



California Regional Water Quality Control Board

Santa Ana Region



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TO: Darrin Polhemus, Chief
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STATE WATER RESOURCES CONTROL BOARD

FROM: Gerard J. Thibeault 
Executive Officer
SANTA ANA REGIONAL WATER QUALITY CONTROL BOARD

DATE: May 26, 2010

SUBJECT: SANTA ANA REGION COMMENTS ON THE 2010 INTEGRATED REPORT

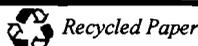
Regional Board staff have reviewed the April 19, 2010 Integrated Report, including the proposed additions to the 303(d) List of impaired waters, and have a number of comments and concerns related to proposed listings. Our comments reflect significant differences in interpretation that we believe warrant State Board staff review and re-consideration.

Use of *E. coli* single sample results to assess the REC 1 beneficial use

The State Board Integrated Report Staff Report includes the recommendation to add several waterbodies in Region 8 to the 303(d) List as the result of exceedances of the "... USEPA fresh water standard of 235 MPN/100 mL (sic)". As you know, the 235/100mL value is a "single sample maximum" (SSM) value calculated in accordance with USEPA's "Ambient Water Quality Criteria for Bacteria – 1986" document, which provides recommendations for states to consider in updating their water quality standards for primary contact recreation waters. (The criteria identified are for "Bathing (Full Body Contact) Recreational Waters"). The 235 /100 mL SSM, calculated using the 75% confidence level factor, applies to designated bathing beaches, which are presumed to receive high primary contact recreation use. The 1986 criteria document also identifies other confidence level factors to be used in calculating SSMs; the resultant, less stringent SSM values apply to waters that receive moderate, light and infrequent primary contact use. The calculation of all of these SSM values relies on the assumption of a default standard deviation value, determined from USEPA's epidemiological studies. However, where sufficient data to support an alternative standard deviation are available, that alternative value can be used to calculate a different set of SSMs. ("Ambient Water Quality Criteria for Bacteria – 1986", p. 16, "EPA Criteria for Bathing (Full Body Contact) Recreational Waters, Freshwater".)

In relevant part, the 1986 criteria document identifies recommended geometric mean objectives for *E. coli* for freshwater that are based on different levels of excess gastrointestinal illness in swimmers (8/1000 swimmers or 10/1000 swimmers). States have the discretion, as a policy matter, to select the allowable excess health risk. The 1986 criteria document also identifies "single sample maximum" values, which are statistical constructs designed solely to provide information concerning the likelihood that the geometric mean values are being met. USEPA has clearly stated its expectation that the SSM values are to be used for making beach

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notification and closure decisions (see, for example, the 2004 Water Quality Standards for Coastal and Great Lakes Recreation Waters; Final Rule, p. 67224 ff.). States are left to determine whether and how to use SSM criteria in the context of their broader programs implementing the Clean Water Act. Given the high degree of variability in SSM data, USEPA recognizes that the geometric mean is the more relevant value for ensuring that appropriate actions are taken to protect and improve water quality. Clearly, taking such actions is the very intent of identifying impaired waters and developing and implementing TMDLs.

For these reasons, in part, Regional Board staff asserts that the use of SSM values to conduct impairment assessments and determine the necessity of TMDLs should not rely on SSM data alone. We recognize that the Listing Policy allows the use of SSMs and other guidelines for impairment assessment purposes, provided that the guidelines used have been peer reviewed. (The matter of peer review of SSMs is addressed below.) However, we believe strongly that the Listing Policy should be revised to eliminate the use of SSMs as the sole basis for 303(d) listing; at the most, SSM data evaluation should be limited to consideration of placement of waterbodies on the Category 3 list.

The Integrated Report correctly states that Region 8 stakeholders are in the process of developing new bacteria objectives for freshwater. However, as we have discussed repeatedly with State Board staff and USEPA, this is not the sole reason that Regional Board staff recommends against listing the waters. As discussed above, we believe strongly that SSM data alone should not be used for impairment assessment purposes. As further discussed with State Board staff, even if we accept the use of SSM data for impairment assessment, we do not believe that use of the 235 /100 mL SSM is appropriate for the waters under consideration. None of these waters are designated beach areas. If SSMs are to be used for impairment assessments, then the appropriate SSM should be applied, based on our knowledge of these waters and the extent of primary contact recreational use, if any. Again, the waters under consideration are not designated beaches; in fact, with one possible exception, these waters receive infrequent, if any, recreation use. Thus, *at most*, a 575 /100 mL SSM should be used for impairment assessment purposes. Again, we argue that SSM data are by their nature too variable to serve as a useful or appropriate tool for making TMDL decisions, particularly when these decisions have significant consequences for the expenditure of public funds (see further comment below).

