Item 11
Water Board Permitting & TMDL Framework

Rebecca Fitzgerald
State Water Resources Control Board
Standards & Assessment Section Manager

CALIFORNIA
Water Boards

California Bacteria Summit

September 15, 2022

Presentation Outline

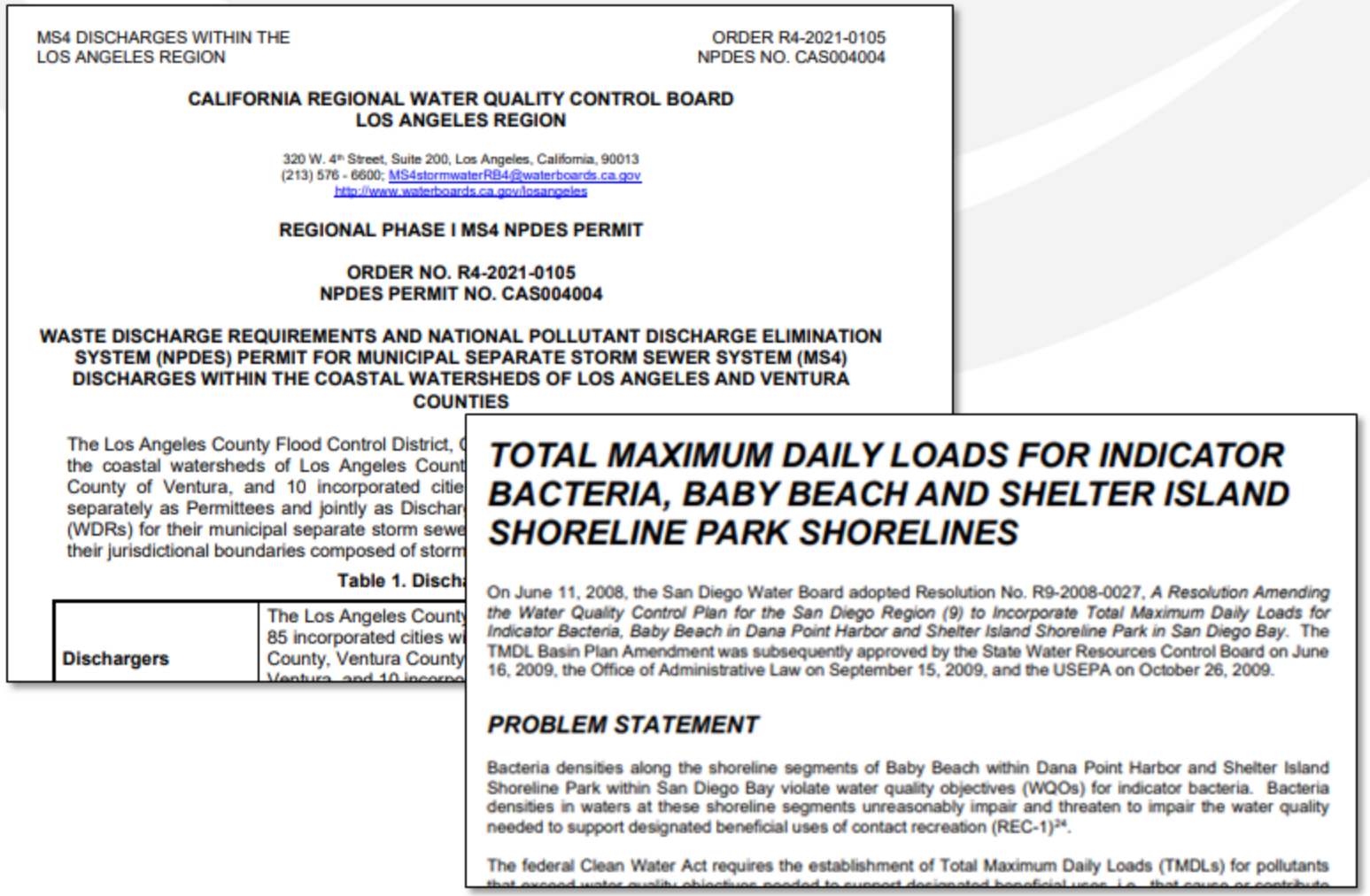
1. Overview of the Water Board's regulatory framework
2. Permits
   - Types of permits
   - Common permits with bacteria requirements
   - Common bacteria requirements
3. Addressing Impaired Waters
   - Identifying impaired waters
   - Restoring impaired waters, including TMDLs
4. Other Implementation Options

Permitting & TMDL Framework

Bacteria is regulated by the Water Boards primarily by:

- Permitting discharges
- Restoring bacteria-impaired waters

The Water Board also provides grants and loans.



