

FINAL

Functional Equivalent Document

Appendix B Responses To Comments



SEPTEMBER 2004

DIVISION OF WATER QUALITY
STATE WATER RESOURCES CONTROL BOARD
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY



STATE OF CALIFORNIA

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STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER QUALITY

FINAL FUNCTIONAL EQUIVALENT DOCUMENT

WATER QUALITY CONTROL POLICY FOR DEVELOPING
CALIFORNIA'S CLEAN WATER ACT SECTION 303(d) LIST

RESPONSES TO COMMENTS

APPENDIX B

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FINAL FUNCTIONAL EQUIVALENT DOCUMENT:
WATER QUALITY CONTROL POLICY FOR DEVELOPING
CALIFORNIA'S CLEAN WATER ACT SECTION 303(d) LIST

APPENDIX B:

RESPONSES TO COMMENTS

Introduction

This section of the Functional Equivalent Document contains the responses to all comments received by State Water Resources Control Board (SWRCB) on: (1) the draft FED (SWRCB, 2003) and (2) the draft Final FED (SWRCB, 2004c).

The draft FED was made available for public review and comment on December 2, 2003. The hearing notice was sent to several thousand interested parties. This appendix presents a compilation of the SWRCB responses to all comments received during the January 28 and February 5, 2004 hearings (SWRCB, 2004a; 2004b) and to all written letters received on or before February 18, 2004.

The draft Final FED was made available for public review and comment on July 22, 2004. A notice of SWRCB workshop was sent to all commenters on the draft FED and to a list of interested parties via electronic mail. This appendix also presents a compilation of the SWRCB responses to all comments received on or before August 25, 2004. If persons testified at the September 8, 2004 workshop their letters were used to represent their testimony (SWRCB, 2004d). If any new comments were presented, written responses were developed and included in this Appendix.

As required by 23 California Code of Regulations section 3779, all significant environmental points received less than 15 days before the September 30, 2004 Board meeting were responded to verbally at the Board meeting (SWRCB, 2004e).

Persons or organizations that submitted written comments, or presented oral testimony during the public hearings are listed in Table 1. Each person or organization submitting comments or providing oral testimony is identified by number. All remarks, observations or recommendations (except as described above) were extracted from each comment letter or oral testimony and

assigned a comment number. All comments that addressed the same issue were grouped and a response was developed for the comment. Unique comments were answered individually. A summary of all comments submitted and the SWRCB response to each comment on the draft FED (SWRCB, 2003) is presented in Table 2. A summary of all comments submitted and the SWRCB response to each comment on the draft Final FED (SWRCB, 2004c) is presented in Table 3.

Dr. David Jenkins (Commenter 2), Dr. John Rice (Commenter 3), and Dr. Donald Weston (Commenter 77) peer reviewed the draft FED pursuant to section 57004 of the Health and Safety Code.

Key to Reading the Comments and Responses

The comments and responses are grouped by the section of the draft FED and draft Policy (SWRCB, 2003) or draft Final FED and draft final Policy (SWRCB, 2004c). General comments, comments unrelated to the Listing Policy, and comments focused on the Policy adoption process, are presented separately.

Column 1 Comment Number: Each comment was assigned a comment number consisting of two parts that are separated by a period. Starting from the left, the comment number begins with a number representing the person or organization submitting comments or providing oral testimony during the public hearings. Numbers less than 100 were assigned to written comments submitted during the comment period ending on February 18, 2004. Numbers greater than 100 were assigned to comments received as oral testimony during the public hearing held on January 28, 2004. Numbers greater than 200 were assigned to comments received as oral testimony given during the hearing held on February 5, 2004. Numbers greater than 300 were assigned to written comments received or oral testimony given during the workshop held on September 8, 2004.

The number after the period represents the individual comment presented in the written submittal or testimony.

Column 2 Summary of Comment: This column presents a summary of the comment extracted from each comment letter or oral testimony. When comments are grouped, one comment was selected to represent the group.

Column 3 Response: This column contains the SWRCB response to each comment.

Column 4 Revision: This column states whether the Policy and/or FED were revised based on the comment.

References

SWRCB. 2003. Draft Functional Equivalent Document: Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. Sacramento, CA: Division of Water Quality, State Water Resources Control Board.

SWRCB. 2004a. Transcripts from January 28, 2004 hearing. Sacramento, CA: State Water Resources Control Board.

SWRCB. 2004b. Transcripts from February 5, 2004 hearing. Sacramento, CA: State Water Resources Control Board.

SWRCB. 2004c. Draft Final Functional Equivalent Document: Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. Sacramento, CA: Division of Water Quality, State Water Resources Control Board.

SWRCB. 2004d. Transcripts from the September 8, 2004 workshop. Sacramento, CA: State Water Resources Control Board.

SWRCB. 2004e. Transcripts from September 30, 2004 Board meeting. Sacramento, CA: State Water Resources Control Board.

