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Re: Comments on September 2005 Draft “Revision of California’s Clean Water Act Section 303(d) List of Water Quality Limited Segments”

Dear Mr. Wilson:

Heal the Bay, the Natural Resources Defense Council, and Santa Monica Baykeeper hereby submit the following comments regarding the State Water Resources Control Board’s (“State Board’s” or “Board’s”) proposed update to the CWA §303(d) list of impaired waters (the “2006 List” or “303(d) List”) as presented in the Draft Staff Report Supporting the Recommended Revisions to the Clean Water Act Section 303(d) List (“Draft Revisions”).

I. INTRODUCTION

Overall, we support the State Board’s efforts in developing a more standardized and uniform approach for listing impaired waters in the State of California under CWA section 303(d). However, this approach must be fully consistent with the CWA and provide full protection of beneficial uses. In this regard, we have several technical and legal concerns with the State Board staff’s proposed interpretation and application of the State Board’s Water Quality Control Policy for Developing California’s Clean Water Act Section 303(d) List (“Listing Policy” or “Policy”) in developing this standardized approach for the 2006 List. These include numerous inconsistencies in the application of the Listing Policy, the failure to evaluate all readily available data and information, the improper reevaluation of prior listings for which TMDLs have already been adopted, an extremely narrow construction and use of the situation specific weight-of-the-evidence factors for listing and de-listing, and inadequate consideration of narrative standards. All of these concerns arise from an improper use or interpretation of the Listing Policy. As this is the State’s first attempt at using and interpreting the new Listing Policy, these overall concerns can and should be resolved by the Board in issuing the final 2006 List.

With regard to Region 4 specifically, we support the proposed addition of 93 waterbody-pollutant segments in the Los Angeles Region (Region 4) to the 2006 List. However, we have numerous specific concerns regarding many of the 92 proposed de-listings in this region. Specifically, we are strongly opposed to an approach that allows de-listing waterbodies previously listed by the Los Angeles Regional Water Quality Control Board (“LA Regional Board”) based on the rationale that (1) nuisances are not pollutants; (2)

adequate numeric guidelines do not exist; (3) an approved TMDL will result in the attainment of the standard; or (4) uncertainty associated with the original data (i.e. the data have been lost) without any showing at all of actual attainment with WQS. Notably, many of these problems can be remedied with an appropriate application of the situation specific weight of the evidence approach as intended by the Listing Policy.

Our comments are broken up into three sections. The first section addresses our general comments and concerns on the statewide interpretation and application of the Listing Policy. The second section addresses our specific concerns with numerous specific proposed de-listings for Region 4. The third section addresses a small number of additional listings that we believe should have been included in the Draft Revisions given the readily available data. Our specific recommendations are then summarized and set forth in a Conclusion section.

II. GENERAL APPLICATION OF LISTING POLICY

A. The Proposed Retroactive Application of the Listing Policy Is Inappropriate and Improper

The State Board should not apply the Listing Policy retroactively to reevaluate listings made prior to the adoption of the Policy, except in very limited circumstances. In its review, however, State Board staff appears to apply the Listing Policy retroactively in a much more wholesale manner using the new Listing Policy factors. Staff's proposed approach fails to recognize the substantial deference that must be given to prior administrative decisions and ignores the limited circumstances set forth in the Listing Policy for re-evaluating previous listings for de-listing.

1. Failure to Give Substantial Deference to Prior Administrative Decisions.

First of all, staff's summary review of prior administrative decision-making contravenes well-established legal principles, which require substantial deference and a presumption of correctness in reviewing previous agency decisions. *Fukuda v. City of Angels* (1999) 20 Cal.4th 805, 820-21 (agency decisions are presumed to be correct); *Santa Monica Chamber of Commerce v. City of Santa Monica* (2002) 101 Cal.App.4th 786, 739 (same); *see also Imperial Irrigation Dist. v. State Water Resources Control Bd.* (1990) 225 Cal.App.3d 548, 568 (holding that agency's interpretation of the Clean Water Act is due substantial deference.). Staff has failed to adhere to the legal presumption of correctness by ignoring the required standard of substantial deference and the corresponding high burden of evidence in evaluating the majority of the proposed de-listings.

The flaws in this approach are shown most acutely in staff's proposals to de-list waters for which TMDLs have already been developed and adopted. Given the necessarily summary nature of the State Board's review of the original listing decisions,¹ these

¹ Indeed, at the State Board hearing on the Listing Policy, the State Board's own counsel advised the Board that going back and second guessing previous decisions would be an extreme administrative burden on staff. SWRCB Hearing Transcript, Sept. 30, 2004.

proposals cannot be justified under basic administrative law principles. In the process of developing the TMDLs for these waters, the Regional Boards will have conducted a comprehensive re-evaluation of the water segments and the impairing pollutants and conditions in order to confirm the impairments and conduct source evaluations and pollutant targets. This re-evaluation would encompass all available information, including all new data and evidence regarding the waterbody. Indeed, during the TMDL development process, where the Regional Boards found a lack of data supporting an impairment caused by certain pollutants, they did not develop TMDLs for those pollutants in the waterbody. Given the comprehensive re-evaluation and analysis done during the TMDL process, it is not appropriate for the State Board to propose to de-list these same segments after performing only a summary re-evaluation of the original listing data as compared to the new factors. As described, the latter was a much less rigorous process. To the contrary, in order to reverse the administrative decision made by the Regional Board and approved by the State Board and USEPA, the State Board would have to meet a high burden of proof to show that the earlier decision was incorrect. The State Board has not done this here.

Staff is also proposing to de-list waterbodies if there are no approved guidelines under the new Listing Policy to evaluate the original data set, the original data was lost or anecdotal, or if the original data set does not meet all of the requirements of Sections 4.1 to 4.10 of the new Listing Policy. Again, the State Board must make a substantial showing in order to overcome the presumption of correctness that applies to the original regional board decision. Notably, staff has made certain express assumptions to avoid this recognized burden altogether. *See* Draft Revisions, Vol. I., Staff Report (hereinafter “Staff Report”) at 11-12. This is a clear violation of the law. The State Board is required to provide substantial evidence in all cases to overturn prior agency decisions. Moreover, in most cases, the regional boards had sufficient evidence to place these water bodies on the 303(d) List when the original administrative decision was made. The regional boards are much more knowledgeable about their local waterbodies and local conditions than the State Board is or can be, particularly in the current process where State Board staff has been tasked with reviewing a huge amount of information for the entire state. Thus, it is not appropriate, or legal, for the State Board to propose to overturn these prior administrative decisions without providing substantial evidence to show that the earlier decision was not correct. This is a high burden, and in most cases, the State Board has not met it in the Draft Revisions.

Notably, during the process of adopting the Listing Policy, the State Board itself recognized this presumption of correctness and the regional boards’ expertise in making prior listing decisions. Indeed, in adopting the Policy, the Board voiced its intent that *an affirmative showing of current attainment is required* before waters may be de-listed. SWRCB Hearing Transcript, Sept. 30, 2004. Specifically, Board Member Sutley clarified that it is not enough to simply state that the listing was made by mistake – the boards must affirmatively demonstrate a lack of **current** impairment. *Id.* (“If it’s on the list...then you have to have some information that says that they [fish] are not dying now and that the waterbody is not currently impaired...”); *see also* discussion *infra* at section II.B. Again, this directive was not followed by staff in the proposed Draft Revisions.

2. The Listing Policy Allows Reevaluation of Prior Listings Only In Specified Situations.

The Draft Revisions also go well beyond the letter and intent of the Listing Policy. As discussed, staff has improperly engaged in a wholesale reconsideration of previous listings. This directly contravenes the letter and spirit of the State Board's own Listing Policy.

The Listing Policy is very clear on the issue of removing previously listed waters from the 303(d) List. Specifically, section 4 of the Listing Policy sets forth only three situations under which a listing may be reevaluated. Listing Policy at 11. The first is if the listing was based on faulty data, such as typographical errors, improper QA/QC or limitations in the analytical methods that would lead to improper conclusions as to the status of the waterbody, and the listing would not have occurred absent this data. *Id.* The second is if a water quality standard or objective has been revised. *Id.* The third situation is if any interested party requests a reevaluation of a particular listing. *Id.* The factors in 4.1 to 4.11 are to be used in such a reevaluation, but only if it is raised under one of these three specified circumstances. *Id.* By listing these specific situations, the Listing Policy prohibits any broader reconsideration of previous listings.

As stated above, the Listing Policy went through an intensive stakeholder and public process before it was finalized. As a result, a great deal of debate was involved in drafting each of its various provisions. Given this level of debate and participation, to read more into any provision than is expressly stated is a clear violation of the well-known canon of construction *expressio unius est exclusio alterius*—the expression of one thing ordinarily implies the exclusion of other things. *See In re J.W.* (2002) 29 Cal.4th 200, 209. Here, the specific situations were delineated in order to prevent a haphazard re-evaluation of prior listings with all of the attendant problems that have now in fact resulted from the application of the proposed wholesale approach. In an analogous situation, this maxim is applied where specific exemptions are set forth in a statute. In that situation, the canon forestalls a court from implying additional exemptions. *See Sierra Club v. State Bd. of Forestry* (1994) 7 Cal.4th 1215, 1230. That same maxim would apply similarly here – it forestalls the State Board from implying an authorization for a broader re-evaluation of prior listings based on its own initiative. The only time that a re-evaluation should be conducted is on a case by case basis pursuant to the three specific situations expressly set forth in the much discussed and debated Listing Policy. In the situation here, where the State Board is conducting this reevaluation *on its own initiative*, only the first situation applies (faulty data), as the Board has not proposed any de-listings due to revision of a water quality standard.

3. The Proposed De-Listing Approach Is Not Adequately Protective of Water Quality.

From an overall policy perspective, the proposed retroactive de-listing approach, in addition to being contrary to law, is not adequately protective of water quality for all of

the same reasons set forth above. In addition, de-listing based on applying the new Policy retroactively provides a perverse incentive to **avoid** monitoring or collecting further data on currently listed segments where there is limited numerical data. California must provide incentives for additional monitoring, not dissuade it, if we are to fully characterize the condition of our waterways.

4. Conclusion.

Given all of the above, the Board should do the following:

(1) state that as a rule previous listings for which TMDLs have already been adopted should not be re-evaluated and overturned during the listing process and that this issue is more properly addressed as part of TMDL implementation;

(2) make clear that the Listing Policy should not be used retroactively to overturn prior listing decisions unless one of the three situations specified in the Policy exists and there is substantial evidence to demonstrate with a high degree of persuasion that the earlier decision was not correct (including an affirmative demonstration that the water is currently in attainment); and

(3) direct State Board staff to forego re-evaluating previous listings in this round and leave that task to the individual regional boards, who are more knowledgeable about their own local waterbodies and listing decisions, to implement during the next round of listing in 2008 in accordance with the above clarifications.

B. A Precautionary Approach Should Be Followed.

As an overarching premise, the Section 303(d) listing process should err on the side of protecting water quality and beneficial uses. The Precautionary Principle was endorsed at the United Nations Conference on Environment and Development in 1992 as an appropriate guideline in environmental decision-making.² This Principle encourages environmental managers to err on the side of caution, in order to ensure that neither human nor environmental health is compromised. *Id.* In implementing this approach, uncertainty should not be a valid rationale for inaction. *Id.*

In the 303(d) Program, the implications of a false negative (failing to list an impaired waterbody) are much worse than a false positive (listing a non-impaired waterbody), as the latter can be corrected early on in the TMDL development process, as indeed it has in many of the TMDLs completed to date. In contrast, a failure to list an impaired waterbody has potential impacts on human health and aquatic life. Where uncertainty exists, decisions should be made in favor of protecting water quality, as well as human health and the environment. Indeed, federal regulations and the Listing Policy itself favor listing of threatened waterbodies (those for which water quality is declining and for which water quality standards may not be maintained). 40 C.F.R. § 130.2(j); Listing

² United Nations, Rio Declaration on Environment and Development, June 14, 1992, 31 ILM 874.

Policy at Sections 3.10 and 4.10. This is necessary to account for the antidegradation component of water quality standards. *Id.*

The State Board recognized the precautionary principle in adopting the Listing Policy in 2004. Significantly, the State Board intended that, as a rule, a strong evidentiary showing is required to remove waterbody/pollutant combinations from the 303(d) List. Again, this intent was also made clear during the final hearing adopting the Listing Policy where the Board voiced its intent that an affirmative showing of attainment is required before waters may be de-listed. SWRCB Hearing Transcript, Sept. 30, 2004. Specifically, Board Member Sutley suggested that it is not enough to simply state that the listing was made by mistake – the boards must affirmatively demonstrate a lack of **current** impairment. *Id.* Ms. Sutley further stated that she was “Okay with not adding [additional] language [to the Listing Policy] as long as we’re all in agreement and that’s the direction of the regional boards that you have to look at the current conditions as well [before de-listing].” *Id.*³

Yet, while staff appears to acknowledge this high burden in its Staff Report and in its Response to Comments on the Listing Policy,⁴ it fails to apply it either in letter or in spirit throughout the proposed revisions. Staff Report at 12; State Water Resources Control Board, *Functional Equivalent Document: Water Quality Control Policy for Developing California’s Clean Water Act Section 303(d) List* (2004) (hereinafter “FED”) at B-158. To the contrary, the staff has applied a very lax standard, *i.e.* that a waterbody is clean until proven dirty, to proposed de-listing decisions (as well as listing decisions) in the Draft Revisions. No evidence that a waterbody is currently in attainment is provided to back up the majority of the proposed de-listings. The necessary burden is to demonstrate that the water quality standard is being met, not that there is insufficient information to show it is not being met.

For example, without any new evidence demonstrating attainment, the State proposes to de-list several waterbodies for pollutants or conditions that are not quantifiable or do not have numeric evaluation guidelines, or where original listings were based upon guidelines that are not approved under the new Listing Policy. Similarly, staff proposes to de-list segments for which there is some uncertainty regarding the original listing or the original data has been lost. This is inappropriate and improper. The Regional Board exercised its Best Professional Judgment in listing these segments originally. Notably,

³ At that point the Board discussed the fact, and staff agreed, that the situation-specific weight of the evidence factor must be considered in all listing and de-listing decisions, and the Board added new language to Sections 3.11 and 4.11 that says “providing any data or information including current conditions supporting the decision.” *Id.*

⁴ The State Board stated: “Using the balanced error approach, the delisting requirements are not more rigorous by design so the burden of proof is equivalent.” FED at B-158. **The State Board did provide a higher burden for de-listing toxic pollutants** however: “The Policy has been modified to *require for toxicants that there be more certainty* when delisting because of the concerns about the expected impacts of these chemicals. The policy requires more data to remove a water body or pollutant from the list.” *Id.* (emphasis added).

the use of BPJ is permitted under Sections 3.11 and 4.11 of the Listing Policy. There must be some affirmative proof that the waterbody is not impaired before de-listing on any of these bases.

Further, although there are no numeric standards or guidelines for some pollutants, narrative standards still apply. The State's Porter-Cologne Water Quality Control Act (Porter-Cologne") acknowledges both narrative and numeric water quality objectives. 40 C.F.R. § 131.3(b). Yet, in the majority of cases, staff has failed to present any data or information in the Draft Revisions to demonstrate that narrative standards are met in these water segments. The onus is on the State Board to demonstrate that these water segments are no longer impaired before removing them from the 303(d) List. Only where the State has affirmative and demonstrable knowledge that water quality standards are being attained and maintained should they remove a water segment from the list. The State Board must make this clear in reviewing the Draft Revisions and approving the 2006 List.

