

G. Fred Lee & Associates
27298 E. El Macero Dr.
El Macero, California 95618-1005
(530) 753-9630 <http://www.gfredlee.com>

March 22, 2000

**Comments on
"Implementation Guidance for Ambient Water Quality Criteria for Bacteria"**

Jennifer Wigal
US EPA Office of Science and Technology

Dear Jennifer:

Recently, the US EPA's request for comments on the draft "Implementation Guidance for Ambient Water Quality Criteria for Bacteria -- 1986" has been brought to my attention. The cover page for these comments states that they are due by March 15, 2000. Unfortunately, I was not aware that the US EPA was requesting comments on this issue. A year ago, I provided comments to the US EPA on this issue on the Agency's proposed "Action Plan for Beaches and Recreational Waters." My previous comments on these issues are available from my website, www.gfredlee.com.

I am particularly interested in this issue, relative to appropriately regulating urban area and highway stormwater runoff as it may impact the contact recreational sanitary quality of waterways. My work on this topic began as an undergraduate in 1954. I have been involved in it repeatedly over the past 45 years, including serving as an advisor to the State of New Jersey Medical Society on the sanitary quality studies of New Jersey beaches that were conducted in the 1980s, advisor to the City of Lubbock, TX, Parks Department on contact recreating in the Lubbock chain of lakes that were impacted by urban stormwater runoff and in the 1990s as an advisor to the City of Newport Beach, CA, regarding the sanitary quality of Upper Newport Bay.

I find that the regulatory approaches that exist now and will likely continue to exist in the future tend to over-regulate urban area and highway stormwater runoff associated pathogen-indicator organisms for those systems that have the indicator organisms derived from non-human waste sources, i.e., those that are of non-human origin. Urban area street and highway stormwater runoff frequently contains high concentrations of fecal coliforms. However, there are significant questions about whether urban stormwater runoff that does not contain domestic wastewaters is a significant threat to human health for those who contact recreate in waters receiving the runoff. I have discussed this situation with Dr. Al Dufour, US EPA ORD/NEEHRL, who indicated to me in August 1999 that he concurred that urban stormwater runoff that did not contain domestic wastewaters-human pathogens was a limited threat to cause illness to those who contact recreate in waters impacted by the stormwater runoff.

My findings and experience on this topic were expressed in my wife and my Stormwater Runoff Water Quality Science/Engineering Newsletter, Volume 2, No. 2, that was issued last October. A copy of this newsletter, in Adobe pdf format, is attached.

I urge that the US EPA develop approaches that can be used to specifically address the regulation of pathogen-indicator organisms in urban area and highway stormwater runoff that will protect to a high degree those who contact recreate in waters that are impacted by stormwater runoff that does not contain human fecal indicator organisms at concentrations that are a potential threat to human health.

At this time, there are a number of stormwater management agencies in California and elsewhere that face initiating costly pathogen-indicator organism control programs as part of complying with TMDL requirements to meet current coliform as well as the US EPA's proposed replacement indicator organisms. While I support the use of the replacement organisms, E. coli and Enterococcus, I know that it is going to be very difficult for public health agencies to abandon fecal coliforms and, in some instances, total coliforms, as a contact recreation indicator organism. The net result will be that stormwater management agencies will likely face not only having to meet the current fecal coliform and total coliform sanitary quality standards, but also the E. coli and Enterococcus standards.

As discussed in the attached newsletter, there is an urgent need for the US EPA to conduct research that specifically addresses the human health risk of contact recreating in waters impacted by urban area and highway stormwater runoff that has no or low numbers of human fecal pathogen-indicator organisms.

If possible, I would like to have this email and the attached newsletter entered into the record in response to the US EPA's request for comments on this issue. If there are questions about these comments, please contact me.

G. Fred Lee, PhD, PE, DEE

Copy to: Geoffrey H. Grubbs, Director, Office of Science and Technology
J. Charles Fox, Assistant Administrator, Office of Water
C. Browner, Administrator, US EPA

Reference as: "Lee, G.F., 'Comments on "Implementation Guidance for Ambient Water Quality Criteria for Bacteria", ' letter to J. Wigal, US EPA Office of Science and Technology, Washington, D.C., March (2000).