

Listing and De-listing Policy

SWRCB Staff Response to Recommendations from the Regional Board Representatives of the TMDL Round Table to the Management Coordinating Committee

In response to the Regional Water Quality Control Board (RWQCB) staff recommendations on the listing and de-listing policy, State Water Resources Control Board (SWRCB) staff has prepared responses to the RWQCB document. The SWRCB responses are presented after each recommendation. The responses are printed in italics. Very long RWQCB staff recommendations have been shortened to enhance the readability of these responses.

For many of the recommendations SWRCB staff agree with the RWQCB recommendations. On many issues there are significant differences in the recommended approach.

Scope of RWQCB Recommendations

As used in the RWQCB document, the word "List" refers to a statewide list of all surface water bodies that are not attaining water quality standards. This List would not be limited to waters requiring TMDLs. This is consistent with the language of Section 303(d)(1)(A) of the CWA.

Response: Creating an "impaired waters" list goes beyond the requirements of state law in developing the listing and de-listing policy. SB 469 requires the SWRCB to prepare guidelines to be used by the state board and the regional boards for the purpose of listing and delisting waters and developing and implementing the total maximum daily load (TMDL) program and total maximum daily loads pursuant to Section 303(d) of the federal Clean Water Act. Developing a master list of all problems in state waters would be a difficult and controversial task that would reach far beyond the scope of the TMDL program. Development of a single list of waters of all impairments was discussed with SWRCB members and was not used because of the potential size of such a list and controversy associated with its development.

The provisions of the CWA, federal regulations, and USEPA guidance allows the SWRCB to focus attention on developing the section 303(d) list for those waters still needing TMDLs.

Differences with the Listing Policy Concept Paper¹

The "binomial model" approach proposed in the Concept Paper does not provide the flexibility needed to assess the attainment of water quality standards in California, given the state's wide diversity of aquatic ecosystems and water uses, and the variability among standards in the Regional Boards' Basin Plans.

¹ "Concepts for Developing a Policy for Listing and De-Listing on California's 303(d) List", released by DWQ for the AB 982 Public Advisory Group meeting of July 23, 2002

Response: The binomial model is one way the SWRCB can ensure consistency among the RWQCB when preparing the list. By using this kind of model factors that affect consistency made be explicitly addressed. These factors include: sample size, standards exceedance frequency, false positive error rate, and false negative error rate. This model is being used by several states, is a feature of the new USEPA guidance, and was used by SWRCB staff in preparation of the 2002 section 303(d) list.

There is considerable flexibility in the use of the binomial model depending on the level of consistency required or desired.

Furthermore, the binomial model is inconsistent with the manner in which most of California's water quality objectives are expressed. None of the Regional Board workgroups favored exclusive use of the binomial model. Instead, the Regional Board recommendations describe general procedures to be followed in the solicitation and evaluation of data and information, with a few specific recommendations on criteria for use with certain categories of pollutants and stressors.

Response: The binomial model can be used to interpret a wide range of water quality standards. This model is a nonparametric statistical test that is being used by several states to answer the question: Are water quality standards are attained? The model requires either a "yes" or "no" answer and is independent of the form of the standard.

We agree that the binomial model should not be used exclusively; there are many circumstances where parametric statistical tests or other analytical techniques should be used. In the 2002 list process, only a very small percentage of the listing proposals could not be analyzed using the binomial model.

If it is desired that the RWQCB-generated lists be consistent then it is necessary to establish the process for developing the list, the proper evaluation guidelines, and the procedures, and conditions for analyzing the data.

The Regional Board staffs are strongly opposed to the Concept Paper's proposed linkage of priority ranking and schedules (and its direction that TMDLs for all high priority waters be completed within two years). The Concept Paper assumes that priorities and schedules are for TMDL development. The Regional Board recommendations assume that priorities are for a broader group of potential actions to address impairment, and that schedules (including schedules for TMDLs) will be developed and updated through the Regional Boards' annual workplan processes rather than through formal action on the List.