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Table 2: Responses to Comments and Testimony

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
DFED, Introduction			
51.70	In its description of the Policy the FED sets forth a variety of measures that if implemented would to some extent mitigate some of the Policy’s adverse environmental impacts. However, these measures cannot be found in the Policy itself. These inconsistencies are misleading and cause the FED’s project description to be inaccurate.	The FED should be viewed as the justification for the various provisions of the draft Policy. In order to avoid duplication, the draft Policy does not include all of the information, justification, alternatives, etc. that are presented in the FED. The Policy provides the requirements for placement or removal of waters from the section 303(d) list.	No
DFED, Environmental Setting			
51.68	The Environmental Setting section of the FED is deeply flawed and falls far short of CEQA’s requirements. The FED utterly fails to describe California’s widespread pollution problems and degraded beneficial uses. As such it is inadequate under the law. The FED does not describe the vast amounts of pollutants and pollution that have been and continue to be discharged into California’s waters. No effort is made to quantify these discharges in terms of mass, toxic effect or other impact. The FED makes no effort to describe the widespread violations of standards and impairments in each of these watersheds. The FED does not describe the numerous water bodies in California that are in danger of becoming impaired by pollutants. Nor does the FED make any attempt to describe the beneficial uses that have been harmed by these impairments. Information about the environmental setting is essential to support an analysis of the cumulative impacts of this policy and the analysis of alternatives. Without this information it is impossible for the public to fully evaluate SWRCB’s decision. Consequently without this additional information the FED is inadequate under the law.	This section of the FED contains a description of the physical environmental conditions using descriptions of the Regions and the water bodies from the Basin Plans, as they exist, from both a local and regional perspective. This description represents the baseline condition upon which the environmental impacts were determined at the time that the FED was commenced. The FED has been revised to include a table that lists the total water bodies on the 2002 303(d) list and the estimated size of the area affected, by region and water body type, so that a more complete picture of the baseline condition is represented.	Yes
DFED, Issue 1: Scope of the Listing/Delisting Policy			
1.17, 5.3, 6.1, 6.2, 11.12, 11.2, 12.2, 12.5, 19.2, 19.14, 30.2, 30.4, 43.5, 43.58, 47.10, 60.49, 60.46, 60.48, 63.4, 71.3, 71.6, 113.1, 113.3, 203.1, 207.14	The NRC recommendation that states develop appropriate use designations for water bodies prior to the 303(d) listing process, and that states refine use designations prior to TMDL development should be incorporated into California’ s listing policy.	The purpose of section 303(d) of the Clean Water Act is to list water quality limited segments relative to existing standards. Re-evaluation of existing standards is usually accomplished under CWA section 303(c)(1) and implementing regulation (40 CFR 131.20). During the triennial review period the RWQCBs hold public hearings for the purpose of reviewing water quality standards and as appropriate, modify or adopt new standards. If the section 303(d) listing process and the triennial review process were combined it would be impossible to complete the section 303(d) list every two years as mandated by federal regulation.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
2.1	Agree with the recommendation to make the document as specific and focused as possible.	Comment acknowledged.	No
5.2, 12.3, 71.4	Per National Research Council (NRC) recommendations, SWRCB should (a) implement appropriate beneficial use designations before listing; (b) define water quality criteria for magnitude, frequency, and duration; and (c) create both a preliminary list and an action list in addition to the final 303(d) list.	Modification of beneficial use designations is a very large task that is beyond the scope of preparation of the CWA section 303(d) list. Water quality objectives and criteria have been established in Basin Plans and in federal regulation. For numeric objectives and criteria, magnitude has been established. For many water quality objectives and criteria, duration and frequency have been established. The structure of the list is addressed in Issue 2.	No
7.5	Listings should be based on sound science.	Comment acknowledged.	No
12.1	Support the SWRCB's goal of establishing a standardized approach for assigning water bodies to the 303(d) list, including requirements for consistent and statistically valid data evaluations, requirements for data quality and quantity, and implementation provisions.	Comment acknowledged.	No
18.60	The TMDL Roundtable recommended that the listing process should not describe a process for determining whether water quality standards are appropriate. The draft Listing Policy is consistent with this recommendation, since there is no step requiring review of uses and standards.	Comment acknowledged.	No
