

Selica Potter, Acting Clerk to the Board  
 State Water Resources Control Board  
 Executive Office  
 1001 I St., 24<sup>th</sup> Floor  
 Sacramento, CA 95814

303 (d) Deadline: 1/31/06

**RE: Comments on Proposed Revision to Federal Clean Water Act Section 303(d) List**

*Dear Ms. Potter:*

The following comments were prepared at the request of and are submitted on behalf of the Big Bear Municipal Water District (BBMWD) Board of Directors. Recently, the State Water Resources Control Board (SWRCB) staff recommended that Big Bear Lake be added to the 303(d) list due to elevated concentrations of Polychlorinated Biphenyls (PCBs) in fish tissue. BBMWD disagrees with that recommendation for several reasons.

First, the PCB concentrations previously identified in various fish tissue samples do not present any threat to human health. The narrative water quality objective for PCB's in the Water Quality Control Plan for the Santa Ana River Basin (1995) states:

*"Toxic substances shall not be discharged at levels that will bioaccumulate in aquatic resources to levels which are harmful to human health." (pg. 4-11)*

In 1984, the U.S. Food and Drug Administration (FDA) established the maximum recommended tolerance level for PCB's at 2000 parts-per-billion. In all of the fish tissue sample data for Big Bear Lake reviewed by SWRCB staff, none was greater than 350 parts-per-billion. Therefore, since the actual measured values are less than 20% of FDA's recommended safe level, PCBs are not bioaccumulating to levels which may be harmful to human health.

Second, the so-called "Screening Value" attributed to the California Office of Environmental Health Hazard Assessment (OEHHA) should not be used to determine whether a given waterbody is impaired by elevated PCB concentrations. The SWRCB's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Sept., 2004) states that:

*"Narrative water quality objectives shall be evaluated using evaluation guidelines... Depending on the beneficial use and narrative standards, the following considerations shall be used in the selection of evaluation guidelines... Evaluation Guidelines for Protection from the Consumption of Fish and Shellfish: Regional Water Quality Control Boards may select evaluation guidelines published by USEPA or OEHHA."*

SWRCB staff elected to use OEHHA's Screening Value as the evaluation guideline when assessing PCB compliance in Big Bear Lake. However, OEHHA has no official "Screening Level" for PCBs. The value attributed to OEHHA in Table 4 of the Functional Equivalent Document for the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (FED) is not part of any official guidance published by that agency.

The OEHHA "Screening Value" of 20 parts-per-billion is two orders of magnitude less than the FDA Action Level for PCBs. However, according to the two OEHHA scientists that developed it:

*"The Screening Values are not intended as levels at which consumption advisories should be issued but are useful as a guide to identify fish species and chemicals from a limited data set, such as this one, for which more intensive sampling, analysis or health evaluation are to be recommended."<sup>1</sup>*

Therefore, fish tissue values that exceed 20 parts-per-billion may justify additional scientific investigations but they do not demonstrate that "water quality standards are exceeded" as SWRCB staff claimed with respect to PCBs in Big Bear Lake.<sup>2</sup> Such conclusive statements are contrary to the State Board's Listing Guidance:

*"Regional Water Quality Control Boards and State Water Resources Control Board shall identify evaluation guidelines that represent standards attainment or beneficial use protection. The guidelines are not water quality objectives and shall only be used for the purpose of developing the section 303(d) list."<sup>3</sup>*

**Third,** OEHHA does not support the SWRCB staff's recommendation. Staff from the Santa Ana Regional Water Quality Control Board recently reviewed all of the available fish tissue data with OEHHA. OEHHA's experts concluded that the data was insufficient to warrant a conclusion that Big Bear Lake was impaired by PCBs. They recommended that additional samples be collected and that the lake be periodically reassessed to determine if there was any adverse trend.

