

Proposed Implementation Planning and Schedule: Ballona Creek and Estuary Toxics TMDL

TO: CREST Steering Committee
FROM: CREST Technical Committee

On September 28, 2004, the Cleaner Rivers through Effective Stakeholder TMDLs (CREST) Technical Committee met to “preview” Draft Ballona Creek and Estuary Toxics (Organics) TMDL with a presentation from the Regional Water Board.

At meetings on December 7, 2004 and January 20, 2005, the Technical Committee discussed recommending potential changes to the implementation planning, the compliance schedule, and the monitoring strategy portions of the Draft TMDL. This memorandum provides a summary of the proposed revisions to the schedule and monitoring plan section, which were discussed by the Technical Committee. The focus of this proposal is to suggest a revised compliance schedule and additions to the monitoring strategy of the TMDL. The purpose of these proposals is to incorporate focused studies designed to optimize the choice of design, siting and schedule of watershed BMPs and source control.

The proposal includes:

1. Changes to the Compliance Schedule
2. Detailed source control studies
3. New fish sampling and analysis
4. Confirmation and refinement of sediment *quality* targets
5. Refinement of sediment *quantity* targets

Compliance Schedule

Current Compliance Schedule

The current implementation schedule in the Preliminary Draft Ballona Creek and Estuary Toxics (Organics) TMDL includes:

- **Studies:** Complete fate and transport studies of sediment pollutants and toxicity within 4 years.
- **Sediment quality:** Achieve very restrictive Effects Range Low (ERL) -based sediment quality goals within 6 years.
- **Water quality and fish tissue-protective values:** Achieve water quality, fish tissue-protective values within 6 years [required for all National Pollutant Discharge Elimination System (NPDES) dischargers].

- ***Sediment Waste Load Allocations (WLAs):*** Meet 100% of the sediment (WLAs) for Ballona Creek within 12 years (amounts to approximately 67% of the current annual load).

Suggested Compliance Schedule

The draft schedule described above should be lengthened. Compliance deadlines should emphasize a phased, iterative approach that takes advantage of the initial 4 years of selected studies and reopens to create a more realistic, implementable schedule. However, the extension of the deadlines does not infer any delay in implementing programmatic controls for priority areas and the proposed source control studies (item 1 below). The following is a suggested revised schedule of key milestones to be included:

- ***Studies:*** Expand (see below) but retain the goal of summarizing results by year 4.
- ***Sediment quality:*** Extend the 6 year compliance schedule to 12 years and develop site-specific pollutant control activities.
- ***Water quality and fish tissue-protective values:*** Extend the 6 year compliance schedule to 12 years; and develop site-specific pollutant control activities.
- ***Sediment WLAs:*** Extend the 12 year compliance schedule to 22 years to accommodate the results of the studies, and an iterative, phased and integrated approach to implementation.

This proposed revised implementation schedule is recommended in part because more scientific data is needed to refine our understanding of impairment and the applicability of the WLAs as this helps in developing the most effective BMP implementation plan. It is likely that full implementation will need to be an iterative process. A reopener scheduled after the initial 4 years of special studies will be necessary to refine the implementation schedule. Currently, there is little direct evidence connecting Ballona Creek water and sediment quality with the fish tissue and sediment impairment. A phased, iterative approach to implementation can be used to maximize the effectiveness of small-scale treatment solutions and source control and well as to monitor effectiveness. Gradual, phased-in implementation which focuses on the highest priorities for earliest implementation will be the most practical and cost-effective approach for the variety of municipalities and other stakeholders. Special studies and monitoring results will be used in conjunction with the other Ballona Creek TMDL programs (e.g., bacteria, metals) that will also depend on source control for full implementation.

More importantly, the time limits for full implementation incorporate an integrated, watershed based approach similar to that being used in the wet weather bacteria TMDL for Santa Monica Bay (where risks and impairment are better understood). The proposed 22 year full compliance schedule is based on the experience gained thus far in developing detailed implementation plans for an integrated approach for the bacteria TMDL; the fact that the cause and effect and the degree of organics impairment is not well known for the much larger Ballona Creek watershed; and the number of municipalities that will be involved in implementation, all of which need to be involved in site-specific BMP activities. Design and construction of appropriate control strategies will take time, as well as will the watershed response. Control of wet weather loading may require innovative and costly

approaches; it is anticipated that the process be iterative, integrated, and closely linked to all Ballona TMDLs, and extended to the suggested 12 and 22 year timelines.