20.19, 20.18, 20.28, 80.13	Eliminate burden on RWQCBs beyond performing the assessment of whether water quality standards are being attained. A number of provisions require the Regions to go above and beyond an assessment of California's surface waters.	The draft FED recommends providing guidance on the listing and delisting factors necessary to assemble the required section 303(d) list of waters that do not currently meet existing water quality standards. Some of the factors are related to the factors listed. While these tasks may be more work for the RWQCBs initially, there would be a savings if problems already being addressed are identified at the beginning of the process instead of when TMDLs are developed. Federal regulation calls for scheduling waters on the list for TMDL development, therefore, this requirement is not avoidable. Monitoring is not required by the Policy per se but the requirements in Policy will influence monitoring efforts throughout the state if the monitoring program is being implemented to determine if a water should be placed or removed from the section 303(d) list.	No
21.11	SWRCB should work toward developing the financial and other resources to develop site-specific WQSs that are protective without significant unnecessary costs for TMDL implementation (i.e., properly implement the CWA requirements for defining a WQS violation). Rather, the SWRCB is adopting a 303(d) listing approach that will significantly weaken water quality protection by allowing violations of WQSs in California water bodies.	Comment acknowledged.	No
30.3	As pointed out in the FED, 'the preparation of the list does not require states to reexamine whether...standards are appropriate.' Recommend a scientific review	The Policy provides guidance to assure that the data used to list a water body is scientifically credible. The section 303(d) listing process also provides for	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	be incorporated into the 303(d) listing and TMDL process.	<p>public review of recommended listings and the data used to list them. A scientific review of the entire listing process every two years would be an enormous and time consuming undertaking and would be largely duplicative of the evaluation of data quality evaluations already required.</p> <p>All TMDLs are peer reviewed as required by Health and Safety Code section 57004.</p>	
50.10	Reevaluations of water quality standards must be subject to legal requirements and public review.	The Policy explicitly states that it is not to be used to 'establish, revise, or refine any water quality objective or beneficial use'; therefore, reevaluations of water quality standards are beyond the scope of this Policy.	No
50.9	Decisions to delist must be fully transparent to the public and the public must be given the opportunity to participate in any determinations which could affect water quality.	The draft Policy requires fact sheets to be prepared that describe the justification for both listing and delisting waters. Using these fact sheets, any waters added or deleted from the list will be considered publicly by RWQCBs and SWRCB.	No
71.7	Recommend, for those cases where a standards review prior to listing is infeasible, that SWRCB's approach, detailed in the document, 'A Process for Addressing Impaired Water in California,' December 2003, of evaluating the appropriateness of water quality standards prior to the development of a TMDL.	Evaluating the appropriateness of water quality standards is beyond the scope of this Policy.	No
73.4	Supports the policy direction being provided through the draft policy to narrow the scope of the list slightly.	Comment acknowledged.	No
76.29	In light of the State's current budget situation and the two-year cycle for adopting 303(d) Lists, appreciates the SWRCB's preference to incorporate guidance on listing/delisting factors only.	Comment acknowledged.	No
76.30	A third alternative should be included in the Issue 1 discussion that would incorporate aspects of Alternatives 1 and 2 while facilitating the completion of 303(d) lists on the two-year cycle currently mandated by federal regulations. This Alternative could provide guidance to assure that future listings are consistent with 40 CFR 130.7 and the existing listings were reviewed for compliance. It could also partially address the 2001 recommendations of the NAS committee concerning development and refinement of use designations prior to TMDL development. This Alternative should include guidance that the adoption of Implementation Plans for TMDLs be delayed until the applicable use designations and water quality objectives are reviewed and refined, if necessary. Such a procedure could be incorporated into the Implementation Plan chapters of the water quality control plans (basin plans) adopted by the various RWQCBs and into statewide plans such as the Ocean Plan. Incorporation of the procedures into the water quality management plan would be consistent with CWA section 303(d) and with CWC section 13242. The CWA does not require Implementation Plans be adopted with TMDLs, and CWC section 13242 does	<p>The alternative described is virtually the same as alternative number 2. The Policy is focused on compliance with CWA section 303(d). The scope of the Policy is to develop a list of water quality limited segments using existing standards.</p> <p>The proposed Policy focuses on the development of a narrowly defined section 303(d) list that includes only those waters that do not meet water quality standards and a TMDL is needed to resolve the pollutant problem.</p> <p>Re-evaluation of existing standards is usually accomplished under CWA section 303(c)(1) and implementing regulation (40 CFR 131.20). During the triennial review the RWQCBs hold public hearings for the purpose of reviewing water quality standards and as appropriate, modify or adopt new standards.</p>	No

