Coastal Pathogen Source Reduction Strategy Fact Sheet

Coastal Pathogen Source Reduction Strategy

The Coastal Pathogen Project investigated fecal pollution and associated sources in several streams and beaches in Humboldt County, five beaches in Mendocino County, and one beach in Sonoma County. Based on the results of that investigation, the North Coast Regional Water Quality Control Board (North Coast Water Board) staff have developed the Coastal Pathogen Source Reduction Strategy (Implementation Plan) to address pollution and impairments of Water Contact Recreation (REC-1) and/or Shellfish Harvesting (SHELL) beneficial uses arising from controllable anthropogenic sources of fecal waste (human, dog, and cattle fecal waste). The Implementation Plan addresses source control measures for six REC-1 impaired streams on the Clean Water Act Section 303(d) List of Impaired Water Bodies (Section 303[d] List). In addition, the Implementation Plan addresses 13 streams, currently not impaired, but having at least one exceedance of the REC-1 Bacteria water quality objective (objective). Addressing these 13 streams now will prevent them from becoming impaired in the future. The Implementation Plan further addresses source control for nine beaches on the Section 303(d) List, impaired for REC-1 and/or SHELL beneficial uses. Source control implementation for three REC-1 and/or SHELL impaired beaches is not addressed in the Implementation Plan as these beaches did not show evidence of controllable anthropogenic fecal sources but were identified as having natural background sources of fecal waste (gull, deer, and elk waste).

Source Control

North Coast Water Board staff evaluated fecal indicator bacteria (FIB), microbial source tracking (MST), land cover, land use, and cattle presence data and identified dog waste as a significant source of fecal pollution to almost all waterbodies evaluated, followed by human waste. In addition, cattle waste was also identified as a contributor to a small number of the waterbodies evaluated. Fecal waste from ruminant wildlife (deer, elk) and gulls was also a major contributor to pollution in a large number of the waterbodies evaluated. North Coast Water Board staff identified onsite wastewater treatment systems (OWTS), stormwater runoff, damaged, defective, or non-functioning wastewater collection systems, grazing, recreational use, and transient communities as the sources of controllable anthropogenic fecal waste contributing to the pollution detected in the waterbodies sampled. The North Coast Water Board will be prioritizing the control of anthropogenic (human, dog, cattle) fecal waste sources identified in the waterbodies sampled, rather than the wildlife (deer, elk, gulls) fecal waste sources

because 1) feces from dogs, humans, and cattle are more harmful to public health than feces from wildlife and shorebirds, and 2) pollutant discharge from these anthropogenic sources is controllable. Source control will be achieved through the use of existing regulatory and or non-regulatory mechanisms currently being employed by regulatory agencies and other entities with jurisdiction in the sampled areas.

Implementation Plan Details

The Implementation Plan places impaired waterbodies identified as having controllable anthropogenic sources of fecal pollution (six streams and nine beaches) on an "Impaired Waterbodies Action List" (the Action List) with a high priority for source control and the 13 streams with exceedances of the REC-1 Objective on a "Waterbody Watch List" (the Watch List) with a medium priority for source control. The waterbodies on the Action List will be addressed first for source control, followed by the waterbodies on the Watch List. The Action and Watch Lists only contain those waterbodies that were sampled under studies that had a complete Quality Assurance Project Plan (QAPP) at the time of data assessment. The Action List waterbody details are provided in Table 1, the Watch List waterbody details are provided in Table 2, and the source control mechanisms and timeline are described in Table 3.

The Implementation Plan will be presented as an Information Item at the April 1–2 North Coast Water Board Meeting to obtain approval of the North Coast Water Board to submit the Implementation Plan as an attachment to the 2028 Integrated Report. Board Meeting details are provided on the North Coast Water Board website - https://www.waterboards.ca.gov/northcoast/board_info/board_meetings/. The 2028 Integrated Report (with the attached Implementation Plan) will then be submitted to the State Water Resources Control Board (State Water Board) for approval. The State Board approval process consists of a public comment period from January 2027 to April 2027. During the public comment period the 2028 Integrated Report, and attached Implementation Plan, will be available to the public for review and comment. Details of the public comment period will be provided by the State Water Board on their website - https://www.waterboards.ca.gov/public_notices/comments/. After State Water Board approval the 2028 Integrated Report (and attached Implementation Plan) will be submitted to the United States Environmental Protection Agency (USEPA) for acceptance.