Response: SWRCB staff did assume that priorities and scheduling are for TMDL development. We have focussed specifically on making priority and scheduling recommendations that are achievable within existing staff and contract resources. CWA and federal regulations require that both scheduling and priorities must be addressed as part of the preparation of the section 303(d) list.

Advantages of Recommended Approach

The alternative approach recommended below will provide overall consistency in the assessment approaches used by all Regional Boards while allowing the flexibility necessary to address regional differences and site-specific concerns. The Regional Boards' Best Professional Judgment (BPJ) is an essential component of the evaluation process, however "transparency" can and should be provided through documentation of the assessment process, and the scientific rationale for listing/delisting, in water body fact sheets. The maintenance of a single "Impaired Waters List" and database will allow the state to respond to potential changes in USEPA regulations for the implementation of Section 303(d). Future federal regulations could at some point require state submission of a subset of this list of impaired waters. Should federal regulations change in this regard, the structure of California's Impaired Waters List will be easily amenable to sorting the waters to accommodate any such requirements.

Response: For the reasons already stated, having one "impaired waters" list would be controversial and goes beyond the scope of SB 469. BPJ is very important and the listing/delisting policy has to build in significant flexibility but must also present a consistent and reproducible approach.

We cannot anticipate changes in federal regulations. Consequently, SWRCB staff continue to work with the regulations as they exist. We are tracking the new TMDL rule and are consistent with those proposed regulations.

1 SCOPE OF THE LISTING POLICY AND GENERAL LISTING CONSIDERATIONS

1.1 Scope of Listing Policy

Recommendation 1: The listing policy should address all assessed surface waters not attaining water quality standards. Water quality standards include numeric criteria, narrative criteria, beneficial uses, and antidegradation considerations.

Response: This recommendation is very similar to the structure of the section 303(d) list as adopted in 1998. The 1998 list included waters that were identified as not meeting standards. The expectation was that the RWQCBs would develop TMDLs for all waters on the 1998 list. Many of the listings are not amenable to TMDL development for a variety of reasons including the standards exceedance not due to a pollutant, additional research and monitoring is needed to identify pollutants causing adverse conditions, etc.

This recommendation also goes beyond the mandate of SB 469 which requires the SWRCB to develop a listing and delisting policy for the purposes of implementing the CWA section 303(d). This recommendation would create a list of all problems not just those required by the CWA, federal regulation, and USEPA guidance.

Recommendation 2: The listing process should not describe a process for determining whether water quality standards are appropriate.

Rationale: Agree.

Recommendation 3: The policy should be applied retroactively within time and resource constraints. Approaches for applying this policy to currently listed waters should be described.

Response: Agree.

Recommendation 4: The policy should not describe the actions to be taken as a consequence of listing.

Response: This recommendation is not consistent with federal regulations and USEPA guidance on integration of the section 303(d) and 305(b) reporting. Data should be developed to determine if a TMDL is an appropriate course of action to address the water quality problem, if other programs are addressing the problem sufficiently, whether there is adequate data and information to address the problem, etc.

Recommendation 5: The policy should describe how waters are removed from the List. Waters should be removed from the List when the data and information indicate that water quality standards are being attained.

Response: This recommendation is in conflict with federal regulation and USEPA guidance. USEPA supports removing waters from the list once a TMDL is completed. During the 2002 process the SWRCB only removed waters from the list if an implementation plan has been approved. By leaving waters on the list, the SWRCB and RWQCBs cannot show progress in completing the requirements of section 303(d) list. Placing waters on TMDLs completed list, as the SWRCB did during the 2002 process, waters can be tracked separately to show progress of actions taken.

Recommendation 6: The policy should address how water bodies are identified on the List. To the extent practicable, water body segments not meeting standards should be identified in a consistent manner.

Response: Agree.

