

**From:** Craig Carlisle  
**To:** 303d R9  
**Date:** 7/13/2007 2:34 PM  
**Subject:** Fwd: Re: EPA beach bacteria assessment protocol  
**Attachments:** CA 2006 303d PD final.pdf

Info on EPA's analysis.

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>>> <Kozelka.Peter@epa.gov> 7/13/2007 2:31 PM >>>  
from our partial disapproval letter, pg. 7.....you can cite this (and  
not have to resort to personal communications with me)  
also feel free to utilize this procedure as your preliminary assessment  
protocol...or refine as you deem fit and share with your RB assessor  
colleagues.

"Our bacteria assessment procedures involved several steps. At least  
three years of  
monitoring data were required for assessment of each waterbody; this was  
satisfied for all  
beaches. Some beaches contained monitoring results from more than one  
sampling site and the  
analyses were typically aggregated for each beach before reaching a  
final assessment decision  
(i.e., no segmentation of named beaches). Where feasible, geometric mean  
results were  
calculated using 5 or more samples for each site collected within a  
30-day period. Geometric  
mean results were compared to the appropriate standard for each  
indicator (i.e., total, fecal, and  
enterococci). We initially generated "rolling" geometric means to  
determine exceedences. Next  
we analyzed the geometric mean exceedences to evaluate if any particular  
sample measurement  
had sufficiently high magnitude as to affect several rolling geometric  
means (i.e., no double  
counting). Then the geometric mean exceedences were analyzed on annual  
basis. Impairment  
was determined by at least one geometric mean exceedence in recent three  
years or two or more  
geometric mean exceedences over five years. We also evaluated individual  
sample results  
relative to single sample maximum standards for each bacterial indicator  
(i.e, total, fecal,

enterococci and fecal/total ratio). Greater than 10% exceedence rates of single sample results was considered conditions of impairment. For those waters with monitoring results available only in summer months (April- October), we applied the 4% allowable exceedence rate for single sample results. Finally, we applied the multiple lines of evidence approach in our assessments to determine impairment, where several bacterial indicators may have showed sufficient exceedences to support listing."

(See attached file: CA 2006 303d PD final.pdf)

"Craig Carlisle"  
<CCarlisle@waterboards.ca.gov>  
07/13/2007 02:22 PM  
To  
Peter Kozelka/R9/USEPA/US@EPA  
cc  
Subject  
Re: email with attachments?

Yes, with large attachments.  
Thanks,  
C

>>> <[Kozelka.Peter@epa.gov](mailto:Kozelka.Peter@epa.gov)> 7/13/2007 2:19 PM >>>

did you get an email from me with large attached files? including raw data that EPA analyzed for adding beaches in 2004-06?

pls confirm.