



San Francisco Bay Regional Water Quality Control Board

July 18, 2023

San Francisco Public Utilities Commission
Joel Prather, Acting Assistant General Manager, Wastewater Enterprise
525 Golden Gate Avenue, 11th Floor
San Francisco CA 94102

California State Parks
Jason Hart, Bay Area District Maintenance Chief
6201 Channel Drive
Santa Rosa, CA 95409

**Subject: Water Code Section 13383 Order Requiring
Enhanced Implementation Plans for Candlestick Park Beaches,
San Francisco Bay Beaches Bacteria TMDL**

Dear Joel Prather and Jason Hart:

Pursuant to Water Code section 13383, this letter requires the City and County of San Francisco (San Francisco) and California Department of Parks and Recreation (State Parks) to submit enhanced implementation plans as described in the requirements section of this letter to further investigate sources of bacteria at three San Francisco Bay beaches located at Candlestick Park State Recreation Area. Submittal deadlines are specified below.

Background

Three San Francisco Bay beaches (Sunnydale Cove, Windsurfer Circle, and Jackrabbit Beach) are listed as impaired by bacteria because observed fecal indicator bacteria densities in water at these beaches exceed applicable water quality objectives. As required by Clean Water Act section 303(d), the San Francisco Bay Regional Water Quality Control Board (Water Board) amended the San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan) to include a Total Maximum Daily Load (TMDL) and implementation plan to achieve water quality objectives at these beaches (see Basin Plan section 7.2.5). Over the last five years, none of the three beaches have met the TMDL targets. As a result, the TMDL requires San Francisco and State Parks to develop enhanced implementation plans to further investigate sources of bacteria at these beaches and implement additional actions to reduce bacteria loads from sanitary sewer collection systems and urban runoff.

JAYNE BATTEY, CHAIR | EILEEN WHITE, EXECUTIVE OFFICER

TMDL Targets Evaluation

To determine whether the TMDL targets were met, we evaluated ambient receiving water data San Francisco submitted for July 2017 through June 2022 and compared these data with the targets: 30-day geometric mean of 35 MPN/100mL calculated with each new sample, and single-sample maximum of 104 MPN/100mL. Our evaluation included the following assumptions:

- Non-detect samples: The detection limit of the IDEXX Enterolert test San Francisco uses is 10 MPN/100 mL, and no bacteria were detected in many ambient samples. When no bacteria were detected, we estimated non-detect values to be 4 MPN/100 mL because (1) this is the highest value reported near San Francisco when the San Francisco Estuary Institute measured surface water enterococcus levels in 2019 and 2020,¹ and (2) this is close to one-half the detection limit.
- Upper limit samples: The dilution series that San Francisco uses for the IDEXX Enterolert test only allows a maximum measurable value of 24,196 MPN/100mL. This evaluation replaces values reported to be above 24,196 MPN/100mL with 24,196 MPN/100mL.
- Non-sampled days: Non-sampled days were not considered in this evaluation. The 30-day geometric mean calculation only incorporates actual sample results that occurred within the 30-day calculation period.

The results of this evaluation are presented in the table below. While the number of exceedances at the three beaches fluctuates each year, bacteria densities at the beaches significantly exceed the TMDL targets. In accordance with the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Table 4.2), a water body may be removed from the 303(d) list of impaired waters if a target is exceeded no more than 4 to 19 times, depending on the number of samples included in the evaluation. This evaluation used this delisting procedure as guidance to determine if TMDL targets were being met at each beach. As shown in the table, the number of numeric target exceedances at the beaches is often above the number of exceedances allowed for delisting. Values shown in bold in the table indicate that the data gathered at the corresponding beach did not meet the threshold for delisting for that year.

¹ San Francisco Estuary Institute, *Enterococci in San Francisco Bay surface waters near seventeen deep water municipal wastewater discharges in dry and wet seasons*, prepared for Bay Area Clean Water Agencies, 2020.

Table 1. TMDL Target Exceedances and 303(d) Listing Policy Allowable Exceedances

Year	Beach	Number of Samples	Maximum Target Exceedances to Delist	Geomean Exceedances (rolling 30d)	Single-Sample Maximum Exceedances (each)
2022 (7/21 – 6/22)	Sunnydale Cove	65	10	24	13
	Windsurfer Circle	71	11	32	22
	Jackrabbit Beach	64	10	20	13
2021 (7/20 – 6/21)	Sunnydale Cove	60	9	0	4
	Windsurfer Circle	86	14	42	25
	Jackrabbit Beach	62	10	2	5
2020 (7/19 – 6/20)	Sunnydale Cove	62	10	17	9
	Windsurfer Circle	71	11	16	9
	Jackrabbit Beach	59	9	3	3
2019 (7/18 – 6/19)	Sunnydale Cove	75	12	36	22
	Windsurfer Circle	73	12	38	16
	Jackrabbit Beach	66	10	9	11
2018 (7/17 – 6/18)	Sunnydale Cove	65	10	15	10
	Windsurfer Circle	81	13	44	24
	Jackrabbit Beach	60	9	0	5

Requirements

San Francisco and State Parks, either independently or together, shall submit to the Water Board implementation plans that incorporate the enhanced implementation elements from Basin Plan Table 7.2.5-5 and implementation schedules that are as short as practicable. San Francisco and State Parks shall submit annual reports, due by October 15 each year, that describe implementation activities and include, as appropriate, updated implementation plans.