C. Failures in Public Process.

After more than two years of stakeholder negotiation, the Listing Policy calibrated a relationship between the State Board and regional boards designed to enable these agencies collectively to manage the workload involved in preparing the Section 303(d) list for a state as large as California. Just as important, the Listing Policy took into account the need to provide adequate public participation opportunities.

The Policy resolved these issues by providing for the regional boards to play a central role in the Section 303(d) process by (1) preparing the lists in the first instance, including the implementation of the Situation-Specific Weight of Evidence Listing Factor (Listing Policy at § 3.11); (2) holding public hearings; and (3) submitting proposed regional lists to the State Board for final review and approval. FED at B-167. One of the chief functions of the regional boards is to allow for detailed factual review of local water quality conditions; by contrast, the State Board role is as a final "check" on the entire process as well as to consider matters of statewide interest or significance. *Id.* ("the SWRCB approval process is the last stage of review.") This central role of the regional boards is conveyed not only by these provisions but also by the more than one hundred references to the regional boards in the FED and in the Listing Policy itself.

Nevertheless, in its first implementation of the Listing Policy, the State Board has turned these procedures on their head by eliminating regional board formulation and public consideration of lists, as well as the other basic structural steps carefully set forth in the Listing Policy. It is not difficult to connect this failure to follow the Listing Policy to the State Board's related failure to consider all readily available information, given the scope of this task in a state as large as California. Moreover, the related failure to implement a weight of the evidence analysis, as required under Section 4.11 of the Listing Policy, whenever evidence suggests non-attainment of standards, appears connected to the attenuated role played by the regional boards in making listing decisions in the first instance.

D. Failure to Consider All Readily Available Information.

1. General Legal Principles.

The body of regulations and guidance that bear on 303(d) listing are unambiguous about the information that should be considered in making listing decisions: all of it. TMDL regulations state clearly that “[e]ach State shall assemble and evaluate all existing and readily available water quality-related data and information to develop the [303(d)] list.”⁵ The regulations go on to mandate that local, state and federal agencies, members of the public, and academic institutions “should be actively solicited for research they may be conducting or reporting.”⁶ Furthermore, EPA’s 2004 Integrated Guidance similarly states that “[a]ll existing and readily available data and information must be considered during the assessment process.”

The regulations and guidance are even more explicit about not excluding data on the basis of age and sample size. The Integrated Guidance states clearly that “[d]ata should not be excluded from consideration solely on the basis of age,”⁷ and “does not recommend the use of rigid, across the board, minimum sample size requirements in the assessment process.”⁸ EPA adds that “the methodology should provide decision rules for concluding nonattainment even in cases where target data quantity expectations are not met, but the available data and information indicate a reasonable likelihood of WQC exceedance.”⁹ As an illustration, EPA explains that “[w]hen considering small numbers of samples, it is important to consider not only the absolute number of samples, but also the percentage of total samples, with concentrations higher than those specific in the relevant WQC.”¹⁰ EPA applied these rules in its review of California’s 2002 303(d) list, finding that “it is inconsistent with federal listing requirements for the State to dismiss a water from further consideration in the Section 303(d) listing process simply because a minimum sample size threshold was not met for a particular water body. This is particularly true . . . where the impairments are caused by toxic pollutants.”¹¹

2. Listing Policy Requirements

Recognizing these principles, the Listing Policy clearly states that “all readily available data and information shall be evaluated.” Listing Policy at § 6. It further states that the “RWQCBs and SWRCB shall actively solicit, assemble, and consider all readily available data and information.” *Id.* at § 6.1 (emphasis original); *see also* FED at B-142 (“If data and information is available, it is required that it be assessed.”)

⁵ 40 C.F.R. § 130.7(b)(5).

⁶ 40 C.F.R. § 130.7(b)(5)(iii).

⁷ 2004 Integrated Guidance at 23-24.

⁸ *Id.* at 25.

⁹ *Id.* at 26.

¹⁰ *Id.* at 27. EPA refers the reader to Section D.6, page 47 last paragraph through page 50 of CALM for further discussion of this point.

¹¹ Letter from Alexis Strauss, U.S. EPA Region IX to Celeste Cantu, SWRCB (July 25, 2003).

Nevertheless, a review of the proposed List shows that the SWRCB has so far failed to implement these bedrock requirements. Board staff has admitted that perhaps as little as 25% of available data has, in fact, been reviewed. Moreover, staff circumscribed the set of data used to formulate the list by restricting it to a public solicitation that ended in June of 2004, eighteen months ago. *See* Staff Report at 4. The result of both of these actions is that the List may, or may not, actually set forth the full extent of impaired waters. Moreover, in many instances staff proposes to delist well-studied waters notwithstanding the availability of high quality data that contradicts staff's conclusions. Both of these results are at odds with applicable regulations, guidance, the Listing Policy—and the basic “safety net” policy rationale for Section 303(d).¹²

E. The Listing Policy Is Not Being Applied as Intended.

The State Board issued the Listing Policy in 2004 after a long public process. During the public process, almost every issue in the Listing Policy was subject to comment and debate by agencies, environmental groups and dischargers. Thus, the intent of the final Listing Policy was clear to all parties. Unfortunately, staff has not interpreted or applied certain aspects of the Listing Policy consistent with that intent. Notably, as most of these are concerns with regard to proposed de-listings, they can be resolved easily by the State Board declining to apply the Listing Policy retroactively.

1. An Existing TMDL is Not A Valid Justification to De-list.

Staff has used Section 2.2 of the Listing Policy improperly to de-list water quality segments where a TMDL has been adopted but compliance with water quality standards has not yet been established. Not only is this inconsistent with the CWA, which requires listing of all segments where water quality standards are not attained and does not contemplate de-listing waters at the time of TMDLs adoption, it was not the intent of Section 2.2. 33 U.S.C. § 1313(d); Listing Policy at § 2.2. Delisting must only occur when TMDL requirements are met and beneficial uses are attained.

Section 2.2 defines when a water quality segment should be moved from the Water Quality Limited Segments category to the Water Quality Limited Segments Being Addressed (“WQLSBA”) category of the 303(d) List. Listing Policy at 3; FED at B-73 – B-74 . Nothing more. It was developed as an alternative to proposals either to de-list segments with a TMDL in place or to leave those segments on the main list until water quality standards are attained. As the CWA does not authorize the State to remove waters from the 303(d) List until water quality standards are attained,¹³ the State chose to create a separate category on the list for these segments to distinguish them from segments still needing a TMDL. Listing Policy at 3. This is the sole purpose of Section

¹² Houck, Oliver A., *The Clean Water Act TMDL Program* 49 (Envtl. Law Inst. 1999).

¹³ Section 303(d) of the CWA does not contemplate de-listing waters at the time that TMDLs are established. 33 U.S.C. §1313(d). Rather, Section 303(d) focuses solely on requiring TMDLs to result in the attainment and maintenance of beneficial uses. *Id.*

2.2, as confirmed by its placement in Section 2: *Structure of the CWA Section 303(d) List*.
Id.

Staff, however, has taken Section 2.2 out of context and applied it in a way that essentially denigrates the entire purpose of that section. Basically, staff cites Section 2.2 to justify de-listing segments for which a TMDL has been adopted and approved by EPA but compliance with standards not yet attained, whenever a reevaluation of the data used for the original listing was insufficient to meet the new guidelines in the Listing Policy. This is wrong on many levels.

First of all, as discussed above, staff should not be reevaluating listing decisions for segments for which TMDLs have been adopted. Rather, for segments already listed, staff should focus solely on whether a TMDL has been approved by EPA for that segment. If so, the Listing Policy provides that it should be moved to the WQLSBA category. During the development of the Listing Policy, neither the State Board nor the public was contemplating using section 2.2 as a justification for de-listing segments for which a TMDL had been approved. Second, from a practical standpoint, it makes no sense to reanalyze the original information and decide that no listing, and thus no TMDL is required, when the State and EPA have obviously very recently re-analyzed all the information during the rigorous TMDL development process, and made a decision to develop and adopt a TMDL based on the fact that water quality standards were not being met.¹⁴ The entire scenario belies logic.

Adding insult to injury, staff has based several of these erroneous de-listing proposals on the fact that there is *uncertainty* with regard to the original listing. *See e.g.*, Draft Revisions, Vol. II, Los Angeles Region 4 (hereinafter “Draft Rev. Reg. 4”) at 206, 299. Obviously, the TMDLs that were developed by the Regional Boards and approved by the State and EPA have already addressed any uncertainty in reevaluating the data and including appropriate provisions in the TMDL to address any uncertainty.¹⁵

Again, the State Board should clearly state that if a TMDL has been adopted, but not yet fully implemented for a waterbody/pollutant, the original listing should not be reevaluated for de-listing during the 303(d) list update process. Instead, those segments should be moved to the WQLSBA category as directed by the Listing Policy.

¹⁴ It has been the state’s practice to effectively de-list a pollutant by not establishing a TMDL if it discovers during the TMDL development process that the waterbody is no longer impaired for that pollutant. This certainly implies that the State believed that the waterbodies were impaired for those pollutants for which a TMDL was established during this process.

¹⁵ In addition, basing a de-listing on a re-evaluation of the original data where a TMDL already exists for that segment will potentially weaken existing TMDLs by opening them up for argument that they should be reopened because the State has determined the segment is no longer impaired under the new Listing Policy.

2. Situation-Specific Weight of Evidence Listing/De-listing Factors Must Be Considered.

The Situation-Specific Weight-of-the-Evidence Approach set forth in Sections 3.11 and 4.11 of the Listing Policy was included to cure well-understood legal and technical inadequacies in the SWRCB's draft binomial-only listing policy. See Environmental Caucus of the AB 982 Public Advisory Group Comments on SWRCB, "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List" (2/18/04). Board Members required that a weight of evidence approach complement the specified listing and delisting factors, acting as a "safety net" to ensure that all impaired waterbodies are included on the 303(d) List. Both of these sections require an evaluation of all available evidence under the situation-specific weight of the evidence process whenever there is any information that indicates non-attainment of standards. Together, these sections provide flexibility to allow the State to use its best professional judgment in listing and de-listing decisions so that it can meet Section 303(d) standards and submit impaired waters lists that EPA can approve. For instance, Section 3.11 states

When all other Listing Factors do not result in the listing of a water segment but information indicates non-attainment of standards, a water segment shall be evaluated to determine whether the weight of evidence demonstrates that a water quality standard is not attained. If the weight of evidence indicates non-attainment, the water segment shall be placed on the section 303(d) List.

Section 4.11 is, and was intended, to be a direct counterpart to Section 3.11. Thus, the Board inserted the exact same language in section 4.11 by simply substituting the terms de-listing and attainment for the terms listing and non-attainment.

When all other Delisting Factors do not result in the delisting of a water segment but information indicates attainment of standards, a water segment shall be evaluated to determine whether the weight of evidence demonstrates that a water quality standard is attained. If the weight of evidence indicates attainment, the water segment shall be removed from the section 303(d) List. If warranted, a listing may be maintained if the weight of evidence indicates a water quality standard is not attained.

Listing Policy at 8. Unfortunately, SWRCB staff apparently is misinterpreting this language when it appears in Section 4 of the Policy to mean that the weight of evidence approach does not have to be employed as a "check" when delisting appears appropriate under the specified delisting factors but would not be appropriate when all evidence is considered.

Staff's interpretation is flawed. First, if the Listing Policy is faithfully implemented, staff's interpretation amounts to a distinction without a difference. Proceeding in a step-wise fashion through the biannual Section 303(d) process

requires consideration of all readily available information as a fundament of the process. Even if staff believe (erroneously, as discussed immediately below) that delisting is appropriate without employing a weight of the evidence analysis under Section 4, the evidence available must in any case be considered under Section 3—it cannot be ignored without violating basic Section 303(d) principles. So, whether Staff employs the weight of the evidence approach under Section 4, or under Section 3, this analysis must be undertaken before a Section 303(d) list of impaired waters can be completed.¹⁶

Second, staff's interpretation of Section 4 is wrong, in any case. This interpretation would set a far less stringent standard for del-listing than to list waterbodies. This plainly was not the intent of the Board nor is it the standard set forth in the Listing Policy. *See e.g.*, Hearing Transcript, Sept. 30, 2004; FED at B-158 – B-159 (responding to the comment that “the burden of proof [for listing and delisting] is equivalent” by noting “this is true.”) Second, if staff believes the language chosen in Section 4 of the Listing Policy fails to clearly reflect the underlying principle of the Listing Policy, staff need only read Section 4 along with Section 3 and in light of the well-documented intent of the State Water Board in approving the Listing Policy. *See e.g.*, *Food and Drug Admin. v. Brown and Williamson Tobacco Co.* (2000) 529 U.S. 120, 133 (“the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.”) Notably, the SWRCB relies on the fact that the Policy employs adequate measures to assure that impaired waters are identified and placed on the Section 303(d) list in the first instance—and not improperly removed thereafter—as a basis of its approval and its related certification that “this policy will not have a significant adverse impact on the environment.” Were staff to persist in contending that delisting is proper when evidence indicates impairment but specified listing factors are not triggered, these critical findings would have no basis and would be subject to challenge.

The need for this flexibility and judgment is highlighted by the fact that some well-known and obviously polluted waterbodies may not meet the specific requirements of the Listing Policy's other de-listing or listing factors. Similarly, the binomial table approach doesn't work in the absence of any quantitative data, yet there may be other information indicating impairment. Instead of acknowledging this flexibility, staff has improperly taken a very narrow and conservative interpretation of these sections to avoid utilizing them, even in situations where it is clearly warranted.¹⁷ De-listings made in this manner

¹⁶ It would be far simpler for Staff to employ the weight of evidence approach before delisting under Section 4, but they could reach a provisional decision to delist under Section 4 and then analyze the same waterbody and the same information under Section 3 before completing the process. This would appear to be less efficient.

¹⁷ An example demonstrates the point. Staff has proposed to de-list the Dominguez Channel and Estuary for DDT in sediment and tissue under Sections 4.5 and 4.6, based on the lack of an approved sediment quality guideline and fish tissue data from fish caught inside the Creek or the Estuary. This, despite the fact that (1) there are high levels of DDT in the sediment; (2) the Montrose Chemical Company, the former largest manufacturer of DDT in the world, was located in the upper Dominguez Creek watershed; (3) the Dominguez Channel is a known conduit and source for historical DDT contamination reaching the Los

would be clearly arbitrary and capricious in view of the totality of the information. State and regional board staff thus need clear direction from the State Board that they are **required** to apply Sections 3.11 and 4.11 whenever there is any information indicating impairment regardless of the other factors, consistent with both the language of the Listing Policy and the intent of the State Board in including these sections.

The State Board therefore should direct its staff and the regional boards on the appropriate application of section 4.11 of the Listing Policy to situations where any evidence exists to support retaining a listing even if the precise requirements of Sections 4.1 to 4.10 are not met or all of the required data sets do not exist. This is the only interpretation consistent with the Listing Policy as a whole and the recognized equal burden of proof applicable to both listing and de-listing decisions.

