State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
April 25, 2007

ITEM: 6

SUBJECT: **PUBLIC HEARING: TOTAL MAXIMUM DAILY LOADS FOR INDICATOR BACTERIA, PROJECT I – BEACHES AND CREEKS IN THE SAN DIEGO REGION (Tentative Resolution No. R9-2007-0044).** (*Christina Arias*)

PURPOSE: To receive testimony and comments on appropriate Total Maximum Daily Loads (TMDLs) and load allocations for indicator bacteria in 17 of 38 bacteria-impaired waterbodies in the San Diego Region. At the June 13, 2007 meeting, the San Diego Water Board may adopt an amendment to the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan) to incorporate the TMDLs.

PUBLIC NOTICE: Federal Clean Water Act (CWA) regulations [40 CFR 25.5] require the San Diego Water Board to provide notice of a proposed Basin Plan amendment to all interested parties at least 45 days in advance of the public hearing. The State Water Board's California Environmental Quality Act (CEQA) implementation regulations [23 CCR 3777] require the San Diego Water Board to provide to the public a Notice of Filing of a written report on any standard, rule, regulation, or plan proposed for board approval or adoption at least 45 days prior to board action. The Notice of Public Hearing for this Basin Plan amendment and Notice of Filing of the written technical report (Supporting Document 1) were provided by newspaper publication in the San Diego Union Tribune and Orange County Register on March 9, 2007, 47 days in advance of the public hearing scheduled for April 25, 2007. The Notices were also distributed to interested persons by email and regular mail distribution. The draft Technical Report (including the draft Resolution and draft Basin Plan amendment) was available to the public on our website on March 9, 2007 (Supporting Documents 2, 3 and 4).

DISCUSSION: *Project Status*
The San Diego Water Board held a public hearing on the bacteria TMDLs in February, 2006, and was originally scheduled to consider adoption in April, 2006. A delay in

adoption was due to ensuring the substitute environmental documents for the project were consistent with the recent Court of Appeals interpretation of the CEQA requirements for certified regulatory programs (*City of Arcadia v. State Water Resources Control Board*). Since over 1 year has passed since the public hearing, a second public hearing is prudent at this time. Important revisions to the Technical Report made since the first public hearing are discussed in Supporting Document 5. Responses to the comments made by Board members and additional information requested at the February 8, 2006 Board meeting are provided in Supporting Document 6.

Project Background

Fecal bacteria originate from the intestinal flora of warm-blooded animals, and their presence in surface water is used as an indicator of human pathogens. Pathogens can cause illness in recreational water users and people who harvest and eat filter-feeding shellfish. Bacteria have been historically used as indicators of human pathogens because bacteria are easier and less costly to measure than the pathogens themselves. As required by section 303(d) of the Clean Water Act (CWA), TMDLs for indicator bacteria were developed to address 17 of the 38 bacteria-impaired waterbodies in the San Diego Region, as identified on the 2002 Clean Water Act section 303(d) List of Water Quality Limited Segments. This project is referred to as 'Project I-Beaches and Creeks in the San Diego Region,' and includes analysis of impaired waterbodies in 12 watersheds. The regulatory provisions of these TMDLs have been incorporated into a draft amendment to the Water Quality Control Plan for the San Diego Basin (9) (Basin Plan).

Exceedances of bacteria water quality objectives (WQOs) and beach postings threaten and impair the water contact (REC-1), non-water contact (REC-2), and shellfish harvesting (SHELL) beneficial uses. The purpose of these TMDLs is to reduce indicator bacteria densities to attain all applicable WQOs for beaches and creeks in the San Diego Region in all seasons of the year.

Technical Approach

The San Diego Water Board and the USEPA coordinated a watershed assessment and modeling study to support the development of TMDLs. Because the climate in southern California has two distinct hydrological patterns, two models were developed for estimating bacteria loads. One model

specifically quantified loading during wet weather events (storms), while the other model quantified bacteria loading during dry weather conditions. In addition to estimating current loading, both models were used to estimate TMDLs for the two climate conditions for each watershed.