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	not mandate the contents of the program of implementation for achieving water quality objectives. Another policy guidance that could be included in Alternative 3 would be direction to the RWQCBs to correct their beneficial use designations to be consistent with CWC section 13241(a) to consider 'probable future beneficial uses' not 'potential' beneficial uses. The potential beneficial use category found in today's basin plans is consistent with State law and has resulted in listings based on uses that do not exist and are highly improbable in the future.		
206.4	Water quality standards are the backbone of CWA and to the extent that the TMDL process is removed from that in terms of there isn't an identified pollutant and there isn't an established criteria for what the appropriate pollutant is in that water body than the TMDL process is going to be delayed and take more time and resources.	Federal regulation requires that TMDLs be developed for the pollutants, including toxicity, identified on the section 303(d) list. USEPA has determined that all of the pollutants are suitable for TMDL development.	No
216.2	The gentleman from Dominguez channel said, 'I don't know why we should even bother with any of these channels. There's no beneficial uses.' But that water always ends up in the ocean, somebody fishes in it, somebody swims in it. Not a good thing.	Comment acknowledged.	No

DFED, Issue 2: Structure of the Section 303(d) List

2.14, 2.2, 10.14, 17.4, 18.28, 18.29, 22.6, 28.4, 38.5, 43.6, 43.1, 43.18, 43.16, 44.13, 47.9, 51.117, 51.20, 56.12, 60.62, 60.27, 60.65, 60.51, 60.7, 60.9, 60.50, 61.8, 64.16, 64.15, 76.14, 76.42, 76.31, 76.3, 83.7, 83.8, 201.2, 205.6, 207.10, 207.17, 207.3, 207.7, 208.1, 210.5, 210.4, 219.7, 219.6, 221.7	<p>Considers the policy decision on how to structure the State's listing policy to address water body segments identified as not meeting water quality standards to be critical. A number of water bodies were listed on the 2002 303(d) list despite the lack of an identified pollutant. 40 CFR 130.7 states that the 303(d) list is for those impairments for which pollutants have been identified and TMDLs are still required.</p> <p>Requests that a new Alternative 6 be prepared incorporating our comments and policy recommendations above about the structure of the CWA Section 303(d) List. We further recommend that the new Alternative become the recommended Alternative.</p>	<p>The proposed Policy focuses on the development of a narrowly defined section 303(d) list that includes only those waters that (1) do not meet water quality standards and a TMDL is needed or (2) do not meet standards and a program is available to resolve the pollutant problem.</p> <p>In all cases but one, the draft Policy calls for the identification of the pollutant that will become the focus of the TMDL. Federal regulation allows for developing TMDLs for the identified pollutants causing or expected to cause water quality standards violations (40CFR 130.7(b)(4)). The exception is toxicity. The definition of a TMDL (40 CFR 130.2(i)) allows for 'TMDLs to be expressed in terms of either mass per time, toxicity or other appropriate measure.' In order for TMDLs to be expressed in terms of toxicity it is necessary for TMDLs to be developed for toxicity. The Policy allows for the listing of waters for toxicity whether the pollutant is known or not. Therefore, when listing for toxicity, the statement requiring the identification of the pollutant before a TMDL can be developed has been removed.</p>	Yes
18.14, 20.22	The Regions are also required to make a distinction between impairments that are due to pollutants versus pollution, which may require an evaluation that cannot be readily performed with available information.	Federal regulation (40 CFR 130.7) requires SWRCB and RWQCBs to evaluate all readily available data and information, to identify waters that do not meet standards, and to identify the pollutants potentially causing standards	No

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		exceedances. If certain information is not readily available and the information is required by the Policy, then the waters should not be placed on the section 303(d) list.	
18.93	Recommendation is that the response to an impairment listing should be consistent with the Impaired Waters Guidance Policy (TMDL Policy). The listing exercise/action may recognize that there are various responses, or remedies, to a listing, but the listing exercise will not assert which response will be exercised. The response to the listing will be separate from the listing itself. The universe of potential responses, as well as guidance on how to select the most appropriate response to a given listing, is contained in the TMDL Policy which is the companion policy to the Policy for the Identification of Surface Waters Not Meeting Water Quality Standards (A.k.a., Listing Policy). The Listing Policy describes how to determine if a water should be included on the section 303(d) List; the TMDL Guidance describes how to address waters already on the section 303(d) list.	The Policy has been revised to refer to allow RWQCBs to determine if regulatory programs will solve the water quality problem in lieu of a TMDL. No actions are mandated as a result of listing. The Listing Policy simply recognizes management actions that are already in place.	Yes
56.6	The SWRCB should revise the Policy to include on the 303(d) list only those waters for which water quality standards are not attained and for which a TMDL is required.	Comment acknowledged.	No
63.5	Alternative 5 is supportable only if detailed and specific, not general, guidelines are established for each pollutant type.	Comment acknowledged.	No

DFED, Issue 3: Weight of Evidence for Listing and Delisting

2.3, 56.13, 63.6	Alternatives 1 and 3 will not result in the consistency desired for the 303(d) process. Alternative 2 is the better choice.	<p>Alternative 2 could potentially lead to some inconsistencies especially when narrative standards are interpreted. The weight of evidence used by individual staff cannot be confidently combined numerically because each individual might overestimate or underestimate a given piece of evidence by distinct amounts. These estimations cannot be reliably captured using a purely statistical weight of evidence approach.</p> <p>In Alternative 1, data and information could also be lost when combining lines of evidence; however, if fact sheets contain an assessment of the way lines of evidence were combined, this problem would be minimized. When considering multiple lines of evidence each line of evidence should be evaluated separately to determine whether multiple lines of the evidence for the same water body support the same conclusion. The Policy has been revised to include a brief description of the weight of evidence approach.</p>	Yes
8.2, 40.12, 40.46, 40.47, 51.78, 51.103, 51.25,	Suggest that the standard for listing be strengthened from a weight of the evidence test to a clear and convincing evidence standard such that where there exists doubt as to impairment, no listing would occur. Past listings resulted in	The standard of evidence for the Policy as well as for listing or delisting is substantial evidence. Substantial evidence is defined in both the Administrative Procedure Act (APA) and CEQA. APA section 11349.1	No