3. Sediment Chemistry Data Should be Evaluated under Situation-Specific Weight of Evidence

Staff recommends *not* listing numerous water segment- pollutant combinations despite the fact that a “sufficient number of samples exceeded the sediment quality guidelines.” For instance, although six of twenty-four sediment samples in Los Angeles Harbor – Cabrillo Marina exceed the copper sediment quality guideline (“SQG”), which satisfies the required frequency for listing under the binomial distribution table, staff asserts that no listing should occur because there was no observed toxicity. Draft Rev. Reg. 4 at 371. Section 3.6 of the Listing Policy is cited as the basis for this decision. This line of reasoning is inappropriate.

Section 3.6 of the Listing Policy provides listing factors for water and sediment toxicity, but **not** for pollutants in sediment. In fact, there are no specific listing factors provided in Section 3 of the Listing Policy for pollutants in sediment. Listing Policy at 5-6. An exceedance of a SQG, in and of itself, is an indicator that water quality standards are not being attained. For example, ERMs are set at a chemical concentration above which adverse biological effects are frequently observed. Long, E.R., MacDonald, D.D., Smith, S.L., and F.D. Calder, Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments, *Environmental Management* at 19(1): 81-97 (1995). Thus, it is unfounded to require sediment *and* observed toxicity data before listing is considered.

Sediment quality data are sufficient for listing decisions on their own merit. As there is no specific section addressing this, pollutants in sediment must be evaluated using a

Angeles Harbor; (4) this contamination has resulted in a Superfund Site directly offshore; (5) a fish consumption advisory exists for Los Angeles/Long Beach Harbor due to elevated DDT and PCBs; (6) other DDT listings are (rightly) retained for areas of the Los Angeles Harbor along with several new proposed DDT listings in the Harbor; and (7) there is existing fish tissue data from the Harbor with high levels of DDT. It is entirely unfounded to propose de-listing the Dominguez Channel and Estuary for this pollutant on the sole basis that no one has sampled any fish inside the Creek itself for DDT. Yet staff has made the erroneous interpretation that Section 4.5 overrides Section 4.11 and so its hands are bound and it must de-list. This is in direct contravention of both the language of the Listing Policy and the intent of the State Board in including Section 4.11.

situation-specific weight of evidence under Section 3.11 of the Listing Policy. The magnitude of the SQG exceedance may also be considered in conducting this situation-specific weight of evidence analysis. The State Board therefore should require its staff and the regional boards to evaluate available sediment quality data using the Section 3.11 situation-specific weight of evidence approach, regardless of the availability of overall sediment toxicity data.

Finally, staff has not interpreted or applied Section 3.6 of the Listing Policy consistently. For example, the Staff Report recommends to *not delist* the Los Angeles Harbor – Fish Harbor due to exceedances of the sediment quality guideline for PAHs in sediments, despite the fact that sediment toxicity has been determined to be “insignificant.” State Board staff find that “it cannot be determined if applicable water quality standards are attained,” so the listing is maintained. Draft Rev. Reg. 4 at 372. This analysis appropriately takes a more conservative approach to ensure water quality standards are attained. In another example, the Draft Revisions are very inconsistent with regard to sediment pollution in the Dominguez Channel Estuary. For instance, staff recommends listing pyrene, phenanthrene, chrysene, and benzo(a)pyrene given three lines of evidence: significant exceedance of SQGs, observed sediment toxicity, and observed impacted benthic community. However, staff recommends not listing other constituents such as copper and benzo[a]anthracene in the same estuary despite a significant number of exceedances of SQGs. The observed toxicity in the Dominguez Channel Estuary should be included as a line of evidence supporting listing for these latter pollutants. The State Board should ensure that it maintains consistency in its interpretation and application of the Listing Policy.

4. Lost or Anecdotal Data

Staff also has made express unilateral assumptions that go beyond the Listing Policy. For instance, on pages 11-12 of the Staff Report, staff provides a list of assumptions, *in addition* to those contained in the Listing Policy, which it used to evaluate potential de-listings. Staff Report at 11-12. These additional assumptions include de-listing previously listed segments if “data or information justifying the original listing was anecdotal” or “data or information to support the original listing simply does not exist.” Staff’s support for this is the following: “This approach was used to *avoid requiring a large burden of proof to delist* a water body pollutant combination if the original listing was found to be baseless in terms of Listing Policy procedures.” *Id.* (emphasis added). Significantly, this approach also illegally avoids the Listing Policy’s requirement to show that the segment would not have been listed absent the faulty or non-existent original data. *See supra* section II.A.2.

The application of these additional assumptions is plainly in direct contradiction to the Listing Policy. These additional assumptions go well beyond the intent of the Listing Policy, which requires a high burden of proof for de-listing. As staff acknowledges, these factors in fact **negate** that required burden. Given that the regional boards must have had a justification for listing the majority of these waterbodies in the first place,

substantial deference must be given to the original listing. A high degree of persuasion is necessary to overturn this presumption of correctness.

The State Board should remove these additional assumptions from the process. They constitute revisions to the Listing Policy and thus must be undertaken as part of a separate process to revise the Policy. The State Board also should clarify that in the absence of any new data showing attainment of water quality standards, these listings should remain on the 2006 List. They may be reviewed again by the regional boards in the next round of listing using Section 4.11, the site-specific weight-of-the-evidence approach.

5. Narrative Standards Must Be Evaluated.

Staff is proposing to de-list several nuisance conditions, including excess algal growth, odor, taste, and foam, which are all covered under various narrative standards in the Basin Plans,¹⁸ on the basis that they are conditions, not pollutants. *See e.g.*, Draft Rev. Reg. 4 at 316. This is inconsistent with both the CWA and Porter-Cologne Act, as well as the express terms of the Listing Policy.

One of the main objectives of the CWA is to restore water quality so that all of the Nation's waterbodies are fishable and swimmable. 33 U.S.C. § 101(a). The narrative standards at issue are necessary to attain this important goal. Moreover, federal regulations explicitly state that narrative water quality standards should be assessed for the purpose of listing waters under Section 303(d). 40 CFR § 130.7(b)(3). The Porter-Cologne Act similarly acknowledges both narrative and numeric water quality objectives; the State and regional boards are charged with enforcing these objectives. Cal. Water Code § 13241. Accordingly, the FED sets forth guidelines for interpreting narrative water quality standards, and the Listing Policy provides for such listings in Section 3.7. FED at 75-78, B-120; Listing Policy at 6. Indeed, in response to a specific comment requesting that assessments based on narrative standards or other qualitative assessments be excluded from the Listing Policy, the State Board responded "Federal regulation requires that narrative water quality standards be evaluated and that waters be placed on the section 303(d) list if these waters exceed these narrative standards." FED at B-74. Plainly, nuisance conditions must be considered for listing on the 303(d) List.

¹⁸ The Los Angeles Basin Plan, like most Basin Plans, contains only narrative objectives for nuisances, including:

"Waters shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growth causes nuisance or adversely affects beneficial uses."

"Waters shall not contain floating materials, including solids, liquids, foams, and scum, in concentrations that cause nuisance or adversely affect beneficial uses."

"Waters shall be free of coloration that causes nuisance or adversely affects beneficial uses."

Staff's proposed rationale for not listing nuisances because they are conditions rather than pollutants is erroneous. Using staff's own terminology, the narrative water quality standards themselves describe a condition, not a pollutant. Presumably, these narrative standards exist because it is difficult to pinpoint one specific pollutant that causes these conditions under all circumstances. For instance, odor could be caused by algae or by petroleum or trash or a combination of factors including water temperature and flow. Regardless of the cause, it is a nuisance. Under staff's proposed approach, however, a segment would not be listed even though specific narrative standards are not attained whenever a pollutant(s) causing the problem cannot be precisely identified during the listing process. This too is erroneous, as determining the source(s) of the non-attainment is generally done during the TMDL development process, which may include such factors as seasonality and a margin of safety.¹⁹ From a more practical standpoint, if narrative listings cannot be made, there may be no incentive to address the problem and investigate the source. The logical and appropriate way to address this is to list waterbodies for the nuisance condition where a narrative nuisance standard is not being attained. This is exactly what Section 3.7 does. Section 3.7 contains no requirement to list for a specific pollutant instead of a nuisance condition. Nor can it under the CWA. To the contrary, the express terms of Section 3.7 allow a segment to be listed for several nuisance conditions, including excessive algae growth, odor, taste or foam. Listing Policy § 3.7; *see also* testimony of State Board Legal Counsel, SWRCB Hearing Transcript, Sept. 30, 2004 ("When you know the pollutant, list the pollutant, if you don't know it, it doesn't mean don't list it...In fact, EPA has consistently held that its own regs [sic] require listing for unknown toxicity, low dissolved oxygen and other conditions like nuisance conditions. So we have no choice but to list for those conditions."). Thus, staff's proposed rationale that only pollutants may be listed must be rejected and relevant listings reassessed.

Staff also asserts that quantitative data is necessary for a nuisance listing. Again, this is erroneous. Translators for assessing narrative conditions are not limited to numeric objectives and guidelines. As acknowledged in Sections 3.7.1 and 3.7.2 of the Listing Policy, there are scientifically-accepted approaches to evaluating compliance with narrative objectives aside from comparison to numeric guidelines. These include biological assessment approaches and the widely used and accepted reference system-based approach. Listing Policy at 6 ("Waters may **also** be placed on the section 303(d) list when a significant nuisance condition exists as compared to reference conditions...." (emphasis added)); *see also* FED at B-27. Further, with regard to nutrient-related conditions, section 3.7.1 expressly allows listing for nuisance conditions if "nutrient concentrations cause or contribute to excessive algal growth." *Id.* ("Waters may **also** be placed on the section 303(d) list ... when nutrient concentrations cause or contribute to excessive algal growth.") This is independent of any need to pinpoint whether the cause is nitrogen (N) or phosphorous (P) or some combination of the two, to list either N or P, or whether there are applicable numeric objectives for N or P. Therefore, consistent with

¹⁹ In addition, the majority if not all of the TMDLs passed to date in California also include some amount of study and pollutant/source characterization as part of their implementation, with reopeners provided in case new information comes to light.

the very language of the Policy, the State Board should clarify that Sections 3.7 and 4.7 should not be interpreted as narrowly as staff has done in the proposed revisions.

Further, where there is no quantitative data, the State and regional boards must evaluate the nuisance condition under Sections 3.11 and 4.11 based on all available information. The State Board acknowledged in its Responses to Comments on the Listing Policy that even if a nuisance does not meet the quantitative requirements for listing, the Policy “was amended to include a situation-specific weight of evidence listing or de-listing process by which Regional Boards can list or de-list any water body-pollutant combination even if it does not meet the listing requirements of the Policy as long as the decision can be reasonably inferred from the data and information.” FED at B.27. This situation-specific weight of the evidence process is provided for in Sections 3.11 and 4.11 of the Listing Policy and, as discussed in Section II.E.2., *supra*, must be used when the other factors fail whenever there is *any* evidence of non-attainment.

6. Lack of Acceptable Evaluation Guidelines

Staff is proposing numerous de-listings based on the assertion that there is no existing and/or acceptable evaluation guideline under the provisions of the new Listing Policy.²⁰ This is improper for two reasons. First, this rationale is not included in the list of three situations in which de-listing may be considered. Listing Policy at 11. Second, this line of reasoning is inappropriate in the absence of any evidence indicating that the segment is in attainment with water quality standards. Once the water is listed, the substantial deference standard applies and a high burden of proof is required for de-listing. The assertion of this line of reasoning by the State Board also ignores the regional boards’ own best professional judgment and the precautionary principle.

In short, it is evident that these proposed de-listings are based solely on a “guess” that there is no impairment, with no scientific evidence or data indicating that water quality standards, including beneficial uses, are being attained. Staff admittedly made no attempt to obtain additional information or more recent data that would reveal whether or not the water segments are indeed in attainment. Given the nature of some of the chemicals affected – like DDT, a highly toxic, persistent and bioaccumulative compound – this proposed approach is not justified. As stated in the Federal regulations, “[The] State must demonstrate good cause for not including a water or waters on the list. Good cause includes...more recent or accurate data...” 40 C.F.R. §130.7. The burden of proof is squarely on the State to provide such data. It has not met that burden here.

The CWA and its implementing regulations cast a wide net to assure that water quality standards are met. This is apparent throughout Section 303(d) and its regulations, which require TMDLs to be established and also require a margin of safety where uncertainty is

²⁰ Evaluation guidelines do exist for several of the pollutants said to have no guideline. For example, currently there is a National Academy of Science (“NAS”) guideline for aldrin and dieldrin, an OEHHA guideline for chlordane, and an ERM guideline for DDT. It is unclear if these guidelines were used to re-evaluate the data.

present. 33 U.S.C. §1313(d). Given all the above, the State Board should direct staff to retain these listings as well until such time as substantial information is gathered to indicate that water quality standards are being met.

7. De-Listings Should Not Be Made Based on New Standards for Evaluation Guidelines

Finally, staff contends that several previous listings based upon Maximum Tissue Residue Levels (MTRLs) and Elevated Data Levels (EDLs) should be removed from the list because the new Listing Policy does not recognize these guidelines. This is another good example of how such staff's proposed retroactive application of the Listing Policy fails. Once again, this is not one of the three express situations in which previous listings may be re-evaluated under Section 4 of the Listing Policy. Moreover, staff has not provided any affirmative evidence that the waterbodies proposed for de-listing are not currently impaired under the situation-specific weight of the evidence standard or otherwise. Finally, the proposed approach again ignores the deference due to prior agency decisions.

Although MTRLs and EDLs are not permissible in data evaluations under Section 6.13 of the new Listing Policy, the Policy must be read as a whole. *See e.g., Food and Drug Admin. v. Brown and Williamson Tobacco Co.* (2000) 529 U.S. 120, 133 (“the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.”) It is another well-established canon of construction that courts must interpret a statute “‘as a symmetrical and coherent regulatory scheme’ [citation] and ‘fit, if possible, all parts into an harmonious whole.’” *Id.* The same canon applies here, where the Listing Policy, a regulatory guidance document, is issued with an intent to provide regulatory guidance for consistent implementation of a section of the CWA. Following this principle in this case, it becomes clear that the regional boards are to consider the totality of the evidence using the situation-specific weight of the evidence factor in Section 4.11 before a waterbody may be de-listed for any reason. The State Board staff did not do this for proposed de-listings based on the previous use of MTRLs and EDLs. Thus, the de-listings proposed on this basis are inappropriate and improper.

Finally, the Precautionary Principle should be heeded where the constituents of concern have no other established guidelines, as is the case here. While previous guidelines may have associated uncertainties, they do indicate **potential** impairments in these water segments. For instance, EDLs are indicative of biological stress and impairment at the very minimum. Similarly, the Los Angeles Regional Board recognizes that “MTRLs have value as alert levels indicating water bodies with potential human health concerns.” Los Angeles Regional Water Quality Control Board and U.S. Environmental Protection Agency, *Total Maximum Daily Load for Toxic Pollutants in Marina del Rey Harbor* (2005) at 13. As threatened waters must also be listed under Section 303(d), these waters should remain listed for this reason as well, particularly in the absence of affirmative evidence showing attainment of standards. Listing Policy at 7; 40 C.F.R. § 130.2(j).

In this vein, we also encourage the State Board to actively pursue efforts to develop new or revised guidelines. Once a new guideline is established, the water quality standard

may be revised and the listing may be reevaluated properly. However, absent any new guideline or standard, and absent affirmative information to show that the water segment is not, in fact, impaired or threatened, it is inappropriate in the context of Section 303(d) to de-list previously listed segments based on staff's proposed rationale.