For wet weather, interim TMDLs were calculated using a reference system approach to implement the REC-1 WQOs. The purpose of the reference system approach is to account for the natural, and largely uncontrollable sources of bacteria in the wet weather loads that can, by themselves, cause exceedances of WQOs, but are not likely to be associated with human pathogens. Final TMDLs were calculated using WQOs as described in the Basin Plan, with no implementation provisions allowing for WQO exceedances due to natural sources.

The scientific basis of these TMDLs has undergone external peer review pursuant to Health and Safety Code section 57004. The Water Quality Standards Unit has considered and responded to all comments submitted by the peer review panel.

TMDL Implementation

Because bacteria loading within urbanized areas generally originates from urban runoff discharged from municipal separate storm sewer systems (MS4s), the primary mechanism for TMDL attainment will be increased regulation of these point source discharges. Owners and operators of MS4s will be responsible for meeting WLAs established in these TMDLs. These persons include municipal phase I urban runoff dischargers, municipal phase II urban runoff dischargers, and the California Department of Transportation (Caltrans). The TMDLs will be implemented primarily by reissuing or revising the existing NPDES requirements that regulate discharges from MS4s to be consistent with the WLAs and compliance schedule established in this TMDL project.

One WLA was assigned to the municipal discharges in each watershed. This WLA was not divided up among the various municipalities in each watershed. The municipal dischargers within each subwatershed are collectively responsible for meeting the WLA and required reductions in bacteria loads for these subwatersheds and for meeting all of the TMDL requirements. Because many municipalities reside and discharge into single watersheds, Lead Jurisdictions were

designated to be responsible for submitting required reports on behalf of all responsible persons within a single watershed (except CalTrans, who has its own set of NPDES requirements). Although only Lead Jurisdictions are responsible for submittals, all responsible municipalities must meet required load reductions to achieve WLAs.

Controllable nonpoint source discharges of bacteria were found to be greater than 5 percent of the wet weather load in four watersheds (San Juan Creek, San Luis Rey, San Marcos, and San Dieguito). Controllable nonpoint sources that warrant regulation include, for example, runoff from agricultural facilities, dairy/intensive livestock operations, horse ranches, and manure composting and soil amendment operations not regulated under NPDES requirements. Controllable nonpoint sources will be regulated primarily by enforcement of existing facility specific WDRs and various waivers of WDRs that apply to these dischargers.

Dischargers have 10 years to implement BMPs and other actions to meet 100 percent of the required load reductions for interim TMDLs and 12 years to meet 100 percent of the required load reductions for final TMDLs. If shellfishing is shown not to occur at a particular shoreline segment, dischargers get an additional 5 years to meet SHELL objectives. Source control and structural and non-structural BMPs and management measures are likely mechanisms to control bacteria discharges. Monitoring and reporting will be required to assess the efficacy of these measures.

The San Diego Water Board has initiated a Basin Plan amendment to adopt implementation provisions to apply the reference system approach, and natural sources exclusion approach to bacteria WQOs. If implementation provisions are adopted, then TMDLs and allocations established in this project can be recalculated using these approaches.

KEY ISSUES:

1. WQOs on which TMDL numeric targets are based, are based on densities of indicator bacteria, not pathogens.
2. Final TMDLs do include allowable exceedance loading from natural sources. These natural source loads consume almost the entire assimilative capacities of the waterbodies during storm events.

LEGAL CONCERNS: None.

SUPPORTING DOCUMENTS:

1. Notice of Public Hearing and Notice of Filing, dated March 5, 2007.
2. Tentative Resolution No. R9-2007-0044 and Attachment A, Bacteria-Impaired Waterbodies Included, and Attachment B, Draft Basin Plan Amendment.
3. Draft Technical Report.
4. Appendices A through R to the Technical Report.
5. Important Revisions to Draft Technical Report since the First Public Hearing.
6. Additional Information Requested by the San Diego Water Board.

RECOMMENDATION(S): Close the public hearing on the Total Maximum Daily Loads for Indicator Bacteria, Project I – Beaches and Creeks in the San Diego Region and direct staff to provide responses to written comments submitted by stakeholders.