

EXECUTIVE OFFICER SUMMARY REPORT
May 9, 2012

- ITEM: 10
- SUBJECT: A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) to Incorporate the Sediment Total Maximum Daily Load (TMDL) for Los Peñasquitos Lagoon. (Tentative Resolution No. R9-2012-0033) (*Chad Loflen*)
- PURPOSE: The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) will deliberate and consider adopting the tentative resolution to incorporate the Sediment TMDL for Los Peñasquitos Lagoon into the Water Quality Control Plan for the San Diego Basin (Basin Plan).
- RECOMMENDATION: Adoption of tentative Resolution No. R9-2012-0033 is recommended.
- KEY ISSUES:
1. This sediment TMDL is the first third party TMDL to be developed in the San Diego region. A third party stakeholder group was brought together to develop the technical analysis portion of the TMDL.
 2. This Basin Plan amendment contains an adaptive management approach to direct the need for, and timing of, follow-up regulatory actions by the San Diego Water Board and further actions by the responsible parties. Further activities by the San Diego Water Board which may result include, but are not limited to, the modification and/or the issuance of individual waste discharge requirements, issuance of investigative, cleanup and other enforcement orders, and revisions to the monitoring requirements of the TMDL implementation plan.
 3. This tentative Resolution, per direction from USEPA, has been modified from the 2011 version to include a lagoon numeric target, which is expressed as an increasing trend in the acreage of salt marsh. Achieving the numeric target will require the participation, coordination and cooperation of the responsible parties with those parties not deemed “responsible” in the tentative Resolution (e.g. State Parks).
- DISCUSSION: Tentative Resolution No. R9-2012-0033 (Tentative Resolution) (Supporting Document No. 2), if adopted, would amend the Basin Plan to incorporate the sediment TMDL for Los Peñasquitos Lagoon (Lagoon). The Lagoon is subject to the development of a TMDL because the Lagoon was placed on the

Clean Water Act section 303(d) list of Water Quality Limited Segments in 1996 for sedimentation and siltation.

To address the sedimentation problem and current 303(d) listing, this TMDL project requires responsible parties to implement best management practices (BMPs) to reduce the current sediment loading rate from the watershed to the level of sediment loading during the early 1970s. The 1970s time period, which was prior to the intense development of the watershed, was identified during the TMDL development period as the time when the sediment water quality standard was met. The TMDL also includes a numeric target for the Lagoon, which is expressed as an increasing trend in the acreage of tidal and non-tidal salt marsh towards 346 acres. This total acreage represents a recovery of 50 percent of the salt marsh lost since the 1970s.

Sediment loading to the Lagoon under current and historic conditions occurs primarily during storm events, which can cause significant erosion and transport of upland and in-stream sediment downstream into the lagoon. Some of these processes are exacerbated by anthropogenic disturbances, such as development causing hydromodification within a watershed. Hydromodification is generally defined as changes in channel form associated with alterations in flow and sediment due to past or proposed future land-use alteration.

The TMDL does not prescribe specific BMPs that must be implemented to reduce sediment and meet the lagoon target. The TMDL identifies the following four categories of BMPs:

- 1) Preservation and Restoration,
- 2) Education and Outreach,
- 3) Retrofitting, New Development, & Site Management, and
- 4) Monitoring.

The TMDL as drafted will have a phased implementation that utilizes an adaptive management approach. Once fully implemented, this TMDL project is expected to result in significant improvements to the water quality conditions in the Lagoon, restoration of Lagoon beneficial uses, and attainment of water quality standards.

The Staff Report (Supporting Document No. 3) includes the technical analysis, which contains the written, quantitative assessment of water quality problems and contributing pollutant sources. The Staff Report identifies the lagoon numeric target for restoring beneficial uses based on applicable water quality standards, specifies the maximum sediment load that can be discharged into the lagoon, and identifies pollutant sources. Furthermore, the Staff Report includes an implementation plan,

which outlines the actions responsible parties must take to reduce sediment loads in order to meet the Lagoon numeric target and required wasteload reductions. The implementation plan also includes lagoon and watershed monitoring to evaluate the effectiveness of actions.

Background

The Lagoon is a 0.6 square mile coastal salt marsh lagoon located in Torrey Pines State Park. The Lagoon is designated as a "State Preserve," a label reserved for the rarest and most fragile State owned lands, and is identified as a Biological Habitat of Special Significance in the San Diego Water Board Basin Plan. The lagoon is currently comprised of over 200 acres of coastal salt marsh, a habitat that has been reduced to an estimated 25 percent of its historic range in California, with an estimated 10 percent remaining in southern California. Freshwater drains from Los Peñasquitos, Carroll Canyon, and Carmel Creeks into the Lagoon. The 93 square mile contributing Peñasquitos watershed extends approximately 19 miles east and rises to an elevation of 2,600 feet above sea level, encompassing portions of the County of San Diego and the Cities of San Diego, Del Mar, and Poway. Supporting Document No. 4 illustrates the location of the Lagoon and its contributing watershed.