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110.4	the inclusion of far too many water bodies. The volume of listed water bodies is already far more than can reasonably be addressed, and many of the listed water bodies are listed on the basis of scanty questionable evidence.	<p>defines the necessity standard to mean 'the record of the rulemaking proceeding that demonstrates by substantial evidence the need for a regulation to effectuate the purpose of the statute, court decision, or other provision of law that the regulation implements, interprets, or make specific, taking into account the totality of the record. For purposes of this standard, evidence includes, but is not limited to, facts, studies, and expert opinion.' Public Resources Code section 21082.2 also defines in terms of what is included and what is not. Under this law substantial evidence includes facts, reasonable assumptions predicated upon facts, and expert opinion supported by facts. Substantial evidence is not argument, speculation, unsubstantiated opinion or narrative evidence which is clearly inaccurate or erroneous, or evidence of social or economic impacts which do not contribute to or are not caused by physical impacts on the environment.</p> <p>Under the provisions of the draft Policy, waters would only be listed or delisted if substantial evidence is available documenting the decision. Using this approach, substantial evidence is not an unusually large amount of evidence but rather the amount of data and information that a reasonable person might accept as a basis for the decision.</p> <p>Doubt regarding the basis for listing and delisting decisions will be present unavoidably in every circumstance. The decision rules proposed in the draft Policy make the decisions more certain but the decisions will never be entirely free from all doubt.</p> <p>Some lines of evidence could be sufficient alone without additional lines of evidence for support. Such cases include exceedance of a numerical water quality standard. Other circumstances will require supporting evidence in assessing water quality. These cases include assessing human health, nuisance conditions, adverse biological response, degradation of biological populations or communities and trends in water quality.</p>	
10.12, 10.15, 10.11, 10.8, 14.5, 18.16, 18.18, 18.20, 20.7, 27.1, 36.3, 37.7, 40.81, 40.95, 40.96, 40.9, 40.32, 40.33, 40.31, 44.9, 44.8, 51.86, 51.122, 51.120, 51.119, 51.81, 51.104, 51.82, 51.83, 51.80, 51.79,	The listing and delisting factors in the Draft Policy focuses on the use of a rigid statistical methodology, backed up only by comparably rigid 'alternative data evaluation' methodology, rather than by a true 'weight of evidence' approach for assessing the health of individual water bodies. As a result, the Policy does not comply with the federal CWA that, 'The policy shall include a 'weight of evidence' approach and shall include criteria that ensure that the data and information used for identification and listing of impaired water bodies are accurate and verifiable.' SWRCB should revise the Draft Policy to include a true weight of evidence approach as specific in the federal CWA.	<p>'Weight of evidence' and 'multiple lines of evidence' as used in the draft Policy are accepted concepts in the scientific literature (e.g., Good, 1985; Smith et al., 2001), and are therefore discussed and promoted accordingly in the draft FED and draft Policy (see Section 3). As a first step, in implementing the Policy these approaches are required to be used in conjunction with the binomial test for numeric sample data. The use of hypothesis or significance testing is one way to weigh evidence (Good, 1985). The draft Policy also allows RWQCBs to recommend listings or delistings based on the situation-specific weight of evidence factors.</p> <p>RWQCBs will need to document all listings and delisting decisions in fact sheets and SWRCB shall determine if there is substantial evidence to list or delist.</p>	Yes

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53.28, 60.42, 76.13, 80.6, 81.1, 101.4, 102.7, 106.6, 107.3, 107.1, 107.10, 108.18, 109.17, 217.17, 221.1, 221.8, 221.3		<p>The new section in the introduction presents the steps for implementing the Policy's weight of evidence approach. The approach includes the process for data and information preprocessing, data and information processing, and data assessment. The Policy also has weight of evidence listing and delisting factors that allows RWQCB to make recommendations as long as RWQCBs justify its recommendations by:</p> <ul style="list-style-type: none"> --Providing any data or information supporting the decision; --Describing in fact sheets how the data or information affords a substantial basis in fact which the decision can be reasonably inferred; --Demonstrating that the weight of evidence of the data and information indicate attainment status of the water quality standard; and --Demonstrating that the approach used in scientifically defensible and reproducible. 	
10.13	The water body must be listed if standards are not met. A TMDL may or may not be the appropriate solution. Should a TMDL be automatic? Again, this goes back to the role of professional judgment, weight of evidence, multiple lines of evidence. Consideration of the above should be acknowledged by language added to this section.	If water quality standards are not met, water bodies will be placed on the section 303(d) list (please refer to section 2 of the Policy). Placement on the list does not automatically mean a TMDL will be completed. The Policy allows placement in another category, if pollution control requirements are reasonably expected to result in attainment of the water quality standard. The RWQCBs are afforded significant flexibility to determine if a water should be listed or delisted using the situation-specific weight of evidence listing and delisting factors.	No
10.6, 42.1, 104.8, 106.8, 106.7, 108.5, 219.4	The binomial procedures proposed in the Policy override the need for weight of evidence and/or professional judgment. Not all listing criteria can be monitored by devices or in the lab. Reliance on the weight of evidence and professional judgment is necessary.	'Best professional judgement' depends on the experience and expertise of the person rendering the judgement. Even people with reasonably similar experience could judge similar situations differently. The current section 303(d) list varies substantially between Regions. The intent of the Policy is to provide a consistent way to develop the section 303(d) list and, at the same time incorporate site-specific information. To do this, fairly specific decision rules are provided that require data to be consistently analyzed. The draft Policy provides significant latitude to RWQCBs to determine the spatial representation, water body segmentation, and temporal representation of the samples used in the analysis. RWQCBs need only to document these factors in the water body fact sheets. This flexibility to use judgement has been emphasized in the draft Policy by inclusion of listing and delisting factors that allow RWQCBs to use the weight of evidence depending on situation- and site-specific considerations.	Yes
12.6, 109.11	The basis and rationale for additional listing decisions is unclear. The commenter supports guidance regarding the requirements for and transparency of listing decision.	The Introduction (Section 1) has been revised to insert a description of the Policy's overall the weight of evidence approach.	Yes
21.57, 21.61	Support the use of a properly developed Weight of Evidence (WOE) approach	Section 303(d) of the federal CWA requires each state to identify those waters	No