1.2 Effects of Listing

Recommendation 7: The effect of listing is to target the water body for a thorough evaluation of the nature and extent of a problem and implementation of an appropriate response. The process that the Regional Boards will use to identify an appropriate response will be addressed in the TMDL development policy. The response could be anything from permitting actions, enforcement actions, voluntary actions, revisions of the

standards if appropriate, or another appropriate response to address the impairment.² A TMDL may or may not be required.

Response: We agree that the appropriate response can and should be developed after the water body is listed. It is also appropriate that if the SWRCB and RWQCB can determine the appropriate action at the beginning of the process, these processes should be allowed to continue without an intervening step to determine what action is necessary to address the problem. The policy should require the identification problems at the listing stage and, to the extent possible, actions that are addressing these problems. It is a duplication of effort to develop a TMDL or to even start the TMDL development process if an existing permit, program, or enforcement action will address the water quality problem

1.3 Listing Process

Recommendation 8: Solicitation: Each Regional Board should be responsible for soliciting information from interested parties within its Region. The State Board should be responsible for requesting information from agencies/entities that are likely to have information relevant to multiple regions (e.g., from federal/State agencies or from the State university systems). The solicitation process should take place during the same period of time in each Region.

Rationale: Agree.

Recommendation 9: Assessment Process: The Regional Boards should be responsible for assessing the existing and readily available information, including information received during the solicitation process. The Regional Boards should also be responsible for identifying waters on the List. The Regional Boards may hold a workshop and/or public hearing to take comments on staff recommendations. The Regional Boards should then take formal action to adopt recommended changes to the List. The Regional Boards will be responsible for submitting to the State Board the administrative record which supports their recommendations. The State Board should review each Regional Board's recommendations for consistency with the Listing policy. The State Board should accept Regional Board recommendations, unless they are inconsistent with the Listing policy or applicable law. The State Board should then adopt the statewide List through a formal action.

Response: Agree for the most part. The only disagreement is with the SWRCBs review of the RWQCB recommendations. The SWRCB will certainly review the recommendations for consistency with the Policy and it is probable that some of the RWQCB recommendations will be revised as a result of testimony received by the SWRCB directly.

Recommendation 10: Frequency of Updates to the List: A solicitation for data and information and assessment of the need for changes to the List should take place every

² A decision tree flow chart should be developed to clearly describe the appropriate course of action to follow for listed waters.

four years. The Regional Board may, on its own motion, recommend changes to the List between periodic updates. Any such changes must go through the same process as the periodic updates (e.g., Regional Board adoption of the recommended change, State Board approval, and USEPA approval for Section 303(d) listed waters).

Response: Under current regulation the SWRCB is required to submit a list every two years.

Recommendation 11: Waters Currently on the Section 303(d) List: All waters currently on the Section 303(d) list (as of 2002) should be reviewed for consistency with this listing policy within the first two listing cycles following adoption of the listing policy. Recommendations per this Listing Policy should be made for these waters. Waters on the current Section 303(d) list may also be reviewed between periodic updates as described in Recommendation 10 above.

Rationale: Agree.

1.4 Listing/Delisting Factors

The listing/delisting factors below describe the broad issues that should be considered in adding waters to the List, for deleting waters from the List, or for not adding waters to the List. Specific recommendations for factors to consider in listing/delisting are described in Section 4.

Recommendation 12: Listing Factors: A water should be listed when readily available data and information indicate that existing water quality standards (which include narrative criteria, numeric criteria, beneficial uses, and anti-degradation considerations) are not attained on a persistent or recurrent basis.

Response: Agree. The definition of persistent and recurrent must be defined clearly so determinations of standards attainment can be made consistently. The frequency of exceedance should be established as a matter of policy, so listing decisions are made consistently in all regions.

Recommendation 13: Delisting or Not Listing Factors [Please refer to RWQCB document for full text of recommendation.]

Response: Agree. The definition of persistent and recurrent must be defined clearly so determinations of standards attainment can be made consistently. The frequency of exceedance should be established as a matter of policy so de-listing decisions are made consistently in all regions.