III. LOS ANGELES REGION 4

The following section describes in detail our concerns regarding the proposed de-listing of numerous waterbody-pollutant combinations in the Los Angeles Region (Region 4). For ease of reference, Table 1 provides a summary chart of the specific segments that should be retained on the list, along with the lines of evidence and the applicable sections of the Listing Policy.

REGION 4: DO NOT DE-LIST

Water Segment	Pollutant	Line(s) of Evidence	Listing Policy Section(s)
Arroyo Seco - Reach 1	Excess Algal Growth	1)Existing TMDL is not a valid justification; 2)Excess algal growth is eligible for listing	2.2; 4.11
Arroyo Seco - Reach 2	Excess Algal Growth	1)Existing TMDL is not a valid justification; 2)Excess algal growth is eligible for listing	2.2; 4.11
Ballona Creek	Cadmium (sediment)	Readily Available Data	4.6; 6.1.1
Ballona Creek	Silver (sediment)	Readily Available Data	4.6; 6.1.1
Burbank Western Channel	Excess Algal Growth	1)Existing TMDL is not a valid justification; 2)Excess algal growth is eligible for listing	2.2; 4.11
Calleguas Creek - all listed reaches	Excess Algal Growth	1)Existing TMDL is not a valid justification; 2)Excess algal growth is eligible for listing	2.2, 4.11
Calleguas Creek - Reach 4	Excess Algal Growth	IBI Data	4.11
Calleguas Creek - Reach 5	Excess Algal Growth	IBI Data	4.11
Calleguas Creek - Reach 9B	Excess Algal Growth	Readily Available Data	4.7; 4.11; 6.1.1
Calleguas Creek - Reach 10	Excess Algal Growth	Photographic Evidence	4.11
Calleguas Creek - Reach 13	Excess Algal Growth	Readily Available Data	4.7; 4.11; 6.1.1
Coyote Creek	Excess Algal Growth	1) Upcoming EPA Study; 2) Ammonia & Nitrate-Nitrogen listing may not address problem	2.2; 4.11
Dominguez Channel	DDT (sed&tissue)	1)SQG Exists; 2)Historical Knowledge	4.6; 4.11
Dominguez Channel Estuary	DDT (sed&tissue)	1)SQG Exists; 2)Tissue sample Exists; 3)Historical Knowledge	4.6; 4.8; 4.11
Los Angeles River - Reach 2	Nutrients (Algae)	1)Existing TMDL is not a valid justification; 2)Excess algal growth is eligible for listing	2.2; 4.11
Los Angeles River Estuary (Queensway Bay)	DDT (sediment)	1)SQG Exists; 2)Historical Knowledge	4.6; 4.11
Los Angeles/Long Beach Outer Harbor	PCBs (tissue)	1)Fish Consumption Advisory; 2)Historical Knowledge	4.8; 4.11
San Gabriel River - Reach 1	Algae	1)Upcoming EPA Study; 2)excess algae is a pollutant/condition eligible for listing	2.2; 4.11
San Jose Creek - Reach 1	Algae	1)Upcoming EPA Study; 2)excess algae is a pollutant/condition eligible for listing	2.2; 4.11
San Jose Creek - Reach 2	Algae	1)Upcoming EPA Study ; 2)excess algae is a pollutant/condition eligible for listing	2.2; 4.11
Verdugo Wash - Reach 1	Excess Algal Growth	1)Existing TMDL is not a valid justification; 2)Excess algal growth is eligible for listing	2.2; 4.11
Verdugo Wash - Reach 2	Excess Algal Growth	1)Existing TMDL is not a valid justification; 2)Excess algal growth is eligible for listing	2.2, 4.11
Abalone Cove, Bluff Cove, Hermosa, Malaga Cove, Malibu, Whites Point, Manhattan, Nicholas Canyon, Portuguese Bend, Puerco, Royal Palms, Carbon, Escondido, Inspiration, Las Tunas, Trancas, Venice, Topanga, Dockwiler, Will Rogers	Beach Closures/ Bacteria	1)Readily Available Data; 2)An existing TMDL is not valid justification to delist	2.2; 4.3; 6.1.1
La Costa, Lunada Bay, Point Dume, Sea Level, Flat Rock Point, Point Fermin, Point Vicente, Resort Point, Rocky Point, Torrance, Zuma	Beach Closures/ Bacteria	An existing TMDL is not a valid justification to delist	2.2, 4.11
Ormond, San Buenaventura	Bacteria Indicators	Readily Available Data	4.3; 6.1.1

Table 1: Water-segment/pollutant combinations that are proposed for de-listing but where the weight of evidence shows that they should remain on the 303(d) list.

A. Proposed De-Listings for Beach Closures

1. All of the Proposed Beach De-Listings in Region IV Should Be Rejected

- All Santa Monica Bay beaches should remain on the 303(d) List because they are covered under existing bacteria TMDLs.
- Readily available data indicate that the two Ventura County beaches proposed for de-listing should remain on the 303(d) List.

Staff proposes to de-list 31 Santa Monica Bay beaches that are currently listed for “beach closures.” All 31 of these beaches are covered by existing Santa Monica Bay Bacteria TMDLs adopted in 2003-04, and thus it is not proper to reevaluate these listings as part of the 303(d) listing process. The State Board’s proposal to de-list these beaches is not only inconsistent with the Listing Policy, it is just bad policy. Significantly, it adds unnecessary complexity to the TMDL implementation process, which is already addressing the issue of impairment and compliance for these beaches.

The Santa Monica Bay Beaches Bacteria TMDLs (“SMB TMDLs”) explicitly address the issue of bacteria levels at each of the beaches proposed for de-listing, including provisions for monitoring of bacteria levels at these beaches and measuring compliance (*i.e.* attainment of water quality standards). Attainment of water quality standards therefore should be determined under the TMDL, which sets forth a procedure to accomplish this – not through the listing process. In addition, the first year of monitoring data under the TMDL has been compiled and does not indicate attainment. **The proper action in this case is to retain these beaches on the 2006 List until compliance is determined under the already adopted TMDLs.**

Notably, of these 31 beaches, only five are also listed for bacteria in addition to “beach closures;” the remaining 26 beaches would no longer be listed *at all* if staff’s proposed changes are adopted. As all of these beaches are addressed in the SMB TMDLs, it is inappropriate to de-list them for this impairment. If the State Board is not comfortable with the term “Beach Closures” for these listings, it should simply replace this term with the term “Bacteria Indicators” on the List for the 26 beaches so affected. All 31 beaches then should be placed in the WQLSBA category as provided for in Section 2.2 of the Listing Policy.

Further, even though the 31 Santa Monica Bay beaches should not even be considered for de-listing in this process, as discussed above, readily available data exist to support retaining them under a bacteria listing in all cases except those few that are not currently monitored at all. Specifically, this data, summarized in detail in Appendix 1, Tables 1 and 2, show that bacteria standards are being exceeded pursuant to the requirements set forth in Table 4.3 of the Listing Policy. This is not new data, it is public data from 2000-2005. Thus, this is yet another line of evidence to retain these beaches on the 2006 List.

Finally, staff has proposed to de-list two Ventura County beaches for bacteria indicators. However, readily available data exist and are included in Appendix 1 of this letter, which support retaining both of these beaches on the 2006 List.

2. The State Board Has Not Presented Valid Lines of Reasoning for De-Listing.

Although all of the LA and Ventura County beaches proposed for de-listing should remain listed for the simple reasons set forth above, it bears mentioning that, in addition to ignoring existing TMDLs and available data, staff has applied its “proposed justifications” for de-listing inconsistently for the various beaches, causing a lot of confusion regarding what is supposed to be a transparent process. For example, staff sets forth three potential justifications for de-listing for “beach closures”: (1) A TMDL has been developed and the implementation plan should result in attainment of the standard; (2) “It is not known if beach closure information is backed by coliform data;” and (3) “beach closures” should not be listed on the 303(d) List because “it is not a pollutant or toxicity.” See *e.g.*, Draft Rev. Reg. 4 at 203. Depending on the particular beach, however, one, two or all three of these arguments are employed. The basis for this inconsistency is entirely unclear. Moreover, these proposed justifications, alone or together, are not valid lines of reasoning in these instances. Thus, the Draft Revisions do not provide any support for the proposed de-listings.

a. The Existence of a TMDL is Not a Valid “Line of Evidence” for De-listing.

In any case, the existence of an approved TMDL is not a valid “line of evidence” for de-listing segments under the Listing Policy. Further, staff’s justification that “[a] TMDL has been developed and approved by USEPA and an approved implementation plan is expected to result in attainment of the standard,” is flawed on its face. By the plain language of staff’s statement, water quality standards will be met only upon *implementation* of the TMDL. This is not sufficient to de-list. Indeed, this is the exact reason that the State Board created the WQLSBA category in the Listing Policy.

It is also worth noting that the *only* “line of evidence” considered and weighed by staff in de-listing many of these beaches was the existence of the SMB TMDLs. The State has not provided any other evidence to demonstrate that these beaches are in compliance, only on an expectation of compliance at some date in the future. The implementation schedules under the SMB TMDLs range all the way up to 18 years for wet weather. Thus, water quality standards may not be achieved until this time. Section 2 of the Listing Policy makes clear that water quality limited segments that are being addressed by a TMDL should remain on the 303(d) List – in the portion of the list for WQLSBA. Water segments should be removed from this category only “if it is *demonstrated* in accordance with section 4 that water quality standards are attained.” Listing Policy at 3 (emphasis added). This plainly does not include WQLS that “will attain water quality standards at some point in the future.” Consistent with the Listing Policy and the CWA, the State Board must direct staff to retain the 31 beaches covered by the SMB TMDLs on the 2006 List until attainment is achieved.

b. Uncertainty in the Original Data or a Lack of Monitoring Data are not Viable Reasons for De-listing a Water Segment for Beach Closures.

While the 31 Santa Monica Bay beaches clearly should remain on the 2006 List for the reasons set forth above, we have additional concerns about the evaluation conducted by staff. For several beaches (again not consistently applied), staff maintains that, “[i]t is unknown if the beach closure information is backed by coliform data.” Draft Rev. Reg. 4 at 203. This implies that the data or information that was originally used to support these listings is unknown or cannot be found. This should not be used as a basis for de-listing either.

Moreover, for the 31 beaches expressly covered by the SMB TMDLs, the LA Regional Board has already addressed this precise issue in developing the SMB TMDLs in 2002-03. For instance, the SMB TMDL Staff Report acknowledges that beach closures may result “from oil spills, vessel spills and in a few cases persistent elevated bacteria densities.” LA Regional Board, *Total Maximum Daily Load to Reduce Bacterial Indicator Densities during Dry Weather at Santa Monica Bay Beaches* (2002) at 3. Further, the SMB TMDLs address monitoring and compliance measurement for these beaches. In contrast, the Staff Report provides no data to indicate the beaches are not impaired by bacteria, although beach bacteria data are readily available from numerous sources. Again, the de-listing process for segments covered by existing TMDLs should be done through the process set forth in the TMDL itself. This is consistent with the Listing Policy, the TMDLs, the CWA and the Precautionary Principle.

Another problem with this type of approach in general is that many beaches throughout the State are not monitored for bacteria in wet weather. Rainfall as a cause of high bacteria densities at beaches is well understood. In fact, AB411 even includes a wet weather health warning provision. However, instead of spending funds on monitoring, some county Health Departments simply post warnings at the beaches whenever there is rainfall above a certain amount. Thus, the use (water contact recreation) is impaired as the County is warning people to stay out of the water, but no bacteria data is being collected.²¹ Given this, it may not always be possible to support the previous listings with quantitative bacteria data even though there is an impairment of uses. It is evident that the State Board either must place dry **and** wet weather monitoring information and programs at a much higher priority for funding if it is to adequately protect the health of the waters on which we all depend, or revise the Listing Policy guidelines for bacteria listings to take this into account.

²¹ Under CWA, water quality standards consist of the designated uses of the navigable waters, the water quality criteria for such waters based upon such uses and an anti-degradation policy. 33 U.S.C. §1313(C); 40 C.F.R. Part 131; LA Basin Plan at 3-1. Therefore, an “impairment of a designated use” equates to the non-attainment of water quality standards.

c. De-listing on the Basis that the Term “Beach Closures” Is Not a Pollutant or Toxicity is Not Proper

The term Beach Closures was used to indicate an impairment of the beneficial use (water contact recreation) of the waterbody segments. If the State Board is not comfortable with this term, it should simply replace it with the term “Bacteria” or “Bacteria Indicators” on the 2006 List. As these beaches are all covered by existing Bacteria TMDLs, such a listing is justified. In addition, as shown above and in Appendix 1.A, there is data to support these listings as well.

B. Excess Algae

Staff proposes to de-list fifteen water segments in the Los Angeles Region which are currently listed for “excess algal growth,” including several reaches covered under the already adopted Los Angeles River Nitrogen TMDL and Calleguas Creek Nitrogen TMDL. Staff proffers three arguments in support of these de-listings: (1) “excess algal growth” is not a pollutant; (2) qualitative information on excess algal growth is not sufficient to maintain these listings under section 3.7 of the Listing Policy; and, (3) in most cases, that a Nitrogen TMDL is in place for the segment. None of these proposed justifications are valid technically or under the Listing Policy. All of the water segments currently listed for excess algal growth should remain on the 2006 List.

1. An Existing Nitrogen TMDL is Not a Valid Justification for De-listing Segments for Excess Algal Growth.

In eleven of the sixteen proposed de-listings,²² staff relies on just one line of evidence – that a nitrogen TMDL has been adopted for the water segment. As discussed above with regard to beach closures, an existing TMDL is *not* a valid line of evidence to de-list a segment under the Listing Policy. These 11 proposed de-listings should be rejected on this basis alone.

In addition, we are very concerned with staff’s proposed reasoning that the LA River or Calleguas Creek Nitrogen TMDLs will adequately address excess algal growth in these segments. First, these two TMDLs, adopted in 2003, are still in the process of being implemented and water quality standards have not been attained. Second, the nitrogen targets in these two TMDLs are based on human health standards, not on levels necessary to prevent algal blooms and protect aquatic life, which are generally much lower. Third, many factors, such as sunlight, phosphate levels, pH, flow and others, can contribute to algal growth, not just nitrogen levels. Thus, addressing nitrogen alone is not likely to solve the algae problem. For all of these reasons as well, the existence of a TMDL for nitrogen is not sufficient to address excess algal growth in these segments. These concerns are discussed in more detail below.

²² These reaches are Arroyo Seco Reaches 1 and 2, LA River Reach 2, Verdugo Wash Reaches 1 and 2, and Calleguas Creek Reaches 4, 5, 9B, 10, 11, and 13.

a. Controlling Nitrogen May Not Adequately Address Excess Algal Growth

Staff bases its proposed de-listings for excess algal growth in whole or in part on the erroneous assumption that future and existing nitrogen TMDLs will adequately address excess algal growth. This is incorrect for two reasons.

