State of California
Regional Water Quality Control Board
San Diego Region

EXECUTIVE OFFICER SUMMARY REPORT
April 9, 2008

ITEM: 6

SUBJECT: **PUBLIC HEARING:** Total Maximum Daily Loads (TMDLs) for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay. The San Diego Water Board will hear testimony and comments on the proposed TMDLs. The San Diego Water Board will deliberate on and consider adoption of an amendment incorporating the TMDLs into the Basin Plan at a subsequent meeting. (Tentative Resolution No. R9-2008-0027). (*Wayne Chiu*)

PURPOSE: To hear testimony and comments on the proposal to amend the *Water Quality Control Plan for the San Diego Basin (9)* (Basin Plan) to incorporate the proposed TMDLs as proposed in Tentative Resolution No. R9-2008-0027 (Supporting Document 2).

PUBLIC NOTICE: Federal Clean Water Act 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 Filing of the written technical report and Notice of Public Hearing for this Basin Plan amendment (Supporting Document 3) were provided by newspaper publication in the San Diego Union Tribune and Orange County Register on February 22, 2008, 48 days in advance of the public hearing scheduled for April 9, 2008. The Notices were also distributed to interested persons by email on February 19, 2008. The Notices and the draft Technical Report (including the tentative Resolution and draft Basin Plan amendment) (Supporting Document 4) were available to the public on our website on February 22, 2008.

DISCUSSION:

A TMDL must be established for the waterbodies listed as impaired on the Clean Water Act section 303(d) List of Water Quality Limited Segments (303(d) List). The shoreline segments of Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay (Supporting Document 1) are listed as impaired for indicator bacteria on the 303(d) List. A TMDL is the maximum amount of a pollutant that a waterbody can receive and still attain water quality standards. A TMDL is also an assessment and planning framework for identifying load reductions or other actions needed to attain water quality standards. An amendment is required to incorporate the TMDL, including an implementation plan, into the Basin Plan.

Project Background

Fecal bacteria originate from the intestinal biota 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 Clean Water Act section 303(d), TMDLs for indicator bacteria were developed to address the bacteria-impaired shoreline segments of Baby Beach and Shelter Island Shoreline Park. The regulatory provisions of these TMDLs have been incorporated into a draft amendment to the Basin Plan.

Beach postings and exceedances of the bacteria water quality objectives (WQOs) indicate a condition of impairment or threatened impairment. The Basin Plan establishes water quality objectives (WQOs) that will support the beneficial uses of a waterbody. Beneficial uses with indicator bacteria WQOs include water contact recreation (REC-1), non-water contact recreation (REC-2), and shellfish harvesting (SHELL). The TMDLs developed in this project are based on the REC-1 and REC-2 beneficial uses. SHELL beneficial use will be addressed in a separate SHELL TMDL and/or standards action pending the outcome of the work of the statewide task force involving the Ocean Planning Unit of the State Water Board, the California Department of Public Health, the USEPA, and the coastal Regional Water Boards.

Technical Approach

Because the climate in southern California has two distinct hydrological patterns, two modeling approaches were

developed for estimating bacteria loads. Separate modeling approaches were developed to quantified bacteria loading and estimate the assimilative capacity (i.e., TMDL) of the receiving waters during wet weather conditions (storm events) and dry weather conditions.

In both modeling approaches, a watershed model and a receiving water model were utilized. This is different from the approach used in Bacteria TMDL Project I for Beaches and Creeks where only a watershed model was used. The watershed model simulated the pollutant loads draining from the watersheds into the receiving waters. The receiving water model used the output of the watershed model as a boundary condition, or bacteria load input into the receiving water. The receiving water model was used to calculate the TMDLs for the receiving waters at the impaired shorelines.

After the TMDLs are calculated, the controllable and uncontrollable point and nonpoint sources are identified and allocated allowable pollutant loads that will comply with the TMDL. Point sources are assigned wasteload allocations (WLAs) and nonpoint sources are assigned load allocations (LAs).

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
The watersheds discharging to the impaired shoreline segments at Baby Beach and Shelter Island Shoreline Park are located entirely within urban areas. Bacteria loading within urbanized areas generally originates from urban runoff discharged from municipal separate storm sewer systems (MS4s). The discharges from the MS4s were identified as the only controllable point source and assigned a WLA. Owners and operators of MS4s will be responsible for meeting the WLAs established in these TMDLs.

The TMDLs will be implemented primarily by reissuing or revising the existing NPDES requirements for MS4 discharges to be consistent with the WLAs and compliance schedules established as part of the Implementation Plan for this TMDL project. However, based on water quality data collected over the last two years, significant improvements

have been observed in water quality at these shorelines. These improvements are likely due to BMP programs recently implemented by the municipalities. At this time, additional monitoring is required to confirm this trend and to collect enough water quality data to support removing these impaired shoreline segments from the Clean Water Act Section 303(d) List of Water Quality Limited Segments (303(d) List).

Therefore, if the present trend continues, the San Diego Water Board expects these shoreline segments to be removed from the 303(d) List within the next 2 to 5 listing cycles (4 to 10 years), and the NPDES requirements may only require continued monitoring and permanent implementation of the current BMP programs to meet the WLAs.

KEY ISSUES:

1. TMDL numeric targets are based on WQOs which are based on densities of indicator bacteria, not pathogens.
2. Natural and background sources within the receiving waters account for a significant portion of the TMDLs for each impaired shoreline segment.
3. The modeling approach is different from Bacteria TMDL Project I for Beaches and Creeks in that a receiving water model was used in conjunction with a watershed model.

LEGAL CONCERNS: None.

SUPPORTING DOCUMENTS:

1. Location Maps.
2. Tentative Resolution No. R9-2008-0027 and Attachment A, Draft Basin Plan Amendment.
3. Notice of Public Hearing and Notice of Filing, dated February 19, 2008.
4. Draft Technical Report and Appendices A through M.

RECOMMENDATION(S): The Executive Officer may have a recommendation following the discussion of this item.