MS4 DISCHARGES WITHIN THE LOS ANGELES REGION

ORDER R4-2021-0105
NPDES NO. CAS004004

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
LOS ANGELES REGION

320 W. 4th Street, Suite 200, Los Angeles, California, 90013
(213) 576 - 6600; MS4stormwaterRB4@waterboards.ca.gov
http://www.waterboards.ca.gov/losangeles

REGIONAL PHASE I MS4 NPDES PERMIT

ORDER NO. R4-2021-0105
NPDES PERMIT NO. CAS004004

WASTE DISCHARGE REQUIREMENTS AND NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) DISCHARGES WITHIN THE COASTAL WATERSHEDS OF LOS ANGELES AND VENTURA COUNTIES

The Los Angeles County Flood Control District, C
the coastal watersheds of Los Angeles Count
County of Ventura, and 10 incorporated citie
separately as Permittees and jointly as Dischar
(WDRs) for their municipal separate storm sewe
their jurisdictional boundaries composed of storm

Table 1. Discha

Dischargers	The Los Angeles County 85 incorporated cities wi County, Ventura County Ventura, and 10 incorpo

TOTAL MAXIMUM DAILY LOADS FOR INDICATOR BACTERIA, BABY BEACH AND SHELTER ISLAND SHORELINE PARK SHORELINES

On June 11, 2008, the San Diego Water Board adopted Resolution No. R9-2008-0027, *A Resolution Amending the Water Quality Control Plan for the San Diego Region (9) to Incorporate Total Maximum Daily Loads for Indicator Bacteria, Baby Beach in Dana Point Harbor and Shelter Island Shoreline Park in San Diego Bay*. The TMDL Basin Plan Amendment was subsequently approved by the State Water Resources Control Board on June 16, 2009, the Office of Administrative Law on September 15, 2009, and the USEPA on October 26, 2009.

PROBLEM STATEMENT

Bacteria densities along the shoreline segments of Baby Beach within Dana Point Harbor and Shelter Island Shoreline Park within San Diego Bay violate water quality objectives (WQOs) for indicator bacteria. Bacteria densities in waters at these shoreline segments unreasonably impair and threaten to impair the water quality needed to support designated beneficial uses of contact recreation (REC-1)[24].

The federal Clean Water Act requires the establishment of Total Maximum Daily Loads (TMDLs) for pollutants

Types of Permits

National Pollutant Discharge Elimination System (NPDES)

- For point sources (discrete conveyance like a pipe or ditch)
- Per federal Clean Water Act

Waste Discharge Requirements (WDRs) and Waivers of WDRs

- Primarily for nonpoint sources
- Per California Water Code

Individual Permit

- Issued to an individual discharger or group of individuals
- Most often issued by a Regional Water Board

General Permit

- Issued to a categorical group of discharges; the individual may enroll for coverage
- Issued by both Regional Water Boards and the State Water Board

Common Permits with Bacteria Requirements

Municipal Stormwater (MS4) NPDES	Phase I: >100,000 pop.	Regional Individual, Group, or General Permits
	Phase II: < 100,000 pop.	Statewide General Permit
Wastewater NPDES	Wastewater from Sewage Treatment	Regional Individual or General Permits

MS4: Municipal Separate Storm Sewer System

Note: Other Water Board permits also include bacteria-related limitations or requirements.

Common Permit Requirements

Goal: To prevent an impact to beneficial uses

Components:

- Effluent Limitations & Receiving Water Limitations
  - Often set at concentrations that equal the bacteria water quality objectives
  - TMDL waste load allocations are translated into permit effluent limitations
- Implementation of Control Measures
  - Wastewater disinfection
  - Stormwater best management practices or other timely control actions
- Monitoring and Reporting Requirements

Presentation Outline

1. Overview of the Water Board's regulatory framework
2. Permits
   - Types of permits
   - Common permits with bacteria requirements
   - Common bacteria requirements
3. Addressing Impaired Waters
   - Identifying impaired waters
   - Restoring impaired waters, including TMDLs
4. Other Implementation Options

Identifying Bacteria-Impaired Waters

- The Water Boards assess surface water data
- Waterbodies that do not attain standards are listed on the Clean Water Act 303(d) List of Impaired Waters
- 520 waterbodies are currently listed as impaired for recreational uses
- 130 waterbodies are currently listed as impaired for shellfish harvesting

- Map tool to search for waterbody impairments: https://gispublic.waterboards.ca.gov/portal/apps/webappviewer/index.html?id=6cca2a3a18154655992012663 73cbb7b

Restoring Impaired Waters

- Regional Water Boards prioritize and undertake actions to restore
- Common tool is the TMDL: the total maximum daily load
  - Problem statement
  - Total load
    - Often expressed as a bacteria concentration equal to the objectives
  - Implementation Plan
  - Source analysis
  - Load allocations
    - Wasteload allocations are translated into permit effluent limitations
  - Implementation Timeline
- Another tool is a restoration program

Finding your local TMDL

- Check the Regional Water Board's Basin Plan at https://www.waterboards.ca.gov/plans_policies/
- Check the Regional Water Board's webpage at https://www.waterboards.ca.gov/waterboards_map.html

Other Bacteria Implementation Options

The Water Boards may include a frequency of exceedance of the objectives based on the observed exceedance frequency . . .

. . . in a minimally disturbed reference waterbody

- Reference System Approach
- Used to ensure bacteriological water quality is at least as good as that of an applicable reference waterbody, without degradation

. . . of the natural sources of bacteria of a targeted waterbody

- Natural Source Exclusion Approach
- May be used after all anthropogenic sources of bacteria are identified, quantified, and controlled

Must be done as part of a TMDL or a Basin Plan amendment

Regulatory Chain