First, it is well established in the scientific literature that nitrogen is not the only factor contributing to algal growth. “Growth of algae in individual streams, or even reaches of streams, may be limited by N alone, P alone, N and P together, or some combination of other physical and chemical factors....” Busse, L., Cooper, S., Kamer, K., and Stein, E., Southern California Coastal Water Research Project, *A Survey of Algae and Nutrients in the Malibu Creek Watershed* (2003) at 412. In fact, the Technical Support Document prepared for the Calleguas Creek Nitrogen TMDL evaluates nitrogen and phosphorus data and concludes that “initial N:P calculations based on the CCCS data indicate phosphorus would be limiting over nitrogen in most of the watershed, if nutrients were the limiting factor.” LA Regional Board, *Calleguas Creek Nutrient TMDLs* (2001). The Report also notes that “nutrients may not be the limiting factor in much of the watershed.” *Id.* In short, the impacts of nutrients such as nitrogen and phosphorus on algal growth are complex and involve numerous factors, and often are waterbody or even reach specific.

This was demonstrated in Region 4 in a recent UCLA study which found that “the relationships between nutrients and algal or diatom cover differed in sunny versus shady sites. In shaded sites, algal cover was not significantly related to nutrient concentrations (*i.e.*, light appeared to be the limiting factor for algal growth), while diatom cover was positively associated with total phosphorus and negatively associated with total nitrogen. In contrast, in unshaded sites algal cover was significantly related to nutrient concentrations (positively with nitrogen, negatively with phosphorus), while diatoms were negatively associated with nitrogen only. Other variables associated with the abundance of algae or diatoms include nitrogen, temperature, pH, and conductivity.” Ambrose, R.F., Lee, S.F., and S.P. Bergquist, *Environmental Monitoring and Bioassessment of Coastal Watersheds in Ventura and Los Angeles Counties* (2003).

Similarly, data collected in the Malibu Creek Watershed by Heal the Bay’s Stream Team show that elevated phosphate concentrations contribute to excess algal growth. Stream Team data collected between the period of November 1998 and November 2004 are represented in Figures 1 and 2. As seen in Figure 1, algal cover in Malibu Creek consistently exceeds 30% when nitrate is <0.05 mg/l and phosphate is above 0.15 mg/l. While nitrate is the limiting nutrient in this case, it would be nearly impossible to get the nitrate level any lower. Thus, decreasing phosphate concentrations would be a more effective means to reduce algal cover. Graphical representation of Site 12 in Figure 1 illustrates a situation where elevated phosphate levels and low nitrate levels lead to excess algal growth in over 80% of the samples. In addition, as shown in Table 2, data collected at the Agoura Hills Reference Site and Las Virgenes Creek Reference Site show that conditions with low nitrates and higher phosphates produce excess algae. Given the complexity of the nutrient issue, it is more prudent to list a segment for excess algae than for nitrates or nitrates and phosphates. This will ensure that all potential factors are

considered in the TMDL so that the algae pollution is cleaned up and narrative standards are attained.

Further, algal growth is often a better indicator of adverse effects on a waterbody than nitrogen concentrations, and is used as such by numerous environmental managers precisely because algal growth is sensitive to many environmental variables. For instance, the United States Geological Survey uses algae as an indicator in various studies due to the fact that "...as primary producers with rapid reproduction rates (days), attached algae would be expected to respond to physical and chemical changes in streams before macroinvertebrates or other fauna. Periphyton respond directly to many aspects of the stream environment that might be expected to change with land management practices including nutrients." U.S. Geological Survey, *USFS-USGS Algae Indicator Studies*, (retrieved November 21, 2005 from the World Wide Web: <http://ca.water.usgs.gov/cgi-bin/influx/projectsapp.pl?preview=16>). USEPA also recognizes algae as a biological indicator of watershed health. "By using algal data in association with macroinvertebrate and fish data, the strength of biological assessments is optimized." U.S. Environmental Protection Agency, *Biological Indicators of Watershed Health: Periphyton as Indicators*, (retrieved Nov. 21, 2005 from the World Wide Web: <http://www.epa.gov/bioindicators/html/periphyton.html>.)

In sum, staff is not scientifically justified in making a blanket assumption that a nitrogen TMDL will fully address excess algal growth in a water segment. The State Board should correct this in reviewing the Draft Revisions.

b. Nitrogen Targets in the LA River and Calleguas Creek in TMDLs Are Based on Human Health Standards and Thus Are Too High to Adequately Address Excess Algal Growth

In addition to the fact that addressing nitrogen alone is not sufficient to prevent excess algal growth, water quality targets established in the nitrogen TMDLs relied upon by staff are not protective of aquatic life uses. The target for total nitrogen in the LA River TMDL is 8 mg/l and in Calleguas Creek is 10 mg/l (nitrate plus nitrite). These levels are intended to address the drinking water standard of 8-10 mg/l nitrate plus nitrite, which is necessary to prevent toxicity to human infants (methemoglobinemia, also known as blue baby syndrome). They are not adequate to address aquatic life uses. This is illustrated by the current Nutrient TMDL for Malibu Creek, adopted by USEPA in 2003, which provides summer season water quality objectives of 1.0 mg/l total nitrogen and 0.1 mg/l total phosphorous. As seen in Table 3, data collected from Malibu Creek show that there are reaches with total N and total P concentrations below these targets that produce algal growth in excess of the nuisance limit of 30% coverage. Heal the Bay studied threshold values for nutrients and algal cover in Malibu Creek using an empirical reference site approach and found that "[p]eriphyton cover exceeded nuisance levels (*i.e.* 30% cover) whenever average nitrate concentration was greater than 0.1 mg/l or average phosphate concentration was greater than about 0.15 mg/l." S. Luce and M. Abramson, *Periphyton and Nutrients in Malibu Creek* (2004). Thus, even the low targets for nitrogen in that TMDL are inadequate to protect aquatic life. Other established nitrogen criteria for

protection of aquatic life also are significantly lower. For instance, USEPA established CWA section 304(a) nutrient criteria specific to the Los Angeles Region (Ecoregion III) of 0.38 mg/l total nitrogen and 0.022 mg/l total phosphorus for protection of aquatic life and recreation uses. USEPA, *Ambient Water Quality Criteria Recommendations: Rivers and Streams in Nutrient Ecoregion III* (2000) (EPA 822-B-00-016).

Clearly staff is not justified in relying on the existence of these Nitrogen TMDLs to address excess algal growth. The State Board should make a finding that this approach is not scientifically sound.

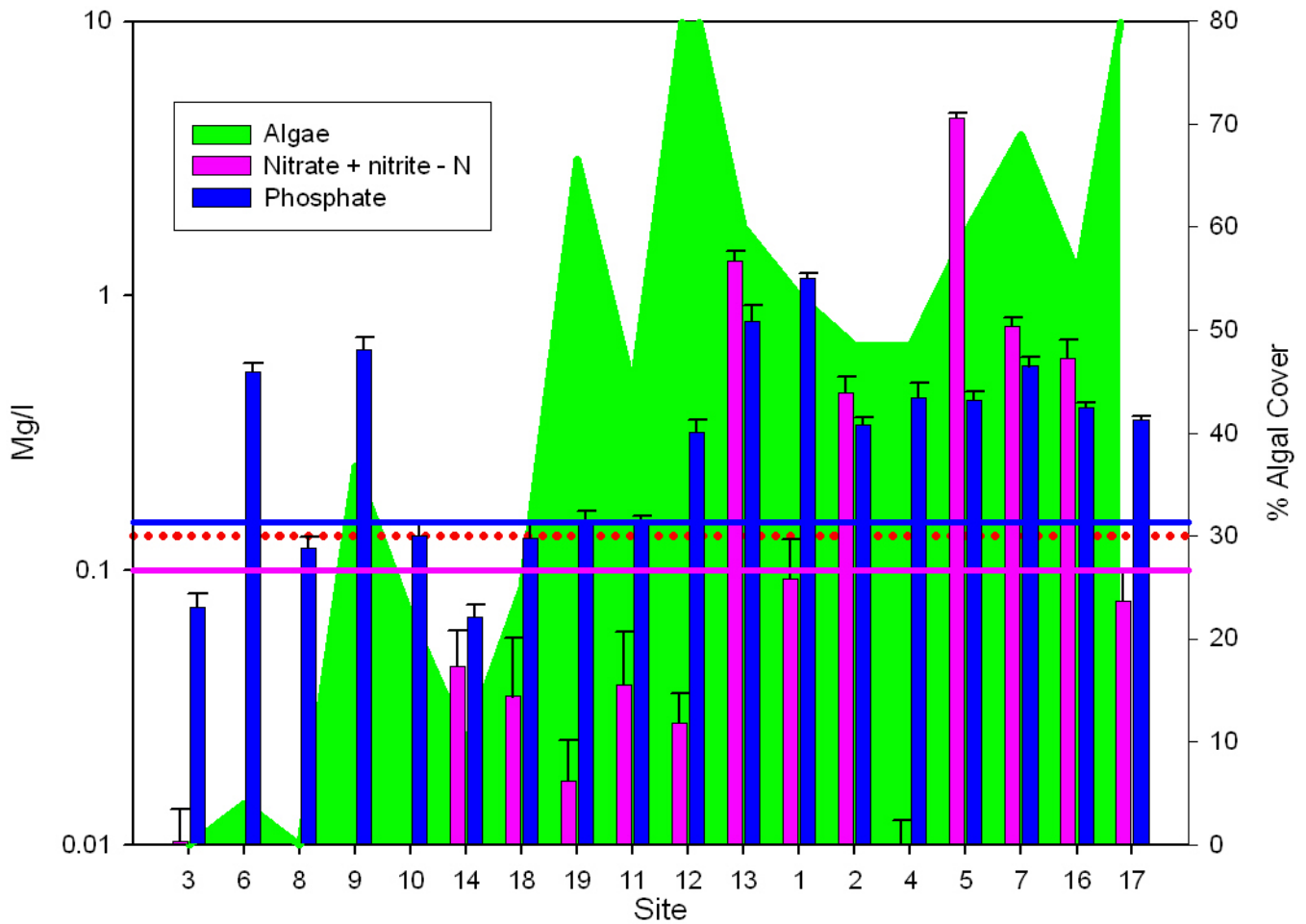


Figure 1: Malibu Creek dry weather nutrients and percentage of algae exceedances >30% coverage (11/98 – 11/04)

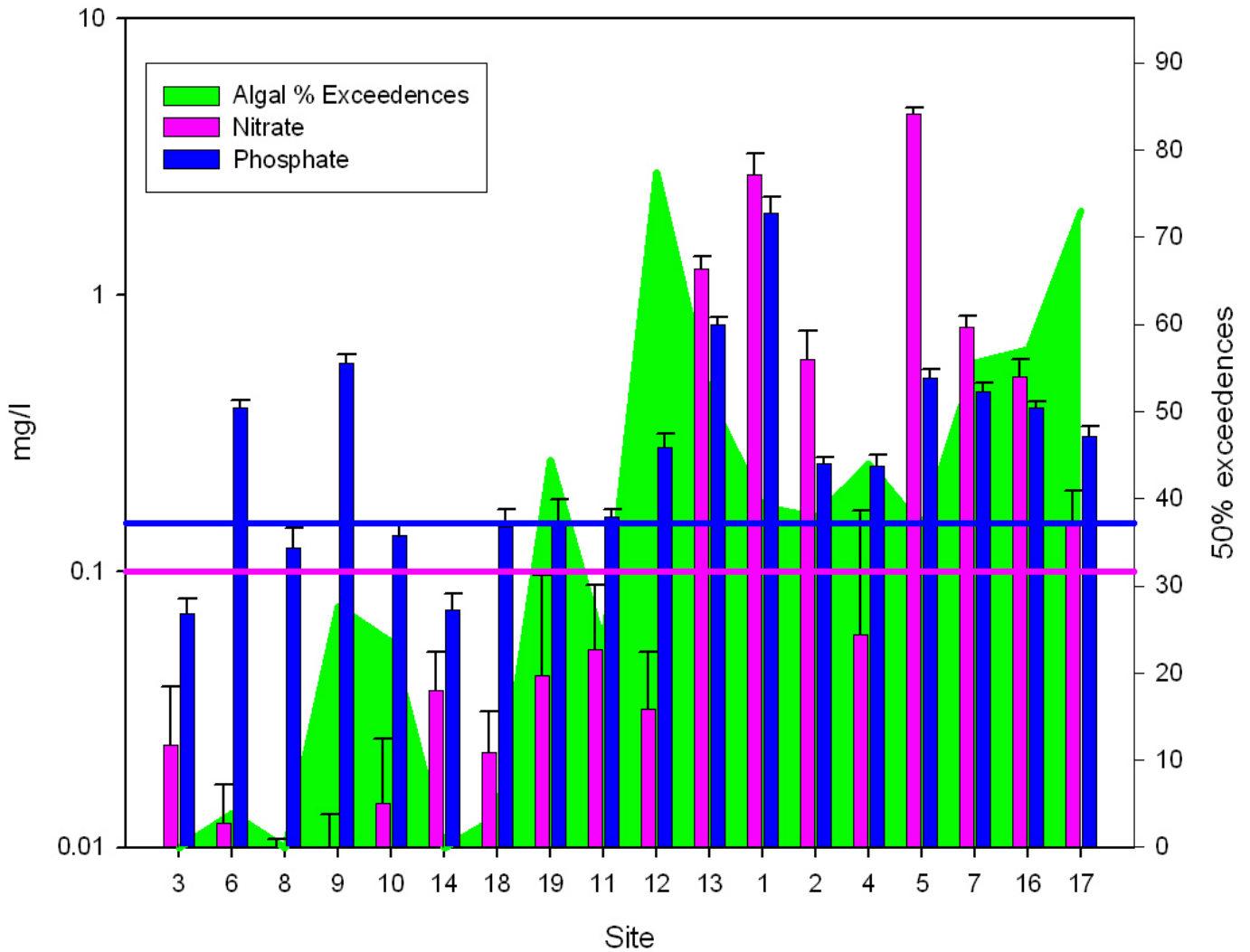


Figure 2: Malibu Creek average nutrients and percentage of algae exceedances >50% coverage (11/98 – 11/04)

	Agoura Hills (HtB - 6)			Las Virgenes Creek (HtB - 9)		
	4/7/2001	5/5/2001	4/6/2003	11/3/2001	1/5/2002	3/3/2002
NO₃+NO₂ (mg/l)	0.005	0.005	0.04	0.005	0.01	0.01
PO₄ (mg/l)	0.52	0.63	0.41	0.43	0.71	0.48
algal coverage (%)	85	100	45	65	95	95

Table 2: Data collected by Heal the Bay at the Agoura Hills and Las Virgenes Creek monitoring locations in the Malibu Creek Watershed.

	Solstice Creek (HtB - 14)				
	5/17/2003	6/1/2003	1/11/2004	8/7/2005	10/16/2005
NO₃+NO₂ +NH₃ (mg/l)	0.045	0.06	0.01	0.96	0.71
PO₄ (mg/l)	0.06	0.07	0.05	0.09	0.1
algal coverage (%)	35	35	32	46	42

Table 3: Data collected by Heal the Bay at the Solstice Creek monitoring location in the Solstice Creek Watershed.

2. Excess Algae is a Pollutant that Impairs Beneficial Uses.

Staff also contends that excess algal growth is not a pollutant, thus it should not be listed. As discussed in Section II.E.5, this assessment is incorrect. Narrative standards must also be met through the 303(d) process.