Therefore, it is misleading to rely on the Screening Value intended solely to allocate water quality monitoring resources within a single research study as though it was official policy guidance published by OEHHA. It is also inappropriate to conclude that the Screening Value shows Big Bear Lake to be impaired by PCBs when OEHHA themselves do not agree with that assessment after reviewing the same fish tissue data used by SWRCB staff.

<sup>1</sup> Broderberg, Dr. Robert K. and Gerald A. Pollock, PhD. Prevalence of selected target chemical contaminants in sport fish from two California lakes: public health designed screening study. Final Project Report. Pesticide and Environmental Toxicology Section, Office of Environmental Health Hazard Assessment, California Environmental Protection Agency. June, 1999. Pg. 4

<sup>2</sup> SWRCB. Staff Report: Revision of the Clean Water Act Section 303(d) List of Water Quality Limited Segments - Volume III: Water Body Fact Sheets Supporting the Listing and Delisting Recommendations. September, 2005. Recommendations to place waters and pollutants on the section 303(d) List in Santa Ana Region (8). Pg. 17.

<sup>3</sup> SWRCB. Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. September, 2004. See section 6.1.3 @ pg. 20.

Table 2 in the FED allows that "Fish and Shellfish Consumption Advisories" are among the "Available Guidelines for the Interpretation of Narrative Water Quality Objectives."<sup>4</sup> However, it does not include informal intra-study screening values as acceptable Evaluation Guidelines for fish consumption. Therefore, use of such screening values is an inappropriate numeric translator for the narrative objective identified in the Basin Plan.

*"Bioaccumulation is a measurable phenomenon, rather than an effect. Merely identifying the presence of a chemical substance in the tissues of an organism is not sufficient information to conclude that the chemical will produce an adverse effect."<sup>5</sup>*

State Board staff asserts that the "FDA action levels do not provide as great a level of protection for consumers of fish and shellfish caught and consumed than do [EPA's] human health criteria." It is self-evident that a lower value is more protective than a higher value. However, that does not prove the higher value is sufficient to prevent PCBs from bioaccumulating to levels "which are harmful to human health" as specified in the water quality objective.

Fourth, the proposed Evaluation Guideline for PCBs (of 20 ppb) does not meet peer review requirements set forth in Section 6.1.3 of the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. Nor does it "identify a range above which impacts occur and below which no or few impacts are predicted" as required in the same section of that policy.<sup>6</sup>

Moreover, the Administrative Record supporting the use of OEHHA's Screening Value is incomplete. The Broderberg-Pollock study is item number 27 (pages 5426-5453) in the SWRCB's official Administrative Record file. Page 4 of the study (page 5432 of the Administrative Record) refers the reader to the Quality Assurance Project Plan (QAPP) for a description of how the Screening Values were established. However, Appendix 1 containing the QAPP is missing from the Administrative Record. Consequently, we have no way to determine whether the underlying assumptions and analysis comply with the mandatory Data Quality Assessment Process described in section 6.1.4 of the Water Quality Control Policy, or is there any evidence in the administrative record to indicate that the State Board staff ever had access to or reviewed the methodology used by Broderberg & Pollock before relying on it to make 303(d) listing recommendations. This is improper and inconsistent with SWRCB guidance:

*"... if it is not possible to tell if the data collection and analysis were supported by a QAPP, then the data and information should not be used by itself to support listing or delisting a water segment."<sup>7</sup>*

Fifth, there is no discharge of PCBs into Big Bear Lake. The manufacture and use of PCB's has been prohibited in the United States since 1977. Numerous samples have failed to detect PCB's in either the water column or the sediment of Big Bear Lake. Therefore, even assuming that relatively low levels of PCB's are present in some fish tissue samples, a 303(d) listing provides no meaningful public health benefit. There is no discharger to regulate.

<sup>4</sup> SWRCB. Functional Equivalent Document for the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Sept., 2004) pg. 78

<sup>5</sup> SWRCB. Functional Equivalent Document for the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Sept., 2004) pg. 81

<sup>6</sup> SWRCB. Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. September, 2004. See section 6.1.3 @ pg. 21.

