# D R A F T

**STATE WATER RESOURCES CONTROL BOARD**
**BOARD MEETING SESSION – DIVISION OF WATER QUALITY**
**TBD**

**ITEM #**

## SUBJECT

CONSIDERATION OF A RESOLUTION APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO REGION (BASIN PLAN) TO INCORPORATE TOTAL MAXIMUM DAILY LOADS FOR INDICATOR BACTERIA IN BABY BEACH IN DANA POINT HARBOR AND SHELTER ISLAND SHORELINE PARK IN SAN DIEGO BAY

## DISCUSSION

On June 11, 2008, the San Diego Regional Water Quality Control Board (San Diego Water Board) adopted Resolution No. R9-2008-0027 amending the Basin Plan to incorporate Total Maximum Daily Loads (TMDLs) for indicator bacteria for Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay. Baby Beach and Dana Point Harbor are located in southern Orange County, and Shelter Island Shoreline Park and San Diego Bay are located within San Diego County. The purpose of these TMDLs is to restore and protect the recreational beneficial uses of these two shoreline segments. The numeric targets for these TMDLs were set equal to the recreational water contact beneficial use water quality objectives for total coliform, fecal coliform, and *Enterococcus* indicator bacteria prescribed in the Basin Plan.

Specific segments of San Diego Bay and Dana Point Harbor in the San Diego Region were placed on the List of Water Quality Limited Segments under section 303(d) of the Clean Water Act because levels of total coliform, fecal coliform and/or *Enterococcus* at those locations exceeded water quality objectives for the water-contact recreation (REC-1) beneficial use. The REC-1 beneficial use is particularly sensitive to and subject to impairment by pathogens when elevated densities of indicator bacteria exist in the water. Persons who ingest water during recreation activities in water containing indicator bacteria at densities in excess of water quality objectives for REC-1, are significantly more likely to incur infections or illness caused by pathogens in the water than when indicator bacteria occur at densities at or below the applicable water quality objectives.

The water quality objectives for indicator bacteria in inland surface waters and enclosed bays and estuaries designated as having the REC-1 beneficial use include total coliform, fecal coliform and *Enterococcus*. Total coliform bacteria density (in marine waters) must be less than 1,000 per 100 milliliters (ml) (10 per ml); provided that not more than 20 percent of the samples at any station, in any 30-day period, may exceed 1,000 per 100 ml (10 per ml), and provided further that no single sample when verified by a repeat sample taken within 48 hours shall exceed 10,000 per 100 ml (100 per ml). Fecal coliform density (in marine waters) must be based on a minimum of not less than five samples for any 30-day period, fecal coliform bacteria density shall not exceed a log mean of 200 per 100 ml, nor shall more than 10 percent of total samples during any 30-day period exceed 400 per 100 ml. Finally, for *Enterococcus* density (in marine waters), the geometric mean shall not exceed 35 colonies per 100 ml. The single sample maximum allowable density in designated beach areas is 104 colonies per 100 ml; in

moderately or lightly used areas it is 276 colonies per 100 ml; and in infrequently used areas it is 500 colonies per 100 ml. The numeric targets for these TMDLs are set equal to the REC-1 water quality objectives for indicator bacteria contained in the Basin Plan. Since numeric targets are equal to the water quality objectives, attainment of TMDLs will ensure attainment of these water quality objectives.

Discharges of bacteria from all identified sources that are susceptible to control or management must be reduced in order to meet the TMDLs. Discharges from controllable sources were identified as originating from municipal separate storm sewer systems (MS4s) for urbanized sources. Controllable sources must be reduced by an amount in proportion to the existing loads generated in each watershed, as calculated using a computer model. TMDLs are reported on a watershed basis and must be jointly achieved by all dischargers of bacteria located in the watersheds. Natural sources of bacteria are considered uncontrollable, and therefore no load reductions are specified in the TMDL.