Project updates, and announcements will be distributed through the North Coast Water Board email subscription list - https://public.govdelivery.com/accounts/CAWRCB/subscriber/new?qsp=north_coast

and posted on the project webpage - https://www.waterboards.ca.gov/northcoast/water_issues/programs/tmdls/coastal_pathogen/

Table 1 Impaired Waterbody Action List

Waterbody Type	County	Impaired Waterbody	Impaired Beneficial Use	Sampling Station Name	Major Controllable Anthropogenic Fecal Source(s)
Stream	Humboldt	Eureka Plain HU, Elk River Watershed, Lower Elk River and Martin Slough	REC-1	Elk River at Highway 101	Dog, Human & Dairy Cattle
Stream	Humboldt	Eureka Plain HU, Elk River Watershed, Lower Elk River and Martin Slough	REC-1	Martin Slough at Pine Hill Road	Dog & Human
Stream	Humboldt	Eureka Plain HU, Gannon Slough	REC-1	Gannon Slough near Highway 101	Dog & Human
Stream	Humboldt	Eureka Plain HU, Jolly Giant Creek	REC-1	Jolly Giant Creek at Samoa Boulevard	Dog & Human
Stream	Humboldt	Mad River HU, Norton Creek	REC-1	Norton Creek at Highway 101	Dog
Stream	Humboldt	Trinidad HU, Little River HA	REC-1	Little River at Highway 101	Dog & Non-Dairy Cattle

Waterbody Type	County	Impaired Waterbody	Impaired Beneficial Use	Sampling Station Name	Major Controllable Anthropogenic Fecal Source(s)
Beach	Humboldt	Clam Beach (near Strawberry Creek)	REC-1 & SHELL	Clam Beach at Strawberry Creek	Dog & Human
Beach	Humboldt	Luffenholtz Beach	REC-1 & SHELL	Luffenholtz Beach at Luffenholtz Creek	Dog
Beach	Humboldt	Moonstone County Park	SHELL	Moonstone Beach at Little River	Dog & Non-dairy Cattle
Beach	Humboldt	Trinidad State Beach	REC-1 & SHELL	Trinidad State Beach at Mill Creek	Dog
Beach	Mendocino	Big River Beach at Mendocino Bay	SHELL	Mendocino Bay at Big River	Dog
Beach	Mendocino	Caspar Headlands State Beach	SHELL	Caspar Beach at Caspar Creek	Dog
Beach	Mendocino	Hare Creek Beach	SHELL	Hare Beach at Hare Creek	Dog & Human

Waterbody Type	County	Impaired Waterbody	Impaired Beneficial Use	Sampling Station Name	Major Controllable Anthropogenic Fecal Source(s)
Beach	Mendocino	Pudding Creek Beach	SHELL	Pudding Beach at Pudding Creek	Human
Beach	Sonoma	Campbell Cove	REC-1 & SHELL	Campbell Cove at Bodega Bay	Dog

Table 2 Impacted Waterbody Watch List

Waterbody Type	County	Waterbody Name	Objective with Exceedance	Sampling Station Name	Major Controllable Anthropogenic Fecal Source(s)
Stream	Humboldt	Campbell Creek	REC-1	Campbell Creek at 14th Street & Union Street	Dog & Human
Stream	Humboldt	Campbell Creek	REC-1	Campbell Creek at 7th Street	Dog & Human
Stream	Humboldt	Cooper Gulch	REC-1	Cooper Gulch at Myrtle Avenue & 8th Street	Dog & Human
Stream	Humboldt	Elk River	REC-1	Elk River at Zanes Road	Dog & Dairy Cattle
Stream	Humboldt	Grotzman Creek	REC-1	Grotzman Creek at Bayside Road	Dog & Human
Stream	Humboldt	Jacoby Creek	REC-1	Jacoby Creek at Old Arcata Road	Dog
Stream	Humboldt	Jolly Giant Creek	REC-1	Jolly Giant Creek at 14th Street near M Street	Dog & Human