CWA Section 502(6) expressly defines “pollutant” to include “biological materials.” 33 U.S.C. §1362(6). Courts also have held that biological materials, such as algae, can be considered a pollutant if they impair beneficial uses. *See Northwest Environmental Advocates v. U.S. EPA*, 2005 WL 756614 (N.D. Cal. 2005), see also *U.S. PIRG v. Atlantic Salmon of Maine* (D.Me., Aug. 2001) (citing *United States v. Hamel*, 551 F.2d 107 (6th Cir. 1977)) (“Courts have interpreted the definition of ‘pollutant’ expansively, stating that it ‘encompasses[es] substances not specifically enumerated but subsumed under the broad generic terms’ listed in Section 502(6).”). *U.S. PIRG v. Heritage Salmon Inc.*, Civil No. 00-150-B-C (D.Me. Aug. 28, 2001). Indeed, the definition of pollutant is ‘meant to leave out very little.’ ” *Sierra Club, Lone Star Chapter v. Cedar Point Oil Co.*, 73 F.3d 546, 566-568 (5th Cir. 1996), *cert. denied*, 519 U.S. 811 (1996).

While algae is an important component of the aquatic ecosystem, in excess amounts, algae can cause problems ranging from low oxygen levels to serious human health concerns. For instance, “excess periphyton growth can lead to low dissolved oxygen levels and increased turbidity in the water column, which are harmful to fish and other aquatic life.” S. Luce and M. Abramson, *Heal the Bay, Periphyton and Nutrients in Malibu Creek* (2004). In addition, “benthic macroinvertebrates may be affected when periphyton grows on stream substrates and covers important habitat.” *Id.* Excess algae can also block sunlight, which in turn affects aquatic organisms. In addition, excess algae impairs other beneficial uses such as fishing, wading, boating, and aesthetic appreciation. Busse, L., Cooper, S., Kamer, K., and Stein, E., *SCCWRP, A Survey of Algae and Nutrients in the Malibu Creek Watershed* (2003) at 412. In some instances, outbreaks of toxic blue-green algae have even caused serious human health impacts. State Water Resources Control Board, *California Water News: Federal, Tribal and State Authorities Advise Caution on Dangerous Klamath River Algae* (retrieved Dec. 1, 2005 from World Wide Web: http://www.waterboards.ca.gov/press/docs/2005/05_019.pdf).

Excess algal growth must be addressed as it may result in low dissolved oxygen levels as well as block sunlight, thereby affecting aquatic life uses. A recent study found extremely low night-time DO concentrations in areas of Malibu Creek with excess algae:

“All sites with flowing water and >30% algal cover had DO concentrations below reference condition values.” Briscoe et al., *Pre-dawn Dissolved Oxygen Levels in Malibu Creek Watershed* (2005). Thus, currently established nitrate criteria, including those used in TMDLs, may not eliminate algal growth or address low dissolved oxygen levels that result from the algal growth. Clearly, consistent with the CWA and case law, excess algal growth must be treated as a pollutant under the Listing Policy.

Ironically, staff itself acknowledges that excess algal growth is a pollutant in other parts of the Draft Revisions. *See e.g.*, Draft Rev. Reg. 4 at 314 (listing excess algal growth as an example of a pollutant). Thus staff directly contradicts itself. In addition to proving our point, this is yet another example of inconsistencies in the Draft Revisions.

3. Qualitative Information on Excess Algal Growth Can Be Linked to Scientifically Sound Evaluation Guidelines

Finally, in proposing to de-list several of these segments, staff discounts available qualitative monitoring data that indicate non-attainment of beneficial uses, insisting that quantitative data are necessary to retain excess algal growth on the 303(d) List. Again, this assumption is flawed and inconsistent with the Listing Policy. For example, Section 6.1.4 of the Listing Policy provides for qualitative data submittals. Yet although four of five algae observations on Coyote Creek were adjudged by Los Angeles County Sanitation District monitoring staff as not supporting beneficial uses, this segment is proposed for de-listing because these data are subjective. Draft Rev. Reg. 4 at 263. This line of reasoning is inappropriate, particularly to de-list segments which were previously listed by the locally knowledgeable regional boards.

In addition, there are reliable quantitative methods to assess narrative water quality objectives. A peer-reviewed study conducted in 2000 developed algae cover guidelines for environmental managers to use in water quality assessments. B. Biggs, New Zealand Ministry for the Environment, *New Zealand Periphyton Guideline: Detecting, Monitoring and Managing Enrichment of Streams* (2000). This study determined that 30% is the maximum cover of visible filamentous algae that will support recreation and habitat. *Id.* Although this Biggs guideline was developed for the New Zealand Ministry for the Environment, the study’s findings have been applied by water quality managers in the United States. During the development of the Malibu Creek Nutrient TMDL, for instance, the LA Regional Board recommended that waters with algae cover exceeding 30% in at least 10% of samples be considered impaired by algae. USEPA, *Total Maximum Daily Loads for Nutrients: Malibu Creek Watershed* (March 2002) at 14-15. USEPA agreed, stating, “We believe it was appropriate to apply the Biggs guidelines in the screening-level exercise entailed by the Section 303(d) listing process....” *Id.* The Biggs evaluation guideline meets the six criteria for an acceptable guideline outlined in Section 6.1.3 of the Listing Policy, and therefore, should continue to be used to evaluate algal impacts until such time as the State Board establishes new California-specific numeric criteria for determining algae impairment. Listing Policy at 20-21.

This guideline can be applied directly to the Los Angeles Region. A recent survey conducted in Malibu Creek is an example of how algae impairment has been quantified. Heal the Bay's Stream Team conducted a survey between November 2001 and June 2002 found that a total of 6.7 miles of the 9.79 miles mapped in Malibu Creek had 30% coverage or greater at least 10% of the time. Heal the Bay, *Watershed Assessment of Malibu Creek: Final Report* (2005) at 29. Figures 1 and 2 illustrate the extent of algal coverage in Malibu Creek. As seen in Figure 2, approximately half of the monitored sites have 50% or greater algal coverage over 50% of the time. Heal the Bay, *Stream Team Chemistry Data* (retrieved Dec. 9, 2005 from the World Wide Web: <http://www.healthebay.org/streamteam/data/chem/>.) Calleguas Creek and Los Angeles River water segments need similar quantification and therefore should not be de-listed until the Biggs guideline is met. Is the State suggesting, by failing to recognize any quantitative guideline such as the Biggs guideline, that reaches exceeding 90% algal coverage should not be acknowledged as impaired? Qualitative information can be assessed using the Biggs quantitative guidelines. This should be recognized in listing and de-listing decisions under the Listing Policy.

In sum, from both a legal and a scientific perspective, none of the proposed justifications for de-listing excess algal growth hold up to scrutiny. The State Board should acknowledge excess algal growth as a pollutant and maintain these listings on the 303(d) List.

4. Quantitative Data Show That Calleguas Creek Reaches 9B, 10 and 13 Should Remain Listed and Reaches 7 and 12 Should Be Added to the List for Excess Algal Growth

Although these reaches should remain listed for all the reasons discussed above, quantitative data also exist for some of these segments which were not evaluated by the State Board. For instance, the Draft Revision proposes to de-list Calleguas Creek Reaches 4, 5, 9B, 10, 11 and 13 for excess algal growth. Yet available evidence plainly shows an algal impairment. First, the staff report for the Nitrogen TMDL for Calleguas Creek specifically identifies algae as a "related effect" that also impairs these segments: "Beneficial uses that algae are most likely to affect in this watershed are aquatic life habitat (WARM) and recreational use (REC-1 and REC-2). Negative effects on aquatic life would result from low dissolved oxygen levels caused by excessive algal blooms, which would also be an aesthetic impairment to recreational use." Los Angeles Regional Board, *Total Maximum Daily Loads for Nitrogen Compounds and Related Effects: Calleguas Creek, Tributaries, and Mugu Lagoon Staff Report* (October 2002). This TMDL thus confirmed that excess algae is present and causing impairments. De-listing these reaches would not only be inconsistent with the TMDL, it would undermine the intent of the TMDL. These segments should not be de-listed until water quality standards are attained and maintained. Instead, they should be placed on the WQLSBA portion of the 303(d) List.

Second, data exist which show that reaches of Calleguas Creek and its tributaries are impaired by algal growth. In 2003, Ambrose et al. submitted a coastal watersheds monitoring study to the Los Angeles Regional Board. As seen in Table 4, data collected through this effort show algal coverage in several reaches of Calleguas Creek at levels

greater than the Biggs guideline of 30% maximum algal coverage. Ambrose, R.F., Lee, S.F., and S.P. Bergquist, *Environmental Monitoring and Bioassessment of Coastal Watersheds in Ventura and Los Angeles Counties* (2003). Given these facts, reaches 9B and 13 should remain listed for algal impairments, and reach 12 should be added to the 303(d) List as impaired by excess algal growth. In addition, a doctoral candidate at UCLA, collected photographic evidence of algal impairments in 2000 and 2004. His photographs of Arroyo Conejo Canyon, Hill Canyon Treatment Plant Outflow, Long Canyon and Arroyo Simi at Royal Oaks plainly show algal growth in excess 30%.²³ Indeed, many of the photographs show coverage well in excess of 50%. *Id.* These sites are all located in reaches 10 and 7. Therefore, Reach 10 should remain listed, and Reach 7 should be added to the 303(d) List as impaired for excess algae. At the very least, under Section 4.11, the weight-of-the-evidence approach, these segments should clearly be on the 303(d) List. The State Board again should clarify that Section 4.11 should be used in situations such as this where there is overwhelming evidence to support the listing, even if it does not meet the strict quantitative requirements of Sections 4.1 to 4.10.

Location	Reach	% algal coverage
Calleguas at Deepwood	13	30
Calleguas at Deepwood	13	55
Oaks Mall	13	45
Oaks Mall	13	65
FC @ VentuPark Rd.	13	75
FC @ VentuPark Rd.	13	50
FC @ VentuPark Rd.	13	45
FC @ VentuPark Rd.	13	60
FC @ VentuPark Rd.	13	60
FC @ VentuPark Rd.	13	50
FC @ Young Rd.	12	40
Upper Wildwood	12	60
Leisure Village	9B	30
Leisure Village	9B	35

Table 4: Calleguas Creek Watershed algal growth data collected by Ambrose et. al in 2001. (See Appendix 3-A for full set of Calleguas Creek data collected in this study.)

²³ A selection of these photographs are included in Appendix 3-B.

5. San Gabriel River, Coyote Creek and San Jose Creek should Remain Listed for Excess Algal Growth.

The State Board proposes to de-list San Gabriel River Reach 1, San Jose Creek Reaches 1 and 2 and Coyote Creek for excess algal growth. This is inappropriate given the EPA/Tetra-Tech study currently underway. The Heal the Bay – EPA negotiated Consent Decree required completion of a TMDL addressing algal impairment in the San Gabriel River by 2005. Amended Consent Decree, *Heal the Bay et al. v. Browner* (1997). However, at the urging of EPA and the Los Angeles Regional Board, the parties extended this deadline to 2008. The purpose of the delay was to allow EPA additional time to conduct a study on the San Gabriel River and its tributaries looking at, among other things, the extent and magnitude of the algal impairment and the relationship between beneficial uses and algae. The study includes collecting data from monitoring sites on the San Gabriel River, San Jose Creek and Coyote Creek. It is therefore premature and improper to de-list San Gabriel River before this study is completed. Once the study is finalized in December 2006, the LA Regional Board will be in a better position to evaluate the listings, consistent with the study and the TMDL Consent Decree.

C. Ballona Creek

1. Uncertainty in the Original Data or Lost Data Is Not A Valid Justification for De-listing Without a Showing of Attainment of Uses

Staff proposes de-listing Ballona Creek for PCBs, cadmium, silver, ChemA, chlordane, DDT, dieldrin, and sediment bioassays for estuarine and marine water based on the statement that “it is *likely* that data from Ballona Creek Estuary were applied inappropriately to Ballona Creek.” Draft Rev. Reg. 4 at 206-229 (emphasis added). Although the State believes a data mix-up was “likely,” there is no solid evidence provided to support this assertion. Thus, the possibility remains that sediment samples were collected in the Creek itself. For instance, sediment monitoring has been conducted in sediment basins and other locations within Ballona Creek in past monitoring efforts, such as a 2003 study conducted by the Army Corps of Engineers. U.S. Army Corps of Engineers, Los Angeles District, *Marina del Rey and Ballona Creek Feasibility Study: Ballona Creek Sediment Control Management Plan* (2003). Through this effort, sediment samples were collected from twenty-four monitoring locations throughout Ballona Creek (see map in Appendix 4). Therefore, the State Board’s unsupported assumption that because the data in question are sediment data they must be data from “soft-bottomed” estuary is not necessarily valid.

As the listings were made at the time the data were available, it should be presumed to be valid in the absence of any evidence to the contrary. No justification, legal or technical, has been provided for doing otherwise. In addition, the State Board intended that there also be a showing of current attainment before any waterbody-pollutant combination is removed from the list. This too was not done here.

Similarly, the fact sheets for silver, cadmium and sediment bioassays claim that “the data cannot be found that was used to list this condition.” “Faulty data,” as defined in Section 4 of the Listing Policy, does not apply to lost data. This is one of the assumptions that staff made on its own and which is not consistent with the Listing Policy. Thus, the State Board should retain these listings on the 2006 List. Although the data may have been lost, the Regional Board originally evaluated the data and ascertained an impairment. Given this, de-listing should only occur if the State can demonstrate that the impairment no longer exists. This was not done. As the State has not demonstrated that Ballona Creek is no longer impaired by these pollutants, these constituents should remain on the 303(d) List until data indicates, with certainty, that the waterbody is no longer impaired.

2. Ballona Creek Estuary Should Be Listed For Cadmium, Silver, and Dieldrin.

Staff hypothesizes that certain data were incorrectly applied to Ballona Creek although the samples were actually collected in the Ballona Estuary. If this is actually true, it is unclear why staff did not propose that the Ballona Estuary be listed as impaired for all of the pollutants proposed for de-listing in the Creek due to the alleged mix-up. The samples came from either the Creek or the Estuary. So one or both are impaired. The State Board cannot de-list these pollutants in the Creek on the basis of mis-location without then adding these pollutants to the list for the Estuary if that is where the data was taken. The data should not be ignored altogether. The State Board-approved Ballona Creek Estuary Toxics TMDL, issued in 2005, appears to partially account for the data “mix-up” as a TMDL was developed for cadmium and silver in the Estuary. The Draft Revisions should reflect these listings as this TMDL evaluation was just done last year.

The adopted TMDL discounts the dieldrin tissue listing, however, stating, “these data sets are over 10-years old and may not reflect current conditions. Given the age of the data, the limited number of samples and the questions about the representativeness of the samples, we find that developing TMDLs based on fish or shellfish tissues is not warranted at this time.” LA Regional Board and USEPA, *Total Maximum Daily Loads for Toxic Pollutants in Ballona Creek Estuary* (2005). This line of reasoning is inappropriate for a de-listing decision, as the Listing Policy does not include the age of data as a limiting factor. The State Board’s Response to Comments on the Draft Functional Equivalent Document notes that “the age of data requirements have been removed from the Policy so that all relevant data and information can be used.” FED at B-65. Further, the Draft Revisions claim that the dieldrin tissue samples do not exceed the allowable frequency for listing in Table 3.1 of the Listing Policy. This analysis is incorrect. The data should be evaluated using the De-listing Factors, since staff is asserting that the historical Ballona Creek listings were actually Estuary listings. Thus, the Estuary should be listed for dieldrin as well.