<sup>7</sup> SWRCB. Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. September, 2004. See section 6.1.3 @ pg. 22

Even establishing a TMDL will have no practical effect on current conditions in the lake because there is no discharge to control through a load allocation or a waste load allocation. Nor is there any means to identify a responsible party when discharges ended three decades ago. A 303(d) listing will merely impose the high costs and regulatory burdens of a TMDL on other living in the community with no prospect for any environmental benefit. Doing so, will divert scarce public resources away from solving the real water quality problems such as nutrient pollution, invasive aquatic plants and excess algae growth already on the 303(d) list.

Sixth, a 303(d) listing for PCBs will cause unnecessary public confusion. As noted earlier, OEHHA has already examined the same fish tissue data and concluded that no Public Health Advisory is necessary for Big Bear Lake. If the SWRCB declares that the lake is impaired by PCBs, the public will not know which state agency to believe. This, in turn, may cause unfounded fear and anxiety among the 6 million people who visit the lake each year.

Any significant reduction in tourism would have severe adverse impacts on the local economy and cause far worse impacts to human health than the estimated effects of trace amounts of PCBs. Rising unemployment is strongly correlated with increased heart disease, stroke, alcoholism, drug abuse, crime, divorce, child abuse and other debilitating illnesses.<sup>8</sup>

It is particularly important to note that PCB's were primarily found only among carp living in Big Bear Lake. Little or no PCBs were detected in the other species tested. Carp is considered a nuisance species in Big Bear Lake. It is rarely consumed in any significant quantities as angler prefer to keep the bass, trout and sunfish also found in the lake. Each year, for the last two years, more than 4,000 pounds of carp are caught and buried in the forest as part of a large-scale tournament designed to reduce their population. This is strong evidence of just how unpopular carp are.

OEHHA Screening Values and USEPA's recommended criteria are based on assumptions about overall consumption, including other popular fish and shellfish species, that are not relevant to Big Bear Lake. It is inappropriate to rely on such assumptions, especially regarding the possibility of "subsistence fishing" when the lake freezes for two to three months each year and access is prohibited.

Finally, the FED states that the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List "does not allow the use of MTRLs and USFDA action levels."<sup>9</sup> That is not true. Section 6.1.3 of the Policy states that:

*"Maximum Tissue Residue Levels (MTRLs) and Elevated Data Levels (EDLs) shall not be used to evaluate fish or shellfish tissue data."<sup>10</sup>*

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<sup>8</sup> For comprehensive discussion of this relationship, see Dunlop, Dr. Richard S. Final Report of the Santa Ana River Use Attainability Analysis. August, 1992. (copy on file with Santa Ana Regional Water Quality Control Board)

<sup>9</sup> SWRCB. Functional Equivalent Document for the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Sept., 2004) pg. 258

<sup>10</sup> SWRCB. Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. September, 2004. See section 6.1.3 @ pg. 20

The Policy itself does not prohibit the use of FDA action levels. This discussion is found only in the SWRCB staff report not in the actual text of the adopted Policy. In addition, the rationale given for disallowing the use of FDA action levels lacks substantive scientific proof. SWRCB staff claims that:

*"... the methodology used by USFDA in establishing tolerances is directed at health risks of contaminants in commercial fish and shellfish (for interstate commerce) rather than in locally harvested fish and shellfish and were never intended to be protective of local water bodies and recreational and subsistence fisherman... Listings based on USFDA action levels may not be the most protective of beneficial uses and, therefore, should be accompanied by water body-specific data showing nonattainment of beneficial uses."<sup>11</sup>*

There is nothing in the preceding analysis to indicate why the people of any other state are more resilient to PCB contamination than the residents of California. Thus, the fact that FDA's studies were based on fish shipped in interstate commerce is irrelevant to the overall risk analysis. Nor does the SWRCB staff provide any evidence to support their assertion that just because FDA's action levels were not "intended" to protect recreational or subsistence fishing that the action levels do not, in fact, provide such protection.

