objective was revised and a new objective was adopted. The revised objectives for CCLEAN are as follows, with revisions indicated in bold type:



1. Obtain high-quality data describing the status and long-term trends in the quality of nearshore waters, sediments, and associated beneficial uses.
2. Determine whether nearshore waters and sediments are in compliance with the Ocean Plan **and associated NPDES permits.**
3. Determine sources of contaminants to nearshore waters.
4. Provide legally defensible data on the effects of wastewater discharges in nearshore waters.
- 5. Manage the program adaptively to ensure cost effectiveness and response to emerging issues of concern to water quality managers.**
6. Develop a long-term database on trends in the quality of nearshore waters, sediments and associated beneficial uses.
7. Ensure that the database is compatible with other regional monitoring efforts and regulatory requirements.
8. Ensure that data are presented in ways that are understandable and relevant to the needs of stakeholders.

The new Objective #5 makes explicit our historic approach to managing the program in collaboration with the Water Board. For example, in 2006–2007 monthly sampling of streams and rivers for nutrients and fecal indicator bacteria was eliminated, mussel sampling was reduced to annually and PBDEs and PFCs were added to the list of program analytes. Further, in 2008–2009, sediment sampling was performed near the mouths of the Pajaro and Salinas rivers in an attempt to detect clearer signals of river inputs of contaminated sediments and, in 2009–2010, assays were performed on wastewater to determine whether endocrine disrupting compounds were hampering fish reproduction at receiving water concentrations. In the same year, sediment sampling sites were reduced from eight to six and returned to sites historically sampled by CCLEAN.

Consequently, recent discussions with Water Board staff and a review of historic CCLEAN data have suggested several program revisions that will maintain the ability of the program to achieve its objectives while reducing costs.

The first recommendation is to reduce the frequency of sediment sampling. Historic CCLEAN data have associated high concentrations of DDTs with decreases in densities of some organisms and community parameters, such as total densities of organisms and number of species. Nevertheless, there have been no detectable trends in concentrations of DDTs, even including data from the 1970s. Consequently, it is proposed that sediment sampling be converted to a status mode, in which the concentrations of sediment contaminants and densities of benthic organisms are measured every five years. Moreover, Water Board staff have asked that pyrethroids be measured in sediment samples, given the high levels of toxicity attributed to these pesticides in urban and agricultural watersheds statewide.

The second recommendation involves focusing the CCLEAN analyte list through adjustments to measurements in all the matrices sampled by CCLEAN. One of these adjustments would involve polynuclear aromatic hydrocarbons (PAHs), for which there are effluent limits in each CCLEAN participant's NPDES permit based on water quality objectives in the California Ocean Plan. PAHs are routinely measured in receiving water monitoring programs. In the case of CCLEAN, while there have been exceedances of California Ocean Plan objectives for PAHs in ocean waters, neither sediment nor mussels samples have indicated PAH concentrations that approach alert levels. Consequently, it is proposed that measurement of PAHs in sediment and mussels be eliminated.

Another analyte adjustment would involve perfluorinated compounds (PFCs). These compounds are of emerging global concern and were added to the CCLEAN analyte list in the 2008–2009 program year. They are not regulated by the California Ocean Plan and have no NPDES effluent limits. While we routinely detect numerous PFCs in wastewater, they have never been detected in any CCLEAN mussel samples and only two PFCs have been detected in any CCLEAN sediment samples in low concentrations. For these reasons, we propose

to eliminate PFCs from the CCLEAN list of analytes and document the validity of such an adjustment with a thorough analysis and discussion of PFCs in CCLEAN samples in the 2010–2011 Annual Report.

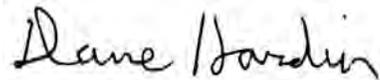
Finally, to further investigate the sources of high PCBs, which have exceeded the California Ocean Plan water quality objective in Monterey Bay, CCLEAN will undertake additional sampling in 2012–2013. The design and scope of this sampling will be developed during the current (2011–2012) program year.

In summary, our proposal includes the following recommendations:

1. Determine status, rather than track trends, of sediment contaminants and benthic organism densities by reducing sampling frequency to every five years and add analysis of pyrethroids in sediments.
2. Focus measurement of analytes on those that have shown the greatest likelihood to impair beneficial uses by eliminating some measurements that have not been associated with impairments.
 - a. Eliminate measurement of PAHs in sediments and mussels.
 - b. Eliminate measurements of PFCs in all samples.
3. Perform broader ocean sampling of PCBs and chlorinated pesticides in Central California ocean waters to more fully investigate the causes of high nearshore concentrations.

Thank you for your consideration of these proposed changes. If you have any questions, please feel free to contact me. I look forward to your response.

Sincerely,



Dane Hardin
Program Director