The enhanced implementation elements from Basin Plan Table 7.2.5-5 are reiterated below with additional instructions.

- 1) By October 15, 2023, for parties that own or operate a sanitary sewer collection system, a plan that prioritizes sewer system inspections and repairs in areas within

0.5 miles of the beach or otherwise connected to the beach that have not been inspected since 2016. The plan shall include a diagram of prioritized infrastructure, a time schedule for implementing short-term and long-term plans, and, as necessary, a schedule for developing the funds needed for the capital improvement plan.

- 2) By October 15, 2023, a plan describing best management practices (BMPs) being implemented and additional BMPs that will be implemented to reduce bacteria discharges to the beach related to urban runoff. The plan shall include an implementation schedule and milestones. The plan shall evaluate the current state of stormwater management in Candlestick Point State Recreation Area, including (1) identification of jurisdictional responsibility by area (i.e., areas where San Francisco is responsible and areas where State Parks is responsible), (2) map of the existing stormwater system showing inlets and discharge points, (3) update on the operability of the stormwater system and any planned rehabilitation projects or maintenance improvements, and (4) condition and effectiveness analysis for any BMPs already in place.
- 3) By October 15, 2024, a supplemental monitoring plan (supplemental to ongoing beach monitoring) and implementation schedule to investigate remaining bacteria sources to the beach. San Francisco and State Parks may develop and submit the plan independently or together. The plan shall include a quantitative rationale to support locations and types of enhanced bacteria BMPs, and/or revision of the numeric targets to reflect bacteria contributions from non-controllable sources. The plan shall use *The California Microbial Source Identification Manual: A Tiered Approach to Identifying Fecal Pollution Sources to Beaches* technical report published in December 2013 by the Southern California Coastal Water Research Project as guidance. This manual provides a step-by-step framework to develop a microbial source identification approach. The recommended lab analyses identified in the 2013 manual may need to be updated. San Francisco and State Parks shall consider incorporating a predictive beach water quality model as recommended by U.S. EPA (<https://www.epa.gov/beach-tech/models-predicting-beach-water-quality>) to evaluate data and support new monitoring locations and frequencies, as listed on the following website.

San Francisco and State Parks shall submit required reports electronically to the attention of Water Board staff, i.e., Samuel Plummer at sam.plummer@waterboards.ca.gov. All submittals shall include the following perjury statement, signed by a duly authorized representative:

I certify under penalty of law that this document and all attachments were prepared by me, or under my direction or supervision, and the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant civil penalties for submitting false information, including the possibility of fine and imprisonment.

Authority

The Water Board requires this information pursuant to Water Code section 13383. Water Code section 13383(a) authorizes the Water Board to establish monitoring, inspection, entry, reporting, and recordkeeping requirements, as authorized by Water Code sections 13160, 13376, or 13377, for any person who discharges to navigable waters, introduces pollutants to a publicly owned treatment works, or owns or operates a publicly owned treatment works or other treatment works treating domestic sewage. Water Code section 13383(b) further authorizes the Regional Water Board to require “any person subject to this section to establish and maintain monitoring equipment or methods ... and provide other information as may be reasonably required.” The Regional Water Board is authorized to require San Francisco and State Parks to provide information pursuant to Water Code section 13383 because enhanced implementation plans and supplemental monitoring plans are needed to address discharges of bacteria to navigable waters that are causing exceedances of water quality standards. Imposing these requirements implements the San Francisco Bay Beaches Bacteria TMDL (Basin Plan section 7.2.5).

Failure to comply with the requirements in this order may subject San Francisco and/or State Parks to administrative civil liability of up to \$10,000 per day of violation pursuant to Water Code section 13385. Any extension in the deadlines set forth above must be confirmed in writing by the Water Board Executive Officer.

Any person aggrieved by this action may file a petition with the State Water Resources Control Board in accordance with Water Code section 13320 and California Code of Regulations, title 23, section 2050. The State Water Resources Control Board must receive the petition within 30 days of the date of this letter. Copies of the law and regulations that apply to water quality petitions may be found at http://www.waterboards.ca.gov/public_notices/petitions/water_quality.

Please contact Samuel Plummer with any questions at (510) 622-2485 or Sam.Plummer@waterboards.ca.gov.

Sincerely,

 Digitally signed
by Eileen White
Date: 2023.07.18
19:55:58 -0700

Eileen White
Executive Officer

cc: w/ attachment (via email):

Amy Chastain, San Francisco Public Utilities Commission
Diane O'Donohue, San Francisco Public Utilities Commission
Michael Stevens, California State Parks