

STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

STAFF SUMMARY REPORT (Farhad Ghodrati)
MEETING DATE: April 9, 2014

ITEM: 5A

SUBJECT: **Pacific Ocean at Muir Beach – Delist for Indicator Bacteria from Impaired Water Bodies List** – Adoption of Resolution Recommending Delisting

DISCUSSION: This Revised Tentative Resolution (Appendix A) would approve a revision to the federal Clean Water Act (CWA) section 303(d) list of impaired waters (303(d) list) in our Region. In accordance with State policy, Board staff has determined that the Pacific Ocean at Muir Beach (Muir Beach) is not impaired by indicator bacteria and therefore should be “delisted” or removed from the 303(d) list.

In 2006, Muir Beach, located in Marin County, was added to the 303(d) list due to impairment of the water contact recreation beneficial use by excessive levels of indicator bacteria. This listing was made based on water quality data collected from 2003-2005, in which 27 percent of the samples exceeded applicable bacterial water quality objectives. Recreational use of waters with elevated indicator bacteria concentrations has long been associated with adverse public health effects. National epidemiological studies have demonstrated that there is a causal relationship between adverse health effects and recreational water quality as measured by indicator bacteria concentrations.

Board staff began developing a TMDL for this water body in 2013. As a part of that work, staff reviewed the available indicator bacteria data collected since Muir Beach was listed as impaired (i.e., data collected from 2005 to 2013), noted improved water quality conditions, and evaluated the conditions that have changed since the original listing occurred.

The Staff Report (Appendix B) provides our assessment of all readily-available data related to indicator bacteria at Muir Beach. The State Board’s Listing Policy (Listing Policy) specifies that, for bacterial measurements, a water body may be delisted when numeric water quality objectives are exceeded in less than or equal to approximately 10 percent of analyzed samples. The data collected from 2005 to 2013 showed observed exceedance frequencies of 0.0% to 1.7% for indicator bacteria. The reviewed data is of good and consistent quality and meets the spatial and temporal requirements of the Listing Policy. Therefore, staff concludes that the water body is no longer impaired and should be removed from the 303(d) list.

The key potential sources of indicator bacteria in the catchment that drains to Muir Beach are: septic systems, horse facilities and riding trails, wildlife, and stormwater runoff. Since the original listing, there have been improvements in the watershed. In recent years, the area near the mouth of Redwood Creek, the main tributary to Muir Beach, has been the focus of an extensive restoration project. These restoration efforts have coincided with a substantial decrease in indicator bacteria discharges to Redwood Creek and ultimately Muir Beach by:

- limiting human and animal (e.g., pet, wildlife, and horse) access to Redwood Creek,
- creating natural vegetated buffers along the creek that act as bacteria filters, and
- relocating the creek channel away from residential areas where potentially faulty septic systems are located.

These improvements are expected to help maintain and continue the improved water quality at Muir Beach into the future.

Public notice of this hearing occurred in January 2014. The draft tentative resolution and supporting staff report were circulated for a 30-day public comment period ending on February 18. Staff received no comments and has made only minor formatting and editorial revisions to the drafts. We expect this item to remain uncontested.

**RECOMMEN-
DATION:**

Adoption of the Revised Tentative Resolution to Delist Muir Beach for indicator bacteria

**APPENDIX A:
APPENDIX B:**

Revised Tentative Resolution
Staff Report