Sources of bacteria are the same under both wet- and dry-weather conditions. Bacteria can enter surface waters from both nonpoint and point sources. Nonpoint sources are typically diffuse sources that have multiple routes of entry into surface waters. Point sources typically discharge at a specific location from pipes, outfalls, and conveyance channels. The only nonpoint sources identified were natural or background sources, such as direct inputs from birds, terrestrial and aquatic animals, wrack line and aquatic plants, sediments, or other unidentified and unquantified sources within the receiving waters, which are considered uncontrollable. The only controllable point sources identified in the watersheds were discharges from MS4s. However, for sources of bacteria that originate from the watersheds draining into the receiving waters, which are located entirely within urbanized areas, the method of transport under dry- and wet- weather conditions is very different. Wet weather loading is dominated by episodic storm flows that wash built-up surface bacteria from all land use types in a watershed during dry periods. Dry weather loading is dominated by nuisance flows from urban land use activities such as car washing, sidewalk washing, and lawn over-irrigation, which transport bacteria into receiving waters.

The TMDLs will be implemented primarily by reissuing or revising the existing National Pollutant Discharge Elimination System (NPDES) requirements for MS4 discharges to include water quality based effluent limitations (WQBELs) that are consistent with the assumptions and requirements of the bacteria waste load allocations for MS4 discharges. WQBELs for municipal stormwater discharges can be either numeric or non-numeric. Non-numeric WQBELs typically consist of a program of expanded or refined best management practices (BMPs). The Implementation Plan also identifies several special studies that the dischargers may conduct to fill data gaps, which can be used to refine the TMDLs and achieve the required load reductions, and/or modify compliance requirements. The Implementation Plan requires the dischargers to conduct monitoring to assess the effectiveness of the implementation measures in achieving the load and wasteload reductions.

The goal of the Implementation Plan is to ensure that water quality objectives for indicator bacteria for the shoreline segments at Baby Beach and Shelter Island Shoreline Park are attained and maintained throughout the water body and in all seasons of the year. The specific objectives of this Implementation Plan consist of the following: 1) identification of the persons responsible for meeting the wasteload allocations in discharges of bacteria to the impaired shoreline segments of Baby Beach and Shoreline Park; 2) establishment of a time schedule for meeting the load allocations and wasteload allocations (the schedule will establish interim

milestones that are to be achieved until the load allocations and wasteload allocations are achieved); 3) reissuance or revision of the various existing statewide and regional NPDES requirements that regulate urban runoff and other point source discharges to the shoreline segments of Baby Beach and Shelter Island Shoreline Park to implement wasteload allocations; 4) establishment of mechanisms that document and track BMP implementation, monitor BMP effectiveness in achieving the allocations in bacteria discharges, assess success in achieving TMDL objectives and milestones, and report on TMDL program effectiveness in attaining water quality objectives for indicator bacteria in the receiving waters at the impaired shoreline segments of Baby Beach and Shelter Island Shoreline Park; 5) enforcement of the Basin Plan waste discharge prohibitions for illegal discharges from vessels and wastewater collection systems and treatment plants where these discharges contribute significant bacteria loads to receiving waters; and 6) identification of the conditions for applying a natural sources exclusion approach if the REC-1 water quality objectives cannot be met in the receiving waters, and if natural and background sources appear to be the sole source of continued impairment.

Based on the past and current BMP programs that have been implemented to reduce bacteria loading, and water quality monitoring data, compliance schedules were developed for each impaired shoreline segment. For the water at Baby Beach to achieve wet weather TMDLs, 50 percent enterococcus bacteria reduction will be required by year seven and 100 percent reduction by year 10. Continued monitoring will be done past the ten-year mark. For the water at Baby Beach to achieve dry weather TMDLs, 50 percent reduction will be required by year three and 100 percent reduction by year five. Continued monitoring will be done past the five-year mark. For the water at Shelter Island Shoreline Park to achieve wet and dry weather TMDLs, 100 percent reduction must be achieved by the year 2012.

**POLICY ISSUE**

Should the State Water Resources Control Board (State Water Board) approve the amendment to incorporate TMDLs for indicator bacteria in Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay?

**FISCAL IMPACT**

San Diego Water Board and State Water Board staff work associated with or resulting from this action will be addressed with existing and future budgeted resources.

**REGIONAL WATER BOARD IMPACT**

Yes, approval of this resolution will amend the San Diego Water Board's Basin Plan.