3. Data Show that Cadmium and Silver Should Remain on the 303(d) List for Ballona Creek.

Finally, as outlined above, due to the data *uncertainties*, Ballona Creek should also be listed as impaired by these pollutants until data is available to show that there is no impairment. Moreover, there are data known to be from the Creek sediments that show an impairment. The Army Corps of Engineers conducted sediment sampling in 1999 and 2001 in Ballona Creek in an effort to pinpoint sources of contaminants. Their results are summarized in the report, *Marina del Rey and Ballona Creek Feasibility Study: Ballona Creek Sediment Control Management Plan* (2003). As seen in Table 5 and Appendix 4, cadmium samples exceeded the ERM evaluation guideline once in a sample size of 26, and silver samples exceeded the guideline three times in a sample size of 26. Thus, in accordance with Section 4.6 of the Listing Policy, these pollutants should remain on the 303(d) List because only one exceedance is necessary for a sample size of 26 or below for the listing to remain.

			Station ID						
	Units	ERM	54	503	Sedimentation Basin - Downstream End	Ballona @ Madison	Total Exceedances	Total Sample Size	Exceedances to not be de-listed
Cd	mg/kg	9.6	ND	2.877	23.4	ND	1	26	1
Ag	mg/kg	3.7	5	3.769	ND	9.42	3	26	1

ND = not detected

Table 5: Sediment data from the ACOE report, *Marina del Rey and Ballona Creek Feasibility Study: Ballona Creek sediment Control Management Plan* (ACOE, 2004). (See Appendix 4 for full data set).

D. Dominguez Channel, Los Angeles/ Long Beach Harbor and Los Angeles River

1. The Dominguez Channel, Dominguez Channel Estuary, and Los Angeles River Estuary (Queensway Bay) Should Remain Listed for DDT in sediments and Dominguez Channel and Estuary Should Remain Listed for DDT in Tissue.

Staff maintains that there is no acceptable sediment quality guideline for DDT and thus proposes to de-list Dominguez Channel, Dominguez Channel Estuary and Los Angeles River Estuary (Queensway Bay) which are currently listed as impaired by DDT in sediments. This assertion is incorrect. A scientifically sound effects range-median (ERM) sediment quality guideline exists for DDT. Long, E.R., MacDonald, D.D., Smith, S.L., and F.D. Calder. (1995). Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments, *Environmental Management* at 19(1): 81-97. ERMs represent a concentration level above which toxic effects are often observed. These guidelines were derived from data collected from nearly 350 publications. *Id.* Subsequent to the initial study, the authors conducted an analysis of the predictive ability of the guidelines by evaluating a new set of data and

found that “the incidence of highly significant toxicity in the amphipod survival tests among samples that exceeded individual ERMs and PELs generally agreed with the intent of these values.” Long, E.R., Field, L.J. and D.D. MacDonald. (1998). Predicting Toxicity in Marine Sediments with Numerical Sediment Quality Guidelines, *Environmental Technology and Chemistry* at 17(4): 714-727. Specifically, the DDT ERM was found to be a reasonable predictor of sediment toxicity and was not an outlier in the group of chemicals assessed in the study. Id. A third study looked at an even larger data set and concluded that “the sediment guidelines can be used to reliably estimate the probability of acute toxicity in laboratory bioassays.” Long, E.R., MacDonald, D.D., Severn, C.G., and C.B. Hong. (2000). Classifying Probabilities of Acute Toxicity in Marine Sediments with Empirically Derived Sediment Quality Guidelines, *Environmental Toxicology and Chemistry* at 19(10): 2598-2601. In addition, the Listing Policy specifically provides ERMs as an example of an “acceptable guideline” and does not exclude any specific ERM values. Therefore, the DDT ERM should be utilized in data evaluation of these and other waters of the State.

In addition, readily available data show that sediment toxicity has been observed in the Dominguez Channel and Dominguez Channel Estuary. The Draft Revisions reference a toxicity sample collected in the Estuary that showed 61% survival. Draft Rev. Reg. 4 at 72. Thus, there is observed toxicity in the Estuary. In addition, NPDES sediment sampling results for the Shell Los Angeles Refinery show observed toxicity at five monitoring locations in the Dominguez Channel (see Appendix 5).²⁴ Thus, in accordance with the State Board’s interpretation of Section 3.6 of the Listing Policy, the Dominguez Channel and Estuary should remain listed for DDT in sediment because there is significant exceedances of the DDT SQG along with observed toxicity.

State Board staff also discount existing fish tissue data: “The tissue sample taken is not representative and the number of samples was insufficient to support the listing.” Draft Rev. Reg. 4 at 290. This line of reasoning is inappropriate considering that the State Board’s sport fish contamination monitoring program has been discontinued due to lack of funding and other monitoring efforts have not been undertaken. Not looking is not a justification for de-listing, especially where human health is concerned. As the data that do exist suggest an impairment, and it has already been listed previously in combination with all of the other factors listed at footnote 17, *supra*, the State Board should maintain this listing until additional monitoring clearly demonstrates that there is no impairment. This is entirely consistent with Section 4.11 of the listing Policy.

If this isn’t enough, historical information clearly indicates that the Dominguez Channel and LA River Estuary should remain listed for DDT. Between the late 1950’s to the early 1970’s, Montrose Chemical Corporation released around 1,700 tons of DDT to the sewer system which discharged to the Palos Verdes shelf. Consequently, the Palos Verdes shelf is highly contaminated with DDT, and the area is now a Superfund site. Montrose also contaminated adjacent groundwater and soil with DDT. U.S.

²⁴ Of note, our interpretation of these data is conservative because we assumed that controls only had 90% survival when survival was likely 100%. Therefore, we interpreted anything under 70% survival as a violation instead of 80% survival.

Environmental Protection Agency, *Cleaning up the Palos Verdes Shelf*, retrieved November 9, 2005 from: <http://www.epa.gov/region09/features/pvshelf/>. Since the Montrose site is located in the Dominguez Watershed, the Dominguez Channel has acted as a conduit for much of the contamination and therefore, itself, has been greatly impacted. The Los Angeles River Estuary also received Montrose DDT runoff. Although DDT was banned in 1972, residual DDT remains in the environment and continues to impact organisms. DDT is a highly persistent compound in the environment that bioaccumulates in organisms and fish tissue. Birds become exposed through predation on contaminated fish. Eggshell thinning and embryo deaths have been attributed to this exposure. Humans may also become exposed to DDT by eating contaminated fish. Based on the historical contamination that has not been remediated to date and the persistent nature of DDT, it is inappropriate to remove the DDT listing for the Dominguez Channel without strong evidence of no impairment. This evidence does not currently exist.

This is a glaring example of the need for the situation specific weight of evidence approach set forth in sections 3.11 and 4.11 of the Listing Policy. Montrose Chemical Corporation, the largest producer of DDT in the world, contaminated the soil and nearby waterbodies. The contamination is so significant that the Palos Verdes shelf is now a Superfund site. The Dominguez Channel was a main conduit for much of the pollution reaching Consolidated Slip, and the Bay and most of San Pedro Bay are listed as impaired for DDT. Therefore, the weight of evidence strongly points towards maintaining the listings for DDT in the Dominguez Channel, Dominguez Channel Estuary and LA River Estuary.

2. Los Angeles/Long Beach Outer Harbor should remain listed for PCBs.

Staff proposes to de-list PCBs in Los Angeles/Long Beach Outer Harbor. This action is inappropriate given the fact that there is a fish consumption advisory due in part to PCB contamination. Interestingly, staff contradicts itself in this regard because other proposed listings are based solely on an advisory being in place. For example, staff proposes listing the Los Angeles Harbor – Cabrillo Marina for DDT stating, “An OEHHA fish consumption advisory has been established in this water body segment. Under section 3.4 of the Listing Policy any water body segment where a health advisory against consumption of edible resident organisms has been issued shall be placed on the section 303(d) list.” Draft Rev. Reg. 4 at 94. The State Board should apply this reasoning consistently.

In addition, historical information supports this listing under the weight of evidence approach in Sections 3.11 and 4.11. Between the late 1950's and early 1970's, industries in the area discharged PCBs to sewers which discharged to the Palos Verdes shelf. Consequently, the Palos Verdes shelf is now a Superfund site for PCB and DDT contamination. The Palos Verdes shelf extends to Point Fermin, adjacent to the Los Angeles/ Long Beach Harbor. The Los Angeles River and Dominguez Channel were also a source of PCBs to San Pedro Bay. Since no clean-up has occurred to date, contamination still exists and the marine environment remains severely impacted.

Although the limited mussel data may not show guideline exceedances, the fish advisory is in place for a sound reason. PCBs are known to be highly toxic and persistent in the environment. These chemical compounds bioaccumulate in the fatty tissue of animals, and PCB exposure has been linked to serious health problems such damage to the immune system and cancer. Based on this historical knowledge and the scientific understanding that PCBs bioaccumulate, it is appropriate to maintain the PCB listing.

Based on all the available evidence, PCBs should remain listed in the Los Angeles/Long Beach Outer Harbor. The fish consumption advisory and historical knowledge provide the weight of evidence necessary to maintain the listing.

3. LA Harbor Consolidated Slip Should Be Listed for Dieldrin in Sediments.

The Staff Report proposes the de-listing of dieldrin in fish tissue in the Los Angeles Harbor Consolidated Slip. While this de-listing appears appropriate, the sediment data referenced in the first line of evidence appears to support the listing of LA Harbor Consolidated Slip for dieldrin *in the sediments*. This sediment data, obtained from the Contaminated Sediments Task Force, show 10 exceedances of the sediment guideline out of 38 total samples, which exceeds the allowable frequency listed in Table 3.1 of the Listing Policy. In addition, the Consolidated Slip is listed separately for sediment toxicity. Therefore, consistent with section 3.6 of the Listing Policy, the State Board should list the Los Angeles Harbor Consolidated Slip for dieldrin in sediments.

IV. ADDITIONS TO THE 303(d) LIST

The Listing Policy requires that “RWQCBs and SWRCB shall actively solicit, assemble, and consider all readily available data and information.” Listing Policy at 17. Under Federal regulations, “each state shall assemble...all existing and readily available...data and information.” (40 C.F.R. § 130.7(b)(5)). Upon review of certain data that are commonly referenced in Region 4, it appears that the State Board failed to obtain or analyze much widely available data. This lack of review has major implications on the content of the proposed 303(d) List. For example, as discussed in detail below, beach bacteria data collected by county health departments and ocean dischargers and posted weekly on Heal the Bay’s website show that 7 beaches in Los Angeles County should be added to the 303(d) List. The fact that this data source was not evaluated is an egregious error and has major implications on the 303(d) List. In addition, the State Board proposes sediment pollutant de-listings in Ballona Creek, but the ACOE report discussed above includes data that support the listing. These examples of data that were not analyzed are an indicator of major problems with the State Board’s data collection and review process. The data provided and discussed below should be evaluated by the State Board in this listing cycle, as it was readily available for analysis prior to the issuance of the Draft Revisions.

Region 4: ADD TO 303(D) LIST

Water Segment	Pollutant	Line(s) of Evidence	Listing Policy Section(s)
Ballona Creek Estuary	Cadmium (sediment)	Data Mix-up	
Ballona Creek Estuary	Silver (sediment)	Data Mix-up	
Ballona Creek Estuary	Dieldrin (tissue)	Data Mix-up	
Ballona Creek	Zinc (sediment)	Readily Available Data	3.11; 6.1.1
Ballona Creek	Copper (sediment)	Readily Available Data	3.11; 6.1.1
Ballona Creek	Benzo(a)anthracene (sediment)	Readily Available Data	3.11; 6.1.1
Ballona Creek	Dibenzo-a,h-anthracene (sediment)	Readily Available Data	3.11; 6.1.1
Calleguas Creek - Reach 7	Excess Algal Growth	Photographic Evidence	3.11
Calleguas Creek - Reach 12	Excess Algal Growth	Readily Available Data	3.7; 6.1.1
Compton Creek	Trash	1)Readily Available Data; 2)Photographic Evidence	3.11; 6.1.1
Dominguez Channel	Sediment Toxicity	Readily Available Data	3.6; 6.1.1
LA Harbor Consolidated Slip	Dieldrin (sediment)	Data Mix-up	3.6
Piru Creek, Unknown Creek, Revolon Slough, Unnamed Creek, Cattle Creek, Boulder Creek, Arroyo Conejo Creek, NF Arroyo Conejo Creek, Arroyo Simi Creek, Bouquet Canyon Creek, Beardsley Wash, Conejo Creek, Castaic Creek, Calleguas Creek, Santa Clara River, San Gabriel River, San Francisquito Creek, Simi Las Posas Creek, Tapo Canyon Tributary, Coyote Creek, San Jose Creek, Walnut Channel, Arroyo Seco, Compton Creek, Zone 1 Ditch, Los Angeles River, Ballona Creek, Medea Creek, Cold Creek, Dominguez Channel, Ventura River, Matilija Creek, Las Virgenes Creek, Malibu Creek, Triunfo Creek	Biological Communities Impairment	Readily Available Data	3.9; 3.11; 6.1.1
Malibu Creek, Cold Creek, Las Virgenes Creek, LV Tributary, Stokes Creek, Liberty Canyon Creek, Triunfo Creek Reach 1, Triunfo Creek Reach 2, Medea Creek Reach 1, Medea Creek Reach 2, Lindero Creek Reach 1, Lindero Creek Reach 2, Malibu Lake, Lake Sherwood, Lake Enchanto, Century Lake (Century Reservoir), Westlake, Lake Lindero, Malibu Country Club Golf Course Ponds, Trancas Creek, Topanga Creek	Exotic Species	Readily Available Data	3.10
Long Beach City Beach, Alamitos Bay Beach, Colorado Lagoon Beach, Westward Beach, Latigo Canyon Beach, Corral State Beach, Solstice Canyon Beach	Bacteria	Readily Available Data	3.3; 6.1.1

Table 6: Water-segment/pollutant combinations that should be added to the 303(d) List based upon the weight of evidence.

A. Beaches

Heal the Bay's Beach Report Card (BRC) contains bacterial data for approximately 450 of the State's beaches and is posted weekly on Heal the Bay's website. Also, Heal the Bay has the raw fecal indicator bacteria data available upon request. As discussed above, our analysis indicates that in Region 4, 7 beaches should be added to the 303(d) List. The summary of these data are found in Appendix 1-A, at Tables 3 and 4. Moreover, there are numerous other beaches around the state that should be listed for the same reasons and based on the same data sources. The readily available data show that 49 beaches outside of LA County should be added to the 303(d) List. Appendix 1-B. In addition, a statewide data analysis shows that staff's proposed de-listings of the Mission Bay Shoreline beaches and Pacific Ocean Shoreline – Scripps HA beaches should be rejected as well. Appendix 1-B provides a full evaluation of the available data and suggested actions for all beaches statewide (outside Region 4).

The State's documentation for the 2006 List must include a "rationale for any decision to not use any existing and readily available data and information for any one of the categories of waters as described in §130.7(b)(5)." 40 C.F.R § 130.7(b)(6)(iii). The data submitted along with these comments were and are readily available to the State Board and should be included in the evaluation for the 2006 303(d) List updates.