1.5 Priority Ranking

Recommendation 14: For waters on the List, the Regional Board should establish high, medium, and low priority categories based on the following factors: a) Water body significance (such as importance and extent of beneficial uses, threatened and endangered

species concerns, and size of water body); b) Degree that water quality standards are not met or beneficial uses are not attained or threatened (such as the severity of the pollution or number of pollutants/stressors of concern; see 40 CFR 130.7(b)(4)); c) Availability of information to address the water quality problem.

Response: Priority setting is only required for the waters on the section 303(d) list; priority setting is not required if not focussed on TMDL development. SWRCB staff agrees with these factors as long as links scheduling with the establishment of priorities for TMDL development.

Recommendation 15: The Regional Board will not assign schedules on the List. A priority setting is not a scheduling commitment. The Regional Board will determine schedules based upon additional considerations including but not limited to available funds, Triennial Review List priorities, applicable court orders, Watershed Management Initiative (WMI) priorities, and other relevant administrative constraints.

Response: As developed in the 2002 section 303(d) list, scheduling should be linked to priority setting so the SWRCB can direct staff and contract resources to complete the most important TMDLs.

1.6 Structure of the List

Recommendation 16: A data management system to store the basic data attributes of surface waters not attaining standards should be used (e.g., such as is currently done for the Section 305(b) Water Quality Assessment report through the GEOWBS data management interface). [Please refer to RWQCB document for full text of recommendation.]

Response: Agree in part. The database should also contain summaries of the data and information used to support the listing of water bodies and pollutants. The information that each RWQCB enters into the system should be the information necessary to support the SWRCB consideration and adoption of the section 303(d) list.

2 ADMINISTRATION OF THE LISTING PROCESS

2.1 Solicitation of Existing and Readily Available Data and Information

Recommendation 17: To provide a minimum statewide level of consistency and completeness in soliciting existing and readily available data and information, each Regional Board will solicit, and document its methods and sources for soliciting, existing and readily available data and information. In general, Regional Boards shall seek readily available data and information generated since the prior List evaluation period. For purposes of data and information solicitation, information is any documentation describing the current or anticipated water quality condition of a surface water body. Data are considered to be a subset of information that consists of reports detailing measurements of specific environmental characteristics. Data and information not

submitted by interested parties in response to the solicitation are not considered to be readily available.

Response: *Agree.*

Recommendation 18: METHODS: The State Board should provide a list of general methods for acquiring data and information (e.g., mailings to Basin Plan mailing lists and lists of other interested parties; website posting; direct requests to select agencies; and internal Regional Board staff requests) that the Regional Water Boards will, at a minimum, use to solicit existing and readily available data and information.

Response: *Agree.*

Recommendation 19: SOURCES: The policy should provide a list of specific sources that the Regional Boards will, at a minimum, solicit for existing and readily available data and information produced since the prior List evaluation period. [Please refer to RWQCB document for full text of recommendation.]

Response: *Agree. The RWQCBs should also be required to assemble all data and information submitted as part of implementation of NPDES permits or Waste Discharge Requirements.*

Recommendation 20: FORMAT: of data and information submittals. [Please refer to RWQCB document for full text of recommendation.]

Response: *Agree for the most part. Statements of certification of data completeness and accuracy may not be available for otherwise acceptable datasets.*

2.2 Documentation

Recommendation 21: To provide statewide consistency and completeness in the formats and procedures of documentation for the List Administrative Record, each Regional Board will use, at a minimum, similar general and specific types of formats and procedures of documentation for submitting its List recommendations to the State Board for the Administrative Record. [Please refer to RWQCB document for full text of recommendation.]

Response: *Agree for the most part. The RWQCB must submit all information to the SWRCB in a consistent format. This format should not be optional. Items 8H and 8J: The process described in these tables is too generic to allow for consistent format or consistent application of decision rules.*

2.3 Data and Information Management and Access

Recommendation 22: Staff from the Regional Boards and State Board should collaborate to specify some general guidance on managing data and information. [Please refer to RWQCB document for full text of recommendation.]