We discussed with both State Board staff and USEPA the matter of the assumption of 235 /100 mL as the appropriate SSM for impairment assessment purposes. State Board staff, relying at least in part on opinion provided by USEPA, have indicated that the 235 /100 mL is a rebuttable presumption, i.e., that all surface waters must be assumed to be designated beaches, until a standards action is taken to modify that presumption. In our view, common sense dictates that it is simply inappropriate to presume that all surface waters in this Region (and in the state and in this country) are designated beaches, with anticipated high use that warrants the most stringent SSM for notification purposes. The presumption for high use beaches is that recreational use is actually encouraged (with facilities, access, lifeguards, etc.) such that relatively high use is expected. It is unrealistic to apply this premise to all surface waters. Again, we argue that it is at best tenuous to apply SSM data to impairment assessments in the first place: the data are too variable and SSMs were not intended for this purpose. To add to that the remarkable presumption that the most stringent SSM applies and can determine the need for TMDLs is only a further misapplication of SSMs that will lead to needless expenditure.

In our discussions of this matter, State Board staff expressed some surprise at our position, given that the proposed 303(d) listings would place the waters as a low priority, giving us and affected stakeholders the opportunity to make appropriate standards changes to rebut the designated beach assumption, to collect additional data for de-listing, etc. We find this very troublesome, for two reasons. First, in our view, productive and efficient interaction with stakeholders depends on a commitment, on both sides, to approaches and solutions that are scientifically and legally defensible. We are not persuaded that the proposed listings meet either test. Second, even low priority listings have real world implications that cannot be minimized or ignored. The listings themselves place a burden on Regional Board staff and the other stakeholders in the Region to address the purported water quality problem. Where there is a demonstrable problem, that is appropriate. But where, as in the case of the proposed *E. coli* listings, the assertion of a water quality problem that necessitates TMDL development and implementation relies on misapplication of SSMs and presumptions, though rebuttable, that simply make no sense, then to proceed with the listings is damaging and ultimately counterproductive. It reduces our credibility and it causes needless expenditure of time, effort and money that is already in very short supply. We should never minimize the impact of 303(d) listings, whether or not identified as low priority.

Finally, a word about peer review. As noted above, we are working with a committed group of stakeholders to make recommendations for revised bacteria objectives. As part of that process, we are proposing to categorize primary contact recreation waters based on the level of use, per the direction of the 1986 criteria document, for the purposes of identifying the appropriate SSM value for each water. Regional Board staff has discussed peer review needs for the Basin Plan amendments needed to effect the recommended changes. With respect to the SSM-related recommendations, Gerald Bowes has indicated that peer review is necessary. We believe that this is a misunderstanding on his part and hope to dissuade him from this opinion since, in our view, the SSM-related modifications are not scientific issues, but rather matters of policy subject to the Regional Board's discretion. We do not question the SSM values that would apply to waters of varying intensity of use, or the science underlying them. Rather, we are trying to identify, as a factual matter, the extent of recreation use of each of the waters and to assign the USEPA derived SSM accordingly. This is entirely consistent with USEPA's expectations, as expressed in the 1986 criteria document and the Coastal and Great Lakes Recreation Waters Rule. However, if we are ultimately required to conduct peer review related to the application of the SSMs in Region 8, then we must ask how State Board staff can presume that the selection of the 235 /100 mL SSM has been peer reviewed, and that it is thus a suitable measure for impairment assessment purposes. The two positions don't seem to match.

In brief, we strongly recommend the following: First, the Listing Policy should be revised to preclude the use of SSM data alone as the basis for 303(d) listing. Second, the Region 8 waters identified for 303(d) listing on the basis of SSM data should be included, at most, in the list of Category 3 waterbodies so that additional data can be collected and considered to determine whether there is actual impairment of recreation uses.

Clarification on the use of the centralized database:

Chino Creek Reach 1A, Mill Creek-Prado Area, Santiago Creek Reach 4 and City Creek are proposed to be added to the 303(d) List of impaired waters. The State Board Staff Report incorrectly indicates that Regional Board staff did not use the centralized database to prepare

the Regional Board staff report. Due to the large number of waterbody and pollutant combinations, staff used query reports from the centralized assessment database to prepare the staff report. Regional Board staff realize that there were inconsistencies between the Regional Board staff report and the data and information in the centralized assessment database, but these were due to problems in downloading specific information needed from the queries of the database and not because Regional Board staff did not use the database.

Notwithstanding the issues noted above, Regional Board staff does not disagree with the proposed inclusion of these waterbodies on the 303(d) List of impaired waters. In fact, we note that Chino Creek Reach 1A, Mill Creek-Prado Area and Santiago Creek Reach 4 were already on the 2006 303(d) List for the pollutants identified in the State Board Staff Report and should remain on the 303(d) List.

Use of metals translators

The State Board Staff Report indicates that USEPA staff commented to the Regional Board on the use of metals translators to evaluate metals data for the Santa Ana River and its tributaries. While Regional Board staff did have discussions with USEPA staff on issues related to assessing metals data, we are not aware of any formal comments from USEPA to either the Regional Board or to Regional Board staff on this issue. The State Board Staff Report should clarify this.

Should you have any questions about these comments, please feel free to contact me at (951)782-3284, or you may contact Joanne Schneider at (951)782-3287 or Hope Smythe at (951)782-4493.

cc: Regional Board

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