**STAFF RECOMMENDATION**

That the State Water Board:

1. Approves the amendment to the Basin Plan as adopted under San Diego Resolution No. R9-2008-0027.

2. Authorizes the Executive Director or designee to submit the amendment adopted under San Diego Water Board Resolution No. R9-2008-0027 to the Office of Administrative Law for approval of the regulatory provisions and to the U.S. Environmental Protection Agency for approval of the TMDLs.

State Water Board action on this item will assist the Water Boards in reaching Goal 1 of the Strategic Plan Update: 2008-2012 to implement strategies to fully support the beneficial uses for all 2006-listed water bodies by 2030. In particular, approval of this item will assist in fulfilling Action 1 to prepare, adopt, and take steps to carry out TMDLs designed to meet water quality standards for all impaired water bodies on the 2006 list.

# D R A F T

**STATE WATER RESOURCES CONTROL BOARD**
**RESOLUTION NO. 2009-**

APPROVING AN AMENDMENT TO THE WATER QUALITY CONTROL PLAN FOR THE SAN DIEGO REGION (BASIN PLAN) TO INCORPORATE TOTAL MAXIMUM DAILY LOADS FOR INDICATOR BACTERIA IN BABY BEACH IN DANA POINT HARBOR AND SHELTER ISLAND SHORELINE PARK IN SAN DIEGO BAY

WHEREAS:

1. On June 11, 2008, the San Diego Water Board adopted Resolution No. R9-2008-0027 amending the Basin Plan to incorporate Total Maximum Daily Loads (TMDLs) for indicator bacteria Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay.

2. The San Diego Water Board found that the analysis contained the California Environmental Quality Act (CEQA) "Substitute Documentation" for the proposed Basin Plan amendment, including the CEQA Checklist, the staff report, and the responses to comments complies with the requirements of the State Water Board's certified regulatory CEQA process, as set forth in the California Code of Regulations, Title 23, section 3775 et seq.

3. The San Diego Water Board found the Basin Plan amendment would not have a significant adverse effect on the environment and is consistent with the Statement of Policy with Respect to Maintaining High Quality of Waters in California (State Water Board Resolution No. 68-16) and the federal Antidegradation Policy (40 CFR part 131.12).

4. The State Water Board finds that the Basin Plan amendment is in conformance with Water Code sections 13240 and 13242, which specifies that Regional Water Quality Control Boards may revise Basin Plans and implement programs for achieving water quality objectives. The State Water Board also finds that these TMDLs are consistent with the requirements of federal Clean Water Act section 303(d).

5. The purpose of these TMDLs is to restore and protect the recreational beneficial uses (REC-1) of these two shoreline segments. The numeric targets for these TMDLs were set equal to the recreation water contact beneficial use water quality objectives for total coliform, fecal coliform, and *Enterococcus* indicator bacteria prescribed in the Basin Plan.

6. The numeric targets for these TMDLs consist of the REC-1 water quality objectives for indicator bacteria contained in the Basin Plan. Since numeric targets are equal to the water quality objectives for total coliform, fecal coliform, and *Enterococci* bacteria, attainment of TMDLs will ensure attainment of these water quality objectives.

7. The Basin Plan amendments do not become effective until approved by the State Water Board and until the regulatory provisions are approved by the Office of Administrative Law (OAL). The TMDLs must also be approved by the U.S. Environmental Protection Agency (U.S. EPA).

THEREFORE BE IT RESOLVED THAT:

The State Water Board:

1. Approves the amendment to the Basin Plan adopted under San Diego Water Board Resolution No. R9-2008-0027.

2. Authorizes the Executive Director or designee to submit the amendment adopted under San Diego Water Board Resolution No. R9-2008-0027 to OAL for approval of the regulatory provisions and to U.S. EPA for approval of the TMDL.

**CERTIFICATION**

The undersigned Clerk to the Board does hereby certify that the foregoing is a full, true, and correct copy of a resolution duly and regularly adopted at a meeting of the State Water Resources Control Board held on (TBD).

Jeanine Townsend
Clerk to the Board