Response: The guidance on data management should be mandatory and in sufficient detail to foster consistent usage by RWQCB and SWRCB staff. This task should be accomplished within existing staff resources because of limitations on the time available to complete the Policy.

3 DATA AND INFORMATION ASSESSMENT PROCESSES

3.1 Determining Compliance with Water Quality Standards

Recommendation 23: Regional Boards should use the decision processes described below and summarized in Figures 1 and 2 (on pages 52 and 53) to evaluate the attainment of beneficial uses and narrative and numerical objectives in surface waters, and to evaluate compliance with the antidegradation component of water quality standards.

The remainder of Section 4.1, together with Figures 1 and 2, constitutes the whole of Recommendation #23. [Please refer to RWQCB document for full text of recommendation.]

Response: Much of the information in this recommendation is descriptive of how data can be used and does not specifically establish a process that can be used predictably. The figures do present a consistent process but the tables are so general that the lists generated from the process could be very different from one another simply because of different interpretations of the RWQCB staffs. In addition to the process it is also important to present clearer decision rules. The figures are useful but quite complicated. Many of the terms are used without clear definition (e.g., degradation, recurrent, interpretative endpoints, persistent, etc.). The text and figure related to antidegradation should be thought through quite carefully since few of the RWQCBs have used this requirement as a basis for listing. Clarifications need to be made in the sections related to: temporal representation, spatial representation, aggradation of stream reaches and water body segmentation, interpreting flow and habitat indicators for 303(d) listing purposes, translating narrative standards, and data quantity assessment (including the numbers of samples).

3.2 Assessment of Toxicity Test Data

Recommendation 24: The following factors must be considered and documented to make management decisions using toxicity monitoring data. This decision process is outlined in the attached figure and in narrative form below. [Please refer to RWQCB document for full text of recommendation.]

Response: Agree with much of the information presented. Based on the SWRCB approach used for the 2002 section 303(d) list, a water would not be placed on the 303(d) list until the pollutant was identified. Clearly if a water is toxic and the pollutant is not known then the research (i.e.,

TIE) should be performed to assess the cause or suspected cause of the toxicity. By identifying the pollutants before the water is listed, TMDL staff and contract resources can be focused on the best characterized problems first.

3.3 Assessment of Toxicity to Aquatic Life Using Water Column and Sediment Data

Recommendation 25: Evaluation of aquatic habitat/aquatic life-supporting beneficial uses incorporates several types of toxicity and chemical data including both water column data and sediment quality data. Each type of data may generally be evaluated independently of the others, and listing for non-attainment of the aquatic life use results when an adequate amount of data indicates impaired beneficial use. A determination of impairment should be based on an environmentally-representative number of samples collected over a timeframe reasonably representative of existing conditions. Issues of spatial and temporal representativeness are discussed in more detail in the Section 4.1. Recommendation 25 includes the remainder of Section 4.3 and Table 1. [Please refer to RWQCB document for full text of recommendation.]

Response: This section is a good start on decision rules for water and sediment data. The approach is impossible to assess at this point for several reasons as follows: (1) the listing values for sediment (i.e., TELs and ERLs) are lower than any evaluation guideline used in any California listing process to date, (2) the exceedance frequency is much more stringent than any of the RWQCBs have used (except for Region 5), (3) the phrases used to allow flexibility allow staff to not use the decision rule under all circumstances, and (4) the table suggests that waters should be listed if impairment is only suggested.

3.4 Bioaccumulative Substances

Recommendation 26: RWQCB staff presented an approach for listing based on bioaccumulation. [Please refer to RWQCB document for full text of recommendation.]

Response: This section is a good start on decision rules for bioaccumulation of pollutants. The approach is impossible to assess at this point for several reasons as follows: (1) The link to pollutants in the water or sediment is not required, (2) the reassessment of the evaluation guidelines sections may cause unpredictable implementation of the policy, (3) it is unclear what data could be available to override an OEHHA health advisory, and (4) the statistical approach for analyzing the bioaccumulation data.