B. Ballona Creek

The mouth of Ballona Creek and the Marina del Rey Harbor entrance channel accumulate large volumes of sediment and are dredged every three to five years to eliminate shoaling problems. Every time these sediments have been dredged (200 K to 500 K yds³) over the last decade or more, a significant fraction of these sediments have been found to be contaminated and toxic to marine life in bioassays. As such, the Army Corps of Engineers conducted sediment sampling in 1999 and 2001 in Ballona Creek in an effort to pinpoint sources of contaminants. Their monitoring results are summarized in Table 7 and Appendix 4. U.S. Army Corps of Engineers, *Marina del Rey and Ballona Creek Feasibility Study: Ballona Creek Sediment Control Management Plan* (2003). As seen in Table 7, zinc, copper, benzo(a)anthracene, and dibenzo-a,h-anthracene concentrations in sediment samples exceed ERM guidelines at various monitoring locations. *Id.* Since there is no section in the Listing Policy that specifically addresses pollutants in sediment, the State Board should evaluate the data under section 3.11, using situation-specific weight of evidence. The weight of evidence indicates that these constituents should be included on the 303(d) List. First, the number of exceedances for each of these constituents necessitates listing as required under Table 3.1 of the Listing Policy. In addition, an exceedance of an ERM guideline indicates that toxicity is present and beneficial uses are impaired. Moreover, the sediment quality guidelines are exceeded by several orders of magnitude in some cases. Thus, zinc, copper, benzo(a) anthracene, and dibenzo-a,h-anthracene should be added to the 303(d) List for Ballona Creek.

Parameters	ERM	648	494	54	Higuera	B. Canyon Ch.	RDD 208	2901	Sepulveda Blvd.	503	51
Zinc	410	1830	1280	483.4	185.673	467.18	1247.423	495.868	642.857	887.692	1840.136
Copper	270	614	310.204	76.24	29.386	213.9	600	230.579	283.673	253.846	242.857
Benzo(a) anthracene	1600	ND	2245	ND	ND	ND	ND	ND	ND	ND	4422
Dibenzo-a,h-anthracene	260	1429	ND	470	292	ND	ND	ND	ND	308	680

Table 7: Sediment data from Marina del Rey and Ballona Creek Feasibility Study: Ballona Creek Sediment Control Mgmt Plan (ACOE, 2004). Exceedances are in red.

C. Dominguez Channel

Dominguez Channel should be placed on the 303(d) List for sediment toxicity based on readily available data. Data collected by the Shell Los Angeles Refinery under their NPDES Permit No. CA003778 and submitted to the Regional Board indicate sediment toxicity in Dominguez Channel. As shown by the highlighted values in Table 8, sediment toxicity is apparent in the Channel. Since control results are unavailable, a conservative approach was taken in interpreting the data by assuming 90% survival for controls and classifying samples with <70% survival as a failed test. Section 3.6 of the Listing Policy states that “waters may also be placed on the section 303(d) list for toxicity alone.” Listing Policy at 5. Thus, the State Board should place Dominguez Channel on the 303(d) List for a sediment toxicity impairment.

**Sediment Toxicity (Amphipod)
Dominguez Channel NPDES Monitoring Stations**

Location ¹	Aug-00	Feb-01	Aug-01	Feb-02	May-02	Jan-03	May-03	Feb-04	Apr-04
R1	72	97.5	NS	NS	NS	NS	NS	NS	NS
R2	NS	NS	NS	NS	NS	NS	NS	NS	NS
R3	NS	NS	NS	NS	NS	NS	NS	9	NS
R4	NS	NS	NS	0	56	NS	NS	NS	NS
R5	NS	NS	10	0	0	4	48	0	NS
R6	NS	NS	4	0	9	26	74	1	68
R7	88	76.3	74	0	0	49	82	0	82

Table 8: Dominguez Channel Sediment Toxicity Data. Source of Data: Retec Group, Inc., Report of NPDES Sediment Sampling Results for Shell Los Angeles Refinery, NPDES Permit No. CA003778 (2005).

¹ Sampling locations were established mid-channel at the intersection of the Dominguez Channel and Anaheim Street (R1), Pacific Coast Highway (R2), Sepulveda Boulevard (R3), Alameda Street (R4), 223rd Street/Wilmington Avenue (R5), Avalon Boulevard (R6), and Main Street (R7). (see Appendix 5 for site map).

NS – Not sampled due to insufficient sediment at the sampling location.

Highlighted values are <70% survival. Control results not available; however, basic QA/QC standards require at least a 90% survival for controls. Assuming a 90% control, any test showing less than 70% would be considered a failed test.

D. Compton Creek Trash

Compton Creek should be placed on the 303(d) List for trash based on the situation-specific weight of evidence under section 3.11 of the Listing Policy. Compton Creek Watershed is arguably the most visibly polluted watershed in California, let alone Los Angeles County. Large volumes of trash collect in the flowing water and along the banks and the unlined portions of Compton Creek. Compton Creek supports many beneficial uses including ground water recharge, water contact recreation, non-contact water recreation, warm freshwater habitat, wildlife habitat and wetland habitat. The high concentration of trash in Compton Creek impairs these beneficial uses. In addition, the trash pollution violates the LARWQCB Basin Plan's narrative water quality objective that "waters shall not contain floating materials including solids, liquids, foams and scum, in concentrations that cause nuisance or adversely affects beneficial uses."

There are three lines of evidence available to assess trash in Compton Creek. The first line of evidence is data on the tonnage of trash collected by Los Angeles County Department of Public Works between 2002 and 2005. In 2002, the County instituted a trash removal program for Compton Creek. As shown in Appendix 2, large amounts of trash have been collected and removed from Compton Creek through this effort. For instance in July of 2002, over 23 tons of trash were removed through this program. The second line of evidence, presented in Appendix 2, is data on the tonnage of trash collected by volunteers at Coastal Cleanup Day and Earth Day events since 2002. At the April 2003 clean-up event, volunteers removed over 10 tons of trash in a period of less than three hours. The final line of evidence is Heal the Bay's photographic documentation of trash pollution in Compton Creek. As presented in Appendix 2, the photographs show large amounts of accumulated trash in various sections of Compton Creek. These photographs were taken at various Heal the Bay-sponsored clean-up activities. Heal the Bay has been the Los Angeles County coordinator for Coastal Cleanup Day and Adopt A Beach for 15 years. During that time, there have been regular clean-ups at over 60 locations. Not one of these locations is even close to as polluted with trash as Compton Creek. Based on these three lines of evidence, the weight of evidence clearly indicates that water quality standards are not attained. Thus, under section 3.11 of the Listing Policy, Compton Creek should be listed for trash on the 303(d) List.²⁵

E. Exotic Species Data Should Be Considered in the Listing Process.

Heal the Bay has significant data indicating impairments by exotic species in Region 4. This data and supporting evidence are provided in Appendix 6. Heal the Bay urges the

²⁵ Compton Creek should be listed for trash separately from the Los Angeles River. The LA River Trash TMDL may not address the trash problem in the portions of Compton Creek situated above the LA River. Several reaches of the Creek are grossly polluted with trash that gets stuck in the mud and vegetation and never actually flows down into the LA River. Without a separate listing for Compton Creek, there is no requirement to ensure that BMPs are places so as to keep trash from accumulating in the upper reaches of the Creek or to do so in a timely manner.

State Board to accept this data and list these reaches for invasive species because it was not until 2005, when the Northern District ruled on this issue, that the State Board indicated that it must consider listing exotic invasive species under Section 303(d). This is clearly a problem for many reaches in Region 4, which contain populations of sensitive and federally endangered species such as the California red-legged frog that are particularly sensitive to the addition of invasive species into the ecosystems. *See* Appendix 6.

F. Index of Biotic Integrity (IBI) Scores Should be Considered in the Listing/delisting Process.

The diversity and sensitivity of the various species within a stream environment are important indicators of stream health. For instance, healthy communities tend to have a diverse set of invertebrate species, while degraded communities often have fewer sensitive species and a higher proportion of hardy species. Based on these principles, an index of biological integrity focuses on specific metrics to provide a comprehensive measure of stream health.

The California Department of Fish and Game (“CDFG”) developed the Index of Biological Integrity (“IBI”) in 2002 for the San Diego Region and adapted the methodology to all of southern California in 2005. Ode, P.R., A.C. Rehn and J.T. May., *A Quantitative Tool for Assessing the Integrity of Southern Coastal California Streams, Environmental Management*. 35:493-504 (2005). The IBI provides a quantitative means of evaluating the biotic conditions of a waterbody by analyzing seven metrics, including the number of different species present from the mayfly (*Ephemeroptera*), stonefly (*Plecoptera*) and caddisfly (*Trichoptera*) families and the number of different beetle species present. *Id.* The metrics are evaluated at a specific site and then converted to a score between 0 and 100 (zero being the worst case scenario). The study’s authors chose two standard deviations below the mean reference site score to develop the impairment threshold. An IBI score of 39 is established as the boundary between “fair” and “poor” biological conditions, and a score of 20 is the division between “poor” and “very poor” biological conditions. *Id.*

This is relevant because readily available IBI score data indicate biological community impairment in numerous stream reaches located in Region 4. IBI scores compiled in the CDFG study show that 22 monitored reaches in Region 4 have IBI scores within the poor and very poor ranges, indicating biological impairment (*see* Appendix 7, Table 1). *Id.* In addition, Los Angeles County and the Ventura County Watershed Protection District have calculated IBI scores for various water segments in Region 4. Ventura County Watershed Protection District, *Ventura River Watershed 2004 Bioassessment Monitoring Report*, (2005); Los Angeles County, *Los Angeles County 1994-2005 Integrated Receiving Water Impacts Report* (2005). These scores are shown in Appendix 7, Tables 2 and 3. As seen in the highlighted sections, there are sixteen sites with scores at or below 39. In addition, monitoring efforts by Heal the Bay in the Malibu Creek Watershed indicate seven sites with low IBI scores. Several of the water segments monitored by the four entities overlap. Heal the Bay, *Watershed Assessment of Malibu*

Creek: Final Report, (2005). These extremely low IBI scores indicate a biological community impairment; thus, these reaches should be listed on the 303(d) List as biologically impaired. While we only looked at available IBI score data in Region 4, it is expected that the State Board would have made similar findings in other regions if it had looked at the readily available data of its sister agency, CDFG.

Particularly noteworthy, IBI scores calculated for Calleguas Creek reaches 4, 5 and 13, each of which the State Board proposes to delist for excess algal growth because they argue that quantitative data are unavailable²⁶, indicate extreme biological impairment. The IBI scores qualify as another valid line of evidence as well as provide a quantitative measure of impairment. Algal impairment often smothers habitat, reduces dissolved oxygen levels, and decreases available rocky bottom substrate. The end result is lower IBI scores and elimination of sensitive macroinvertebrates such as the Plecoptera family that are often found in healthy, non-algae impaired communities. Thus, the State Board should consider these IBI scores as another line of evidence that points towards an excess algal growth impact in these reaches. Further, the Calleguas watershed has been extensively studied in terms of biological impairment. If other waterbodies in the region and the state were subject to such intensive study, it is likely that similar findings would be made for those waterbodies.

Regardless, these reaches of Calleguas Creek should be placed on the 303(d) List for biological communities impairment based upon this readily available IBI data. Specifically, water segments with IBI data in the poor and very poor ranges meet the listing factors in sections 3.9 and 3.11 of the Listing Policy. Inherently, the IBI scoring system compares monitoring site conditions to reference sites. Thus, in accordance with Section 3.9, the IBI data indicate significant degradation in biological populations and/or communities as compared to reference sites. In addition, one sample is sufficient for considering IBI scores due to the sampling protocol used in the IBI process, which takes into account site variability and is designed to combat sampling errors.²⁷ In essence, one IBI score is really multiple samples within a creek run. In other words, the Board does not need to use the Listing Policy's binomial distribution table to correct for these issues. Finally, biological impairment demonstrated by low IBI scores can be related to other 303(d) listed pollutants in these water segments. Listing Policy at 7. For instance, Malibu Creek is included on the 303(d) List for several impairments, including nutrients and sedimentation. This, along with 20 of 22 IBI scores from seven sites in the poor or very poor ranges is sufficient to indicate that Malibu Creek should be placed on the 303(d) List for biological impairment under Section 3.9.

Second, IBI scores can and should be evaluated using the situation-specific weight of evidence approach. Section 3.11 of the Listing Policy states that "if the weight of

²⁶ We disagree with the assertion that no quantitative data are available for algal growth. *See supra* sections III.B.3 and III.B.4.

²⁷ Specifically, the study looks at a minimum linear area of 150 meters having at least 5 riffles. Within this area, the sampler randomly selects 3 out of 5 riffles where the transects will be taken. Within the 3 riffles, the samples are taken from three transects per riffle. A transect is comprised of three 1ft x 2 ft x 6 in deep samples within the randomly selected location on the riffle. Of note, the riffle habitat is the most productive habitat and therefore is the most conservative for documenting degradation of streams.

evidence indicates non-attainment [of water quality standards], the water segment shall be placed on the section 303(d) list.” Listing Policy at 8. The IBI scores should be weighed heavily in conducting such an analysis. Water quality standards and beneficial uses are not being attained in waterbodies with an IBI score less than 39.

In sum, IBI data compiled by CDFG, Los Angeles County, Ventura County and Heal the Bay are readily available and qualify as applicable listing factors in Sections 3.9 and 3.11 of the Listing Policy. Moreover, the State Board should support the IBI methodology developed by its sister agency, CDFG, and include these quantitative data in the listing analysis.

Given all of the above, the water segments highlighted in Appendix 7, Tables 1-4 should be included on the 303(d) List as impaired for biological communities. At the very minimum, the IBI scores should be used as another line of evidence in listing/de-listing decisions. On this latter basis Calleguas Creek reaches 4, 5 and 13 should remain on the 303(d) List for excess algal growth or algae. Finally, while we focused on Region 4, we believe the State Board should evaluate IBI data available for other areas of the State as well.

V. CONCLUSION

For all of the reasons set forth above, we urge the State Board to reject the proposed de-listings for the waterbody-pollutant combinations set forth in Table 1 and to add listings for the waterbody-pollutant combinations set forth in Table 6.

In addition, we strongly urge the State Board to:

- (1) ensure that all readily available information is evaluated;
- (2) state that as a rule previous listings for which TMDLs have already been adopted should not be re-evaluated and overturned during the listing process and that this issue is more properly addressed as part of TMDL implementation;
- (3) make clear that the Listing Policy should not be used retroactively to overturn prior listing decisions unless one of the three situations set forth in Section 4 of the Listing Policy exists and there is substantial evidence to demonstrate with a high degree of persuasion that the previous decision was not correct (including an affirmative demonstration of a lack of current impairment);
- (4) direct State Board staff to forego re-evaluating previous listings in this round and leave that task to the individual regional boards, who are more knowledgeable about their own local waterbodies and listing decisions, to implement during the next round of listing in 2008 in accordance with the above clarifications;
- (5) clarify that the situation specific weight-of the evidence approach was intended to act as a “safety net,” and thus Section 3.11 and 4.11 require an

evaluation of all available evidence under the situation specific weight of the evidence approach whenever there is *any* information that indicates non-attainment of standards; and

(6) clarify that narrative standards must be fully evaluated under Sections 3.7 and 4.7 as well as Sections 3.11 and 4.11 of the Listing Policy for both pollutants and conditions and regardless of the availability of quantitative data or guidelines.

If you have any questions or would like to discuss any of these comments, please feel free to contact us. Thank you for your consideration of these comments.

Sincerely,

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