MEMORANDUM

TO: BALLONA SAC

FROM: ERIC STEIN AND RICH AMBROSE

SUBJECT: APPROACH FOR ADDRESSING SEDIMENT AND WATER QUALITY ISSUES

DATE: 3/7/2008

CC: BALLONA PMT

BACKGROUND

The ultimate design for the Ballona wetlands will likely include additional water flow into the site. The exact source(s) of water is yet to be determined, but could include water from the ocean, Marina del Rey, Ballona Creek, tributary canyons or channels, or some combination of the above. Ballona Creek and estuary are currently listed as impaired for several organics (e.g. DDT, PCB, PAH, chlordane) and metals (Cu, Pb, Zn, Se) in terms of both water column and sediment toxicity. The July 2006 report by Weston also concludes that there are concerns related to water and sediment quality adjacent to the tidal channels. Consequently there is a need to develop a strategy to evaluation the potential ecological risk associated with influent water or sediment quality to the restored wetlands.

Decisions regarding suitability of particular sources of water or sediment are partly a matter of science and partly a policy issue. The policy questions should be addressed by the regional water quality control board, USEPA, and other relevant agencies and include considerations of the proposed approach to regulate both the restoration process itself as well as the ultimate restored wetland (i.e. basin plan standards that might apply).

The scientific questions regarding sediment and water quality cannot be answered based on the information currently available, and will ultimately depend on the design of the project. However, the SAC can outline a process for addressing this issue over the duration of the restoration and beyond and request that a water quality subcommittee explore this issue in more detail.

CONCEPTUAL APPROACH

There are several elements to addressing the issue of contaminant risk in the restored wetland. First, we need to consider water quality in Marina del Rey, lower Ballona Creek and support the TMDL implementation efforts to improve water and sediment quality. With regard to the restored wetland, we can attempt to assess potential issues via a modeling effort (should we decide to fund development of a water quality model). However, ultimately we will need to address these concerns through a monitoring approach. Water and sediment quality (particularly the latter) will need to be monitored during and after restoration to assess potential risk of toxicity. This is an excellent opportunity to apply and extend the Sediment Quality Objectives (SQO) work that is currently being developed by the State (with assistance from SCCWRP and others). The SQO process relies on a multiple lines of evidence approach whereby both stressors and response variables are used to assess risk of toxicity. In this case chemistry, toxicity assessment and benthic response are all used together

to assess if there is a potential problem. The SQOs are being developed for subtidal systems, but there is interest in seeing if they can be extended to intertidal systems as well. Ballona (as well as the larger IWRAP) would be an excellent catalyst for this extension.

RECOMMENDATION

We recommend that this issue be referred to the water quality subcommittee for further consideration and development of a strategy to approach this issue. The water quality subcommittee should include (at a minimum) representation from the SAC, regional water quality control board, Corps of Engineers, SMBRC, and City of Los Angeles. We further recommend that the strategy include the following elements:

- 1. support TMDL implementation to address water and sediment quality in Ballona Creek
- 2. modeling to assess potential issues of concern and help identify management options for influent sediment and water quality
- 3. identify additional data collection (water column or sediment) that may be necessary in advance of the restoration
- 4. develop a monitoring program for assessing potential risk. This program should employ an SQO-type approach to assess for ongoing risk.
- 5. develop a set of decision criteria that would trigger the need for a management response to potential ecorisk concerns
- 6. identify a preliminary set of contingency measures that could be considered should influent sediment or water be determined to an unacceptable risk