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	<p>in evaluation of existence of water quality impairment and its cause. High quality science should be used in listing and delisting, involving a non-numeric Best Professional Judgement which properly incorporates aquatic life toxicity, excessive bioaccumulation, aquatic organism assemblages relative to appropriate reference sites, and chemical information on the cause of adverse impacts- not total concentrations. The use of WOE approach should be through TIEs to identify the cause of toxicity.</p>	<p>within its boundaries for which the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) are not stringent enough to implement any water quality standard applicable to such waters. In addition, the Listing Policy requires the use of a multiple lines of evidence for human health, toxicity, nuisance conditions, adverse biological response, degradation of biological populations or communities and trends in water quality. Any combination of these conditions can be used to support a listing/delisting decision. The use of TIEs are included in the toxicity section of the FED and Policy to identify the cause of or the contributors to toxicity.</p> <p>Using TIEs as the sole basis for substantiating the pollutant is causing or contributing to the standards exceedance is a very high burden of proof. Associations between pollutant concentrations and effects have been used in many scientific studies to link effects with pollutant levels and are appropriate for development of the section 303(d) list.</p>	
32.1	<p>The policy appears to preserve flexibility for the RWQCBs to work with stakeholders to obtain and evaluate high quality data and to discuss findings in an open, public process. Encourage SWRCB to ensure that such flexibility is preserved in the policy so that determinations on exceedances of water quality objectives are based on a broad array of information and on sound science. In that regard, the policy should promote a wide variety of investigative strategies and avoid the appearance that it endorses or prescribes specific procedures, such as the proposed application of the binomial distribution. RWQCBs should have the discretion to consider all data and interpretations that they and stakeholders deem appropriate as part of a comprehensive, weight-of-evidence approach for determining water quality impairments.</p>	<p>The Policy provides guidance on how to interpret and weigh a wide variety of data and information and provides a process to evaluate data that, if justified, allows for the use of additional data and information. The Policy has been revised to allow RWQCBs wide discretion, if it is needed, to evaluate all lines of evidence that may be available.</p>	Yes
38.4, 43.7, 56.20, 60.52, 64.18, 64.11, 64.13, 76.32	<p>Supports recommendation of Alternative 1. Use in the 303(d) listing of a weight of evidence approach.</p>	<p>Comment acknowledged.</p>	No
77.1	<p>Greater clarity is needed in the distinction between Issue 4 (single line of evidence) and Issue 5 (multiple lines of evidence). Toxicity appears under Issue 5, yet it was my impression that toxicity could be used alone for listing (though not for TMDL implementation). It would be helpful to better explain what is meant by multiple lines of evidence. Some of that information appears towards the end of the document, but it would be helpful to have a brief explanation up front when the single vs. multiple issue is first raised.</p>	<p>These sections have been clarified.</p>	Yes
<h3>DFED, Issue 4: Listing or Delisting with Single Line of Evidence</h3>			
18.57	<p>The Listing Policy should use the technical module approach used in the TMDL Guidance. The Listing Policy itself should just define general parameters for</p>	<p>Section 13191.3(a) requires the SWRCB to prepare guidelines to be used in listing, delisting, developing, and implementing TMDLs pursuant to CWA</p>	No

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	conducting the 303(d) list assessment. Over time, specific technical modules should be developed that would provide guidance, but not mandates, on how to conduct specific types of assessments (e.g. bioaccumulation; pathogens; nutrients; sediment). There are a wide variety of technical issues that must be considered in performing assessments for different types of pollution. The science in performing such assessments is evolving and should not be mandated within a policy. Guidance, which could be updated prior to each listing cycle, would allow the Regions and SWRCB to use the most current science in evaluating available data and information to determine standards attainment.	section 303(d). Additionally, the Budget Supplemental Report required a weight of evidence approach and the inclusion of criteria that ensure data and information are accurate and verifiable. The Policy follows this mandate by providing guidance on how to conduct specific types of assessments for various pollutants while allowing the use of the most current scientific approaches available. If a non-mandatory 'technical module' approach were taken it is less likely the Policy would provide a consistent listing process.	

DFED, Issue 4B: Interpreting Numeric Marine Bacterial Water Quality Standards

2.5, 60.54, 76.34	Agree with the recommendation. Rules for determining ocean water quality should be a statewide rather than a regional issue.	Comment acknowledged.	No
21.1, 21.34, 21.23, 51.100	<p>Allowing a 10% exceedance rate plus a confidence level of 90% in a binomial distribution at marine beaches is arbitrary, is not protective of public health, and allows an exceedance rate far higher than the exceedance rates observed at many polluted beaches in California.</p> <p>The policy specifies that if the reference system is not used, a marine beach will not be listed unless the observed exceedance rate is 10% or greater with a 90% confidence level using the binomial model. This translates to a 17% exceedance rate at beaches monitored weekly (the most common monitoring plan at California beaches) using Table 3.1 of the draft Policy. This is an extremely high rate of exceedance of California's health-based standards, which are designed to meet the federal marine beach criteria. Clearly, this policy will result in the failure to list beaches that frequently pose a health risk above the USEPA's recommended health risk rate of 19 swimmers per 1,000 for gastrointestinal illnesses and that are not supporting a REC-1 beneficial use designation.</p> <p>The recommended 10% threshold is not supported by existing data. For example, data analyses conducted for the bacteria TMDLs for Santa Monica Bay do not support a 10% exceedance rate. Analysis of five years of routine monitoring data at 55 beaches showed that 35 beaches had an average exceedance rate of less than 10% per year. In other words, 61% of the beaches routinely monitored in Santa Monica Bay have an exceedance rate of less than 10%, yet most of these beaches are monitored because they have sources of bacteria nearby such as storm drains. Thus, many beaches with sources of bacteria have a lower exceedance rate than the rate the state is using.</p> <p>SWRCB provides no justification for applying the binomial model with a 10% exceedance rate to the assessment of marine beaches for protection of human</p>	The proposed exceedance frequency is very low when compared to the precision of bacteria measurements and is recommended in USEPA guidance documents (e.g., USEPA, 1997c). Bacteria measurements are inherently imprecise. In the SWAMP QAPP (Puckett, 2002), for example, measurement variability must be less than 1,000 times the average of duplicate measurements to be considered acceptable. With this level of acceptable variability it is probable that some measurements exceed standards when in fact standards are not exceeded. If no other exceedance frequency value is available then using a 10 percent value (as an average) is quite small relative to the expected analytical variability in these bacteria indicator tests. If a lower exceedance frequency is justified based on situation-specific factors, the alternate value may be used.	No