Urban development has altered the environmental processes that support wetland habitats, specifically coastal salt marsh in the Lagoon, in three ways:

- 1) Increase in the volume and frequency of freshwater input,
- 2) Increase in sediment deposition, and
- 3) Decrease in the tidal prism.

These factors have reduced tidal mixing within Lagoon channels, degraded and resulted in the net loss of salt marsh vegetation within the lagoon, increased the vulnerability of surrounding urban and industrial developments to flooding, increased turbidity associated with siltation in Lagoon channels, and constricted wildlife corridors.

Technical Approach

The technical analysis of the sediment TMDL was developed through close collaboration between the municipalities within the Peñasquitos watershed (the City of San Diego, San Diego County, City of Del Mar, and City of Poway), the California Department of Transportation (Caltrans), San Diego Coastkeeper, California State Parks, the Los Peñasquitos Lagoon Foundation, the U.S. Environmental Protection Agency,

and representatives from the San Diego Water Board. Technical support was provided by Tetra Tech, Inc.

Using a weight of evidence approach, the Staff Report designated the early 1970s as a time when Los Peñasquitos Lagoon received relatively natural background loads of sediment from all sources and was likely attaining the sediment water quality objective. Accordingly, if the current sediment loading rate is reduced in conformance with the assigned wasteload and load allocations, the sediment water quality objective should once again be achieved in the Lagoon.

A watershed model was used to calculate existing and historical sediment loading to the Lagoon from the Peñasquitos watershed from which a total wasteload allocation was assigned to the responsible parties and a load allocation was assigned to the ocean. A receiving water model was used to simulate hydrodynamics and sediment transport characteristics within the Lagoon.

The scientific basis of these TMDLs has undergone external peer review pursuant to Health and Safety Code section 57004. Staff has considered and responded to all comments submitted by the peer review panel. These responses are included as Attachment 4 of the Staff Report.

Implementation Plan

The responsible parties must undertake actions that will reduce watershed sediment loads in accordance with the appropriate compliance schedule. Responsible parties include: Phase I MS4s copermittees (the County of San Diego, City of San Diego, City of Del Mar, and City of Poway), Phase II MS4 permittees, Caltrans, and enrollees under the State Water Resources Control Board General Construction and General Industrial Storm Water Orders.

While it is the collective responsibility of all the responsible parties in the Peñasquitos watershed to reduce their collective sediment load, the Phase I MS4 systems collect and drain virtually the entire watershed. As such, the Phase I MS4 copermittees become the ultimate point source conveyor of sediment to the Los Peñasquitos Lagoon. Additionally, the Phase I MS4 copermittees have a responsibility to inspect other responsible parties for storm water BMP compliance (e.g. construction sites). Therefore, it is reasonable to expect the Phase I MS4 copermittees to assume the lead role in coordinating and carrying out the responsible party actions, compliance monitoring, and adaptive management required under the sediment TMDL.

Responsible party actions include development of a Load Reduction Plan, which demonstrates how they will comply with the required wasteload reductions and meet the lagoon numeric target in the sediment TMDL. In addition, the responsible parties must also conduct compliance monitoring to assess BMP effectiveness and progress towards achieving the required interim milestones and final load reductions in accordance with the compliance schedule contained in the sediment TMDL.

The implementation plan also includes an adaptive management approach, which entails applying the scientific method to the sediment TMDL. This approach allows the Lagoon to make progress toward attaining water quality standards while regulators and stakeholders improve understanding of the system through research and observation of Lagoon response to implemented actions. The information collected under the adaptive management approach may also result in modifications to the TMDL and Basin Plan when determined appropriate by the San Diego Water Board.

LEGAL CONCERNS:

None.

SUPPORTING DOCUMENTS:

1. Notice of Filing and Notice of Public Hearing
2. Tentative Resolution No. R9-2012-0033 with Proposed Changes in Response to Comments Received
3. Staff Report with Proposed Changes in Response to Comments Received (the Staff Report contains the following as attachments 1-5: TMDL Technical Support Document, Modeling Report, Environmental Analysis and Checklist, Peer Review Comments and Response, and Public Comments on the April 22, 2011 draft)
4. Location of Los Peñasquitos Lagoon
5. Response to Comments and Written Comments Received on Tentative Resolution No. R9-2012-0033
6. Response to Comments for Written Comments Received on Tentative Resolution No. R9-2011-0021

COMPLIANCE RECORD:

Prior enforcement orders have been issued to responsible parties.

PUBLIC NOTICE:

Notice of Public Hearing for this Basin Plan amendment, including filing of the written staff report, tentative resolution, and draft Basin Plan amendment, was provided by newspaper publication in the San Diego Union-Tribune on February 15, 2012 (Supporting Document 1). The Notices were also distributed to interested persons by email and made available on the San Diego Water Board's website on February 15, 2012. These notifications satisfy applicable requirements of Clean Water Act regulations [Code of Federal Regulations, Title 40, section 25.5] and State Water Resources Control Board (State Water Board) California Environmental Quality Act (CEQA) implementation regulations [California Code of Regulations Title 23 section 3777].