Waterbody Type	County	Waterbody Name	Objective with Exceedance	Sampling Station Name	Major Controllable Anthropogenic Fecal Source(s)
Stream	Humboldt	Jolly Giant Creek	REC-1	Jolly Giant Creek at 7th and J Streets	Dog & Human
Stream	Humboldt	Jolly Giant Creek	REC-1	Jolly Giant Creek at 9th and J Streets	Dog & Human
Stream	Humboldt	Jolly Giant Creek	REC-1	Jolly Giant Creek at Alliance Road near 17th Street	Dog & Human
Stream	Humboldt	Liscom Slough	REC-1	Liscom Slough at Jackson Road	Dog, Human, & Dairy Cattle
Stream	Humboldt	Martin Slough	REC-1	Martin Slough at Campton Street & Fern Street	Dog & Human
Stream	Humboldt	McDaniel Slough	REC-1	McDaniel Slough at Q Street	Dog & Human
Stream	Humboldt	Salmon Creek	REC-1	Salmon Creek at Eel River Drive	Dog, Dairy Cattle & Non-dairy Cattle

Waterbody Type	County	Waterbody Name	Objective with Exceedance	Sampling Station Name	Major Controllable Anthropogenic Fecal Source(s)
Stream	Humboldt	Swain Slough	REC-1	Swain Slough at Elk River Road	Dog, Human & Dairy Cattle
Stream	Humboldt	Unnamed Slough	REC-1	Unnamed Slough at Lanphere Road	Dog, Human & Dairy Cattle
Stream	Humboldt	Unnamed Slough	REC-1	Unnamed Slough at Ranch Road	Dairy Cattle

Table 3 Regulatory and Non-Regulatory Mechanisms and Timelines

Controllable Anthropogenic Fecal Source	Source	Mechanism	Timeline
Dog	Stormwater runoff	Future Phase II Municipal Separate Storm Sewer System (MS4) pet waste requirements and prioritize identified waterbodies for compliance	No Later than One Year after the Adoption Date of the Phase II MS4 permit
Dog	Stormwater runoff	Existing federal, state, county, and city regulations and non-regulatory mechanisms for dog waste disposal and collection	Ongoing
Dog	Recreational Use	Existing state park, county park, and trust regulations and requirements for dog waste disposal and collection	Ongoing
Human	Stormwater runoff	Future Phase II MS4 requirements and prioritize identified waterbodies for compliance	No Later than One Year after the Adoption Date of the Phase II MS4 permit
Human	Stormwater runoff	Existing actions implemented by local regulatory agencies to address waste from transient and unhoused communities and prioritize identified waterbodies for compliance	Ongoing
Human	Wastewater collection systems	Existing Sanitary Sewer Systems General Order/Waste Discharge Requirement Permit Requirements and prioritize identified waterbodies for compliance	No Later than One Year after the USEPA Acceptance of the 2028 Integrated Report

Controllable Anthropogenic Fecal Source	Source	Mechanism	Timeline
Human	Onsite Wastewater Treatment Systems	Existing Humboldt, Mendocino, and Sonoma County Local Area Management Plan Requirements	No Later than One Year after the USEPA Acceptance of the 2028 Integrated Report
Dairy Cattle	Stormwater runoff	Existing dairy permit requirements and prioritize identified waterbodies for compliance	No Later than One Year after the USEPA Acceptance of the 2028 Integrated Report
Non-Dairy Cattle	Stormwater runoff	Enforcement action as needed	Ongoing for the two Action List waterbodies and as needed for the one Watch List waterbody