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	<p>health. The policy fails to explain how this 10% relates to implementation of the health standard. Instead, this percentage is from an outdated recommendation from USEPA for interpreting fecal coliform data. This threshold was not recommended by USEPA in their most recent guidelines for interpreting bacteria data for listing purposes in the May 2002 draft Implementation Guidance of Ambient Water Quality Criteria for Bacteria. In fact, none of the USEPA's most recent guidance documents on management of public health protection or assessment of recreational water bodies recommends this high exceedance rate.</p>		
31.2	<p>Recommend that the 4 percent criteria for bacterial impaired water body segments not be used due to possible unrepresentative conditions. This exceedance threshold was based on one location for a limited duration of five weeks. Support using the 10 percent frequency for the number of bacterial water quality objective exceedance, which is consistent with the frequency exceedance rate for pollutants listing in this Policy that have been statistically validated.</p>	<p>The four percent value was recommended by the BWQW and this recommendation represented a broad agreement of scientists who are familiar with bacterial indicators in coastal waters. While the study is limited to Southern California waters, SWRCB staff know of no other study or circumstance that would contradict its application to all coastal waters of the State. The draft Policy allows RWQCBs to use other studies that are more representative of site-specific conditions. If site-specific studies are not available, then it is appropriate to use the four percent value during the AB 411 period.</p>	No
43.9	<p>SWRCB should consider supporting BWQW recommendation of monitoring stations 25 yards from storm drain discharges. Agree with the staff-recommended Alternative 2.</p>	<p>The decision related to the size of the area where standards are not met should be based on site- and situation-specific factors related to the segment of the water body. Specific guidance would inappropriately limit needed discretion.</p>	No
51.93, 51.99, 51.95	<p>The 4% exceedance rate allowed in the policy for assessing dry summer season conditions at beaches in lieu of a reference system is arbitrary.</p> <p>The draft Policy allows a 4% exceedance rate during the AB 411 monitoring time period (summer dry weather), which is far too high, based on statewide monitoring data. In the Santa Monica Bay Beaches TMDL, the reference site is a popular beach located in northern Santa Monica Bay. Daily monitoring for five years showed no exceedances during summer dry weather at this beach. More significantly, water quality at many beaches in California meet the state's bacteria standards throughout the summer. For example, during the AB 411 time period of 2002, at least 34% of the 420 beaches routinely monitored showed no exceedances of state health standards during the AB 411 timeframe. In fact, most beaches in the South Bay portion of Santa Monica Bay do not exceed the 4% frequency on a year-round basis, let alone for the summer dry weather.</p> <p>The 4% exceedance rate was derived from a study of Southern California completed by SCCWRP and others as part of the Bight '98 study. This study was not designed to establish exceedance rates due to background bacterial concentrations. The study did not consider whether anthropogenic sources other than storm drains were potentially contributing to bacteria at the beach;</p>	<p>Few locations along California's coastline have been identified as reference beaches. If reference beaches have been identified and the standards allow, reference beaches should be used in the decision to list or not list waters. The fall back position advocated by BWQW was to use 10 percent for data sets from year around sampling and the four percent values for monitoring only collected during the AB 411 period. The study used to substantiate this decision was recommended as the basis for setting this four percent value. No data and information to the contrary was provided showing that the study is not being used appropriately.</p>	No