3.5 Determining Compliance with Numeric Bacteriological Water Quality Objectives

Recommendation 27: The following data requirements and processes should be used in assessment of compliance with Water Quality Objectives. [Please refer to RWQCB document for full text of recommendation.]

Response: This section is a good start on decision rules for water and sediment data. The approach should be compared with the approach recommended by the Beach Water Quality Workgroup so, to the extent possible, the approaches can be made consistent.

3.6 Nutrients

Recommendation 28: Several relevant parameters—listed in Table 4 and 5—may be useful for establishing nutrient listings. The utility of these parameters varies, based on our current state of knowledge, and on the directness of their linkage to nutrient-related beneficial use impairment. The process for listing and/or delisting water bodies for nutrient impairment is to utilize a weight of evidence approach using the parameters in Tables 4 and 5 below, as appropriate, for each beneficial use designation in combination with the decision process. [Please refer to RWQCB document for full text of recommendation.]

Response: This section only provides the parameters that would be used to determine if water quality standards are attained. No decision rules are presented that would allow for a generally consistent approach for nutrient listings.

3.7 Temperature

Recommendation 29: When data of sufficient quantity and quality (see Section 4.1 above) are available, a comparison of current and “historic” or “natural” water temperatures can be made to determine whether water quality objectives are being met. If the current temperature regime of COLD or WARM waters has been altered from the “natural” or “historic” temperature regime in a manner prohibited by the applicable objective, then the water quality objective is not being met and the water body shall be determined impaired by temperature. The provisions of the State Board’s Thermal Plan should also be considered. [Please refer to RWQCB document for full text of recommendation.]

Response: This approach should form the basis of the recommendations for the listing policy related to temperature. The approach allows the Boards an alternative that allows a weight-of-evidence approach to be used to determine if standards are attained.

Sedimentation

Recommendation 30: Waters shall be listed based on sufficient credible data and information that indicate that water quality standards for sediment are not met, or that impacts to beneficial uses occur and are caused by sediment. A water body will be listed if any one of the following conditions is met:

1. Beneficial use impairment caused by increased sediment loads.
2. Nuisance caused by sediment loads (CWC, Section 13050).
3. Exceedance of turbidity objective, where turbidity is caused by increased suspended sediment loads.

[Please refer to RWQCB document for full text of recommendation.]

Response: This approach should form the basis of the recommendations for the listing policy related to sedimentation. Some specificity may be necessary for this approach to be consistent and repeatable throughout the state.

3.8 Habitat, channel, and flow modification

Recommendation 31: Water bodies that have beneficial uses that are impaired due to factors such as lack of flow, degraded aquatic habitat, and physical changes to stream channels should be identified on the List.

Response: This recommendation goes beyond the requirements of the section 303(d) to list waters that do not meet standards due to the effects of pollutants. The SWRCB is reluctant to list these waters. Waters with these kinds of impacts should be categorized with water impacts but the impacts are not due to pollutants.

3.9 Biological Monitoring and Assessments

Recommendation 32: The assessment process below should be followed until biological standards (biocriteria) have been incorporated into a Regional Board's Basin Plan. After that time these standards would necessarily guide listing decisions for the affected geographic areas. Regional Boards (especially the larger Regions) will probably adopt biocriteria for one or a few areas at a time, not for the whole Region at once. After the biocriteria are adopted for a specific area, watershed, ecoregion or waterbody type, those established biocriteria would guide listing or delisting decisions for that area only. The remainder of the Region (for which no biocriteria have yet been adopted) would still follow the process below. [Please refer to RWQCB document for full text of recommendation.]

Response: This approach should form the basis of the recommendations for the listing policy related to analysis of biomonitoring data. Some specificity may be necessary for this approach to be consistent and repeatable throughout the state and so, deviations from the approach, do not become the rule.