If one follows the reasoning to its logical conclusion, then SWRCB staff is saying that fish shipped from California to Maine will protect the residents of Maine but not the people living in California. And, conversely, fish shipped from Maine to California will protect the residents of California but not the folks living in Maine. The distinction between fish caught and consumed locally vs. those caught and consumed in a different state is artificial at best. All of the fish have to meet the same FDA action level regardless of where they are caught or where they are ultimately consumed. Transcontinental shipping does not cause PCBs to biomagnify enroute.

In order to demonstrate that the water quality standard "is exceeded" as claimed, the SWRCB staff must show that PCBs are concentrating to a harmful level. And, that, in turn, requires that they prove the site-specific carp consumption levels of subsistence fishermen is greater than FDA allowed in their calculations. No such analysis is presented in the Policy, the Staff Report or any of the other detailed documents used to support the listing recommendations.

The State of California is well within its rights to elect to use a more conservative water quality criteria than EPA routinely approves for use in other states. However, such conservatism is not required by the Clean Water Act. And, if the SWRCB wishes to impose a more restrictive standard, then they must comply with Section 13241 of the California Water Code and perform a new assessment of the economic impacts of that decision (as described by the California State Supreme Court in the recent Burbank case).<sup>12</sup>

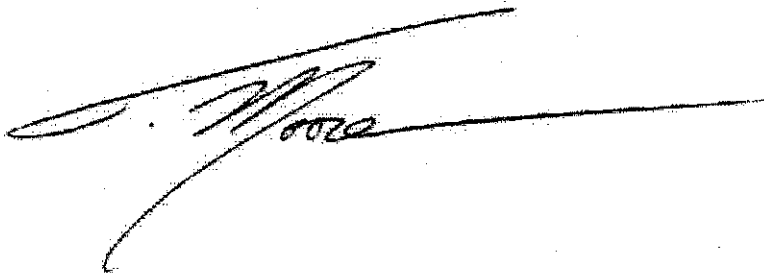
For all of the reasons cited above, we strongly oppose adding Big Bear Lake to the 303(d) list based on trace concentrations of PCBs in isolated fish tissue samples. There is no evidence to prove that PCBs are bioaccumulating to a level harmful to human health. Independent state agencies have reviewed the relevant data and concur with our conclusion. Going forward with the listing will unnecessarily confuse and frighten the public. And, it will adversely impact the local economy without providing any material environmental benefits.

<sup>11</sup> SWRCB. Functional Equivalent Document for the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Sept., 2004) pg. 85

<sup>12</sup> City of Burbank v. State Water Resources Control Board. Opinion No. S119248; April 4, 2005

If the State Board elects to continue with this listing, then we recommend that the text of the staff conclusion be altered to state that "water quality standards may be exceeded." And, that additional text be added to make it clear that the OEHHA Screening Values are not intended to serve as automatic Target Levels if and when TMDLs are developed. Finally, the Regional Water Quality Control Boards should be encouraged to adopt site-specific water quality standards based on fish tissue data rather than continuing to rely on misapplied screening values from un-peer-reviewed studies by other state agencies.

*Respectfully submitted on behalf of the BBMWD Board of Directors,*



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## FACSIMILE COVER PAGE

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**To :** Selica Potter - Acting Clerk

**From :**

**Sent :** 1/31/2006 at 5:56:40 PM

**Pages :** 7 (including Cover)

**Subject :** 303(d) List Comments for BBMWD

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Please see attached comments submitted on behalf of the Big Bear Municipal Water District Board of Directors regarding the proposed 303(d) listing for PCBs in Big Bear Lake.

An electronic copy of this letter was also sent, via email, as a PDF attachment to:  
[commentletters@waterboards.ca.gov](mailto:commentletters@waterboards.ca.gov)

This fax is intended as a backup copy in the event of an email transmission error.

Thanks,

Tim Moore  
Risk Sciences