



Ventura Countywide Stormwater Quality Management Program

Participating Agencies

February 21, 2012

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Ventura County
Watershed Protection
District

EPA Docket Center
1301 Constitution Avenue NW., EPA West, Room 3334
Washington, DC

SUBJECT: COMMENTS ON U.S EPA'S DRAFT RECREATIONAL WATER QUALITY CRITERIA (EPA 820-P-11-001)

Thank you for this opportunity to submit written comments on the draft document Recreational Water Quality Criteria ("Draft Document"), which was released for scientific views by U.S. EPA on December 21, 2011. The Ventura Countywide Stormwater Quality Management Program submits the following comments on the draft document Recreational Water Quality Standard.

The Program supports the approach taken to protect the public.

We support the use of the Statistical Threshold Value (STV at 75th percentile) and agree with its usage in place of the current single sample maximum. The STV was computed based on the water quality variance observed during EPA's epidemiology studies, and corresponds to the 75th percentile of an acceptable water-quality distribution. EPA concluded that because of the high variability of fecal indicator bacteria (FIB) concentrations the use of a distributional estimate is more robust than single point estimates. As California beaches, and waters receiving predominantly runoff, were underrepresented in the EPA epidemiology studies, we want to stress that highly variable fecal indicator concentrations also occur in such waterbodies (e.g., Boehm 2007; Colford et al 2005; Converse et al). Therefore, we suggest that EPA explicitly recommends the use of the STV (75th percentile) in waters of all States, including waterbodies receiving predominantly urban runoff.

The Program also supports the opportunity for States to develop site-specific criteria for waterbodies which are believed to be predominantly impacted by nonhuman sources. The use of STV (75th percentile) and site-specific criteria will allow better allocation of resources to waterbodies posing the highest risks for human health.



The recommendations for calculation geomean are unclear.

We continue to support the use of geomean for expressing water quality criteria. We also agree that geomeans should be calculated seasonally rather than on a 30-day basis. The appropriate time period for calculating geomeans should be based on local conditions such as duration of summer. However, EPA should provide clearer directions to States on how to determine the appropriate time periods for calculating geomeans. For instance, should it be based on periods during the swimming season with relatively similar weather, as the EPA epidemiology studies suggest? The Draft Document suggests that longer periods are preferred, due to the reduced waterbody misclassification with respect to attainment status. We suggest that the EPA explicitly states that longer periods are preferred over shorter periods, as long as weather conditions are the same. Also, EPA should explicitly state that rolling geomeans are not suitable, and that one geomean value should be calculated for each 30-d to 90-d period, depending on local conditions.

Continued studies are needed regarding the risk for human health at waterbodies predominantly impacted by nonhuman sources.

The Draft Document does not provide sufficient data to enable formulation of new criteria for waterbodies predominantly impacted by nonhuman sources. EPA opted for the prudent approach, and formulated nationally applicable criteria assuming waterbodies impacted by POTW's and human fecal sources. This approach likely overestimates the risk for human health at all or some of the waterbodies impacted mostly by runoff where human sources are unlikely. Resources will continue to be spent inefficiently with regards to minimizing risk to human health following this approach. Therefore, we believe it is crucial that EPA continues to perform studies and collect information regarding the risk for human health at waterbodies predominantly impacted by nonhuman sources. This includes Quantitative Microbial Risk Assessment (QMRA) and epidemiology studies, and data collection in reference waterbodies.

The Draft Document should specifically address stormwater.

It is unclear if the EPA recommends using the proposed criteria for REC-1 designated flowing inland waters (e.g. rivers, creeks, channels) during storm events. We propose that EPA develops nationally applicable storm-specific criteria, or allow States to develop storm-specific criteria. The concept is similar as developing site-specific criteria. For a lot of flowing inland waters in California, the microbial loading is practically 100% from runoff during storms. As highlighted in the Draft Document, a recent EPA study suggested that predicted illness levels in waterbodies that contain FIB at the 1986 criteria levels from land-applied fecal material from cattle (with microbial loading due to runoff from a storm event) were approximately 20 times lower than the risk associated with human-impacted water (U.S. EPA, 2010). These findings strongly suggest that criteria proposed in the Draft Document should not be applied to storm flows, and that storm-specific criteria should be used, with bacteria threshold levels at least an order of magnitude higher compared to the proposed criteria in the Draft Document. Given that cattle feces pose a higher risk for human health than other non-human fecal sources (Schoen and Ashbolt 2010; Soller et al. 2010), EPA should be able to develop nationally applicable storm-specific

criteria based on the aforementioned 2010 EPA study. These storm-specific criteria still assume recreational use during storms, however unlikely this may be. In case EPA determines that it cannot develop nationally applicable storm-specific criteria, we propose to include the option for States to develop their own storm-specific criteria.

We propose the addition of microbial source tracking explicitly to the final Recreational Water Quality Criteria document.

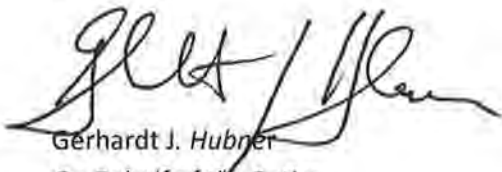
The Draft Document does not explicitly refer to microbial source tracking techniques and studies, but focuses on the use of sanitary surveys, predictive modeling, epidemiology studies and QMRA. However, the state of science has greatly evolved in the last decade, and microbial source tracking can be very relevant for determining the origin of fecal pollution in waterbodies, or for determining the extent of human pollution before initiating QMRA studies. Especially qPCR (quantitative real time polymerase chain reaction) quantification of source-specific genetic markers appear useful (e.g. Green et al. 2012; Harwood et al. 2009; Kildare et al. 2007; Schriewer et al. 2010; Sercu et al. 2009) and EPA has been involved in several of such studies (e.g. Shanks et al. 2007; Shanks et al. 2010). We propose that microbial source tracking is added to the final Recreational Water Quality Criteria document and described in detail as a useful tool for determining the sources of fecal pollution in waterbodies.

Allow consistent use of indicator organisms.

The Draft Document proposes the use of two indicator organisms for freshwater, *E. coli* and enterococci. Programs that have been developed to address a single indicator organism should not be required to change the indicator organism. Doing so would limit the use of years of data setting back programs and increase the resources needed for compliance.

An appendix with references is attached to this letter.

Sincerely,



Gerhardt J. Hubner

On Behalf of the Entire

Ventura Countywide

Stormwater Quality Management Program

cc: Ventura Countywide Stormwater Quality Management Committee

VENTURA COUNTY STORMWATER PROGRAM COMMENTS ON DRAFT DOCUMENT RECREATIONAL WATER QUALITY CRITERIA

APPENDIX: REFERENCES

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