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**Tri-TAC**  
Jointly Sponsored by:  
**League of California Cities**  
**California Association of Sanitation Agencies**  
**California Water Environment Association**

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Reply to: 10844 Ellis Avenue  
Fountain Valley, CA 92708  
(714) 593-7458  
E-mail: jcolston@ocsd.com

August 2, 2002

William Morrow, Assistant Branch Chief  
Water Quality Standards Branch (Mail Code 4305T)  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, N.W.  
Washington, D.C. 20460

bacteria.guidance@epa.gov

**SUBJECT: Comments Regarding Implementation Guidance for Ambient  
Water Quality Criteria for Bacteria (Draft)**

Tri-TAC appreciates the opportunity to provide comments regarding the Implementation for Ambient Water Quality Criteria for Bacteria (Draft). Tri-TAC is a statewide organization comprised of members from public agencies and other professionals responsible for wastewater treatment. Tri-TAC is jointly sponsored by the California Association of Sanitation Agencies (CASA), the California Water Environment Association (CWEA), and the League of California Cities. The constituency base for CASA and Tri-TAC collects, treats, and reclaims more than two billion gallons of wastewater each day and serves most of the sewered population of California.

1. EPA recommends dropping recreational water quality standards based on total and fecal coliform and replacing them with *E. coli* standards for freshwater beaches and enterococci standards for marine beaches. Tri-TAC agrees that enterococci are the best indicator bacteria demonstrating the presence of water born pathogens in marine waters.
2. EPA's criteria are based on epidemiological studies comparing illness rates between swimmers and non-swimmers. Tri-TAC suggests that in the future, EPA use a design where the swimmer illness rate is related to different indicator densities among swimmers as opposed to non-swimmers. This methodology is more appropriate for setting the microbial standards for the protection of swimmers at a chosen level of protection.

3. EPA suggests using Appendix D to adjust maximum indicator densities for beaches that might have fewer swimmers. California Department of Health Services Beach Sanitation Standards<sup>1</sup> require monitoring at marine beaches with attendance of 50,000 or more users during the swimming season. Tri-TAC suggests that EPA explore this idea more thoroughly. The Santa Monica Bay Epidemiological Study<sup>2</sup> suggested that bacteria indicator levels associated with a specific source (storm drains) correlated with an identifiable rate of swimmer illness. EPA should recommend a strategy whereby sources of bacteria indicator organisms are specifically determined for a waterbody to show an association with the proposed or adopted water quality standard. The better the correlation between the source and the water quality standard, the more likely that beneficial uses will be both protected and available to beach users. One suggestion is to use epidemiological investigations to establish wet weather standards at waterbodies with only the indigenous animal population as the contributor of indicator bacteria.
4. Tri-TAC supports the use of both the single sample standard and the geometric mean standard; however, the manner in which each of these types of standards is used is important to successful beneficial use protection. The single sample standard is appropriate as an indicator of an acute water quality problem, such as a sewage spill, and it should trigger an immediate re-sampling of the waterbody to confirm or refute a water quality problem. The geometric mean standard is a more appropriate indicator to determine whether a waterbody is consistently supporting recreational uses. Both types of standards are useful for water quality protection, but they must be used in their proper context.
5. The document states that long-lasting closures or advisories can be prevented by increasing sampling frequency at a given beach (page 20-21). Tri-TAC disagrees with this statement. Monitoring data from Southern California POTW's in 2001 demonstrated that bacteria indicator values are extremely temporal in nature, and more frequent monitoring might actually cause more closures or advisories depending on the thresholds of response. This relates directly with the comments in #4 above that standards need to be properly correlated with the water quality of a certain waterbody. Transient, unrepeatable exceedances of some beach sanitation standards have been detected, despite any indication of continuous or long-term beach contamination.
6. EPA is concerned about the use of chlorine as a disinfectant due to the formation of disinfection by-products (page 25). Chlorine has proven to be an effective disinfectant of water and wastewater throughout the world. Proper use of chlorine can assure that waste discharges meet water quality standards for the protection of human health, aquatic organisms and other beneficial uses. POTW's should be encouraged to use methods of

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<sup>1</sup> See California Assembly Bill (1997)

<sup>2</sup> *The Health Effects of Swimming in Ocean Water Contaminated by Storm Drain Runoff*, Robert W. Haile, et al., *Epidemiology*, July 1999, Volume 10 Number 4, pp. 355-363.

disinfection that meet the community's needs based on the wastewater treatment planning and processes and the protection of beneficial uses.

Thank you for your consideration of our comments.

Sincerely,

James E. Colston, Co-chair  
Tri-TAC Water Committee

Monica Oakley, Co-chair  
Tri-TAC Water Committee

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