Public Comment
Statewide Bacteria Objectives- Scoping
Deadline: 2/20/15 by 12:00 noon

County of Santa Cruz

HEALTH SERVICES AGENCY

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ENVIRONMENTAL HEALTH **www.co.santa-cruz.ca.us/eh/ehhome.htm**

February 20, 2015

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor
Sacramento, CA 95814

Subject: **Comment Letter - Statewide Bacteria Objectives – Scoping Comments**

Santa Cruz County has been monitoring bacteriologic water quality of salt and fresh water bathing areas since the 1970's.We have strived to use the best available methodologies evolving over that period to assess health risk and identify sources of fecal contamination. As methodology has evolved, we have conducted parallel studies of the various indicators. We have maintained records of reported beachgoer illness and have conducted two health risk studies which involved initial and follow up interviews of a total of 3,460 swimmers. We continue to collect and analyze more than 1200 beach samples and 2200 freshwater samples per year and conduct source assessment using qPCR analysis for human specific bacterioides.

Based on this work, we have the following observations and concerns regarding the proposed bacteria objectives:

- Although we have discontinued testing for fecal coliform, parallel testing of 360 samples for fecal coliform and E.coli showed statistical equivalence between results from the two methods (R^2=0.82)
- Incidence of swimming related illness has been low, ranging from 3.26% in the summer to 6.86% in the winter. One of our studies showed that the occurrence of high enterococcus (>104 mpn/100ml) was the only fecal indicator that showed a correlation to occurrence of illness. The other study showed no correlation of illness to any of the fecal indicators.
- The occurrence of human contamination at ocean beaches in Santa Cruz as indicated by ribotyping and measurement of human specific bacterioides is infrequent and at very low levels, generally below the level of quantification.
- The predominant source of fecal indicator bacteria in both fresh and marine waters is birds, as indicated by ribotyping.
- We are concerned that the EPA standards were developed in east coast and mid-west waters that were influenced by sewage discharges and that the standards may not be directly applicable to west coast waters, which have a variety of non-sewage sources of fecal indicator bacteria.
- Some of our beaches are currently posted more frequently as a result of exceeding E. coli objective and some exceed the enterococcus objective more frequently.

Based on our experience, we offer the following comments:

1. We support the use of E. coli as a freshwater objective, although the proposed STV standard of 320 cfu/100ml will likely result in more frequent standard exceedence and posting. The benefits to public health protection for more frequent posting are not clear, and could be assessed in the substitute environmental documentation.
2. We support the sole use of enterococcus as the sole indicator for marine waters.
3. We would strongly support additional epidemiologic studies in northern California to measure health risk and better inform the establishment of appropriate bacteria objectives in waters with a variety of sources of fecal indicator bacteria. We also support more use of QMRA type approaches to assess risk at specific locations so that public and private resources are not unnecessarily spent in an attempt to reduce bacteria sources that may pose limited risk and which may or may not be controllable.
4. We strongly support natural source exclusion approaches.
5. We strongly support high flow suspension of objectives as this acknowledges the high,uncontrollable bacteria levels that occur in stormwater, even in undeveloped watersheds.
6. We support maintaining existing policy for mixing zones, calculation of effluent limits, time schedules for compliance, and monitoring and reporting frequency, which allows the Regional Boards to adopt situation-specific provisions.
7. We concur with the approach of not specifying analytical measures, as these methods are evolving.
8. We support the use of LREC-1. We have numerous water bodies that have limited or no REC-1 use that are subject to elevated bacteria levels from wildlife and other uncontrollable sources.

Thank you for the opportunity to comment. If you would like to discuss our comments further, I can be reached at 831-454-2750, john.ricker@santacruzcounty.us.

Sincerely,

John A. Ricker
Water Resources Division Director