Monitoring Strategy

Several aspects of the preview Draft TMDL monitoring strategy may require amendments and additions to provide public protection and to optimize the effectiveness of TMDL implementation and BMP design.

Current Monitoring Strategy

The current draft includes the following monitoring activities:

- Wet weather loading reductions and WLAs (structural and nonstructural BMPs along with compliance monitoring)
- Limited special studies (3-D estuary model, source assessment, sediment load characterization, sediment methods testing).

This proposal in no way suggests changing or delaying the implementation of these activities, as they are an appropriate and necessary part of the implementation of this TMDL. In reference to the above-mentioned monitoring, water-column based BMPs are specifically excluded from the draft monitoring plan, as these are banned substances; therefore compliance monitoring is required.

Suggested Monitoring Strategy

A series of focused special studies will be needed as part of the initial 4 year characterization to better understand the relationships between toxic substances and sediment; and between toxics and fish. In addition, focused estuary and shoaling studies will be needed to better understand the importance of in-place sediments in determining impairment and to design practical BMPs to control toxicity and impairment at the sediment source.

The suggested studies may be grouped as those needed as part of an initial, immediate concern for the early implementation process and the protection of human health, and those studies needed to refine BMPs as part of maximizing the effectiveness of design.

Immediate needs:

1. Detailed source control studies to identify the watershed sources of highly contaminated sediments. If hot spots are found, targeted abatement strategies are warranted as part of an immediate Phase 1 implementation. If pollution is found to be widespread and more diffuse, implementation should focus on general, broad-based BMPs. If correlations are found between where hot spots are in the storm drains/systems and land based sources, this would be useful information in the siting, and scheduling priorities for the BMPs.
2. New fish sampling and analysis to update the fish tissue concentration information, which is currently based on the results from a single fish, sampled in 1993. Such results

can be used as the basis for protection of the local fishing population and the establishment of Phase 1 implementation and controls. In addition, results from the studies would be used to quantify the link between local fish tissue and sediment quality (as needed for BMP design). It may be possible to analyze selected fish already collected as part of the ongoing, annual monitoring of Marina del Rey.

Additional BMP design needs:

3. The sediment *quality* targets should be confirmed and refined into site-specific targets for Ballona Estuary. The State Water Resources Control Board is currently establishing draft state-wide Sediment Quality Objectives (SQOs) by the summer of 2005. While these SQOs will establish constituent level guidelines in sediment to protect beneficial uses, they will not be defined for specific bays and/or estuaries. In addition, the fish studies (study 2, above) may suggest different targets for sediment quality that will be protective of fish and human or ecological exposure for the Ballona estuary. Therefore, these studies will establish Ballona Estuary-specific sediment toxicity WLAs by applying the sediment triad approach (toxicity, sediment quality, and benthic community structure) to the site. Site-specific characterizations are incorporated in the State Board SQO methodology and are a critical step ensuring that BMPs will be designed to optimize performance for the site-specific conditions that exist in Ballona Estuary.

4. The sediment *quantity* targets should be refined. The detailed US Army Corps of Engineers (USACE) data on sediment loading and shoaling for Ballona Creek and estuary should be fully incorporated as part of selection of sediment load reductions and BMP design. Studies on transport details, such as the size fractions for suspended toxics loading will be essential in effective BMP design. In addition, a better understanding of the potential role of dilution of toxic Ballona-derived sediment by cleaner, longshore drift should be used to adjust the WLAs to optimize required reductions in shoaling sediment. Not only is the information developed by the USACOE important, but the long-term plans that this agency has for protecting the navigational uses of Marina Del Rey. Therefore, in addition to proposing that the data be incorporated and used for understanding how to achieve that desired level of clean sediment, the USACOE's plans, and the schedule and potential result of implementation of these plans will also be critical to the understanding of sediment transport and impacts on Ballona Estuary. One other source of information that will provide important data that will inform the design of BMPs is the annual report prepared by the LA County Beaches and Harbors which included sediment and water quality data and benthos and fish community information (not fish tissues).

The results of these proposed studies, especially because they will improve the understanding of the physical and chemical aspects of sediment processes in Ballona Creek/Estuary, will assist in effective BMP design and rapid implementation of the most protective features of the TMDL. These studies are proposed to be done, in addition to the ones that were already included in the Preliminary Draft TMDL, during the first 4 years after the TMDL is adopted.