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	i.e., the study beaches may have been impacted by a wide variety of sources including septic tanks, boats, anthropogenic-related bird and animal wastes, etc. Additionally, the study is a snapshot study, in which sampling was conducted weekly during a 5-week period of one summer. The results are not temporally-representative of unimpacted beaches during the dry season. The draft Policy should not rely on snapshot data when there are years of routine monitoring data available for many California beaches. In summary, the use of this data in the context of assessing marine beaches for impairment is scientifically inappropriate.		
51.94	We support the draft Policy's recommendation that a reference system approach should be used to assess marine beach water quality for listing purposes. Comparison to an appropriate reference system is the most scientifically defensible and protective approach to accounting for background levels of bacteria at marine beaches and to prevent further degradation of water quality. This approach is recommended by the State's Beach Water Quality Work Group (BWQWG), which is comprised of microbiologists and scientists from local health agencies, POTWs, stormwater agencies, researchers, and nonprofit groups (Heal the Bay is an active member). Additionally, the reference system approach is used in the Los Angeles RWQCB's bacteria TMDLs for the Santa Monica Bay Beaches, Marina Del Rey, and Malibu Creek, based on the recommendation of a stakeholder technical advisory committee after three years of study and analysis.	Comment acknowledged.	No
DFED, Issue 4C: Interpreting Numeric Freshwater Bacterial Water Quality Standards			
2.6, 43.10, 60.55, 76.35	Agree with the recommendation. Consistency is needed.	Comment acknowledged.	No
DFED, Issue 4D: Interpreting Narrative Water Quality Objectives			
2.7	For DFED, Issue 4D either Alternative 3 (recommended) or Alternative 4 would suffice.	Comment acknowledged.	No
8.4, 110.5	Concerned with adoption of narrative standards and thresholds of concern without public notice. Numeric (not narrative) criteria, adopted by the SWRCB and not the staff, are advisable.	The Policy does not develop new or revise existing water quality standards (i.e., beneficial uses, water quality objectives, or the State's Non-degradation Policy). Evaluation guidelines are used so decisions regarding whether to place waters on the section 303(d) list are transparent. These guidelines are used only for the purposes of the section 303(d) list; no other regulatory use is authorized or allowed. The use of any evaluation guideline requires the staff to present to RWQCBs and SWRCB the reasons for their use.	No
21.48, 21.58, 21.56	NAS tissue guidelines, chemically based sediment quality guidelines and	These guidelines are technically valid and are used by many RWQCBs as a	No

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	sediment apparent effects thresholds from California and other states are not technically valid for any purpose associated with water quality assessment.	benchmark by which exceedances to the standard are compared. To our knowledge, the NAS values have not been withdrawn or superseded by other values and are therefore appropriate to use. The Policy provides the RWQCBs the flexibility to use these guidelines as well as other guidelines or more current data as long as they meet the criteria set in Policy.	
21.59	Additional information is needed on what is meant by 'toxicity guidelines,' and (Table 1) 'USEPA screening' to determine if the particular guideline is technically valid.	The table contained a typographical error. The correct reference is 'other states toxicity guidelines.' 'USEPA screening' refer to values developed by USEPA using a risk-based method for developing screening values based on a dose-response variable and certain assumptions regarding exposure.	Yes
21.60	The U.S. Army Corps of Engineers (USACOE, 1997), Environmental Residue-Effects Database (ERED) and the USEPA (Jarvinen and Ankley, 1999) should be used. The NAS tissue guidelines are not technically valid and should not be used for Fish Consumption.	The FED does not recommend the NAS tissue guidelines for fish consumption. The NAS screening values represent levels that are protective of aquatic life. The screening values developed by OEHHA and USEPA represent concentrations in water that protect against the consumption of aquatic organisms containing chemicals at levels greater than those predicted to result in significant health problems. RWQCBs have the option of using the guidelines suggested, provided their use is referenced in the fact sheets.	No
21.63, 21.62	In order to be scientifically-based, there must be a critical review of the validity of the science used.	In order to select evaluation guidelines, the RWQCBs would have to provide justification and reference for the approach or values used. The required documentation would need to address the quality assurance requirements of the Policy.	No
21.64	The NAS limits are no longer considered reliable by anyone except the SWRCB staff. Table 2 values are not reliable for estimating critical concentrations in water that lead to adverse impacts.	The NAS guidelines are based on evaluations of tissue residues for several chemicals; the recommendations reflect scientific understanding of the relationship between aquatic organisms and their environment. They are not intended to reflect critical concentrations in water.	No
43.11	Supports the need for numeric translators. Federal regulations require that pollutants be suitable for calculation before a TMDL is required. Although USEPA maintains that all pollutants are suitable for calculation under proper technical conditions. It is often hard to establish the needed proper technical conditions. Best professional judgment can be one of several rules of evidence but not the sole reason for listing if the SWRCB wants a transparent system. Agree that narrative water quality objectives do not quantify parameters necessary to clearly determine if beneficial uses are being protected. The presence of a pollutant does not automatically translate into impairment of a beneficial use. The use of narrative water quality objectives without numeric translators is often not scientifically defensible because interpretation of impairment becomes subjective. Alter alternative 4 to reflect the requirement that impairments be suitable for calculation.	Alternative 4 has been revised to include the use of 'interpretive guidelines.'	Yes
51.124, 51.132	SWRCB should remove the following language from requirements on alternative guidelines or methods used to interpret narrative objectives: 'For non-	The Policy provides RWQCBs guidance on the use of peer-reviewed, scientifically-defensible data and analysis that could be used in risk	No

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	<p>threshold chemicals, risk levels shall be consistent with comparable water quality objectives or water quality criteria.' Risk levels are rarely determined by many scientifically-acceptable methods for evaluating biological and ecological impacts. This is because, in many cases, risk levels can not be conclusively calculated without the use of multiple assumptions that can be easily manipulated. Thus, this requirement could significantly limit the use of data and analysis from peer-reviewed, scientifically-defensible efforts or could force the completion of uncertain, and largely useless, risk assessments.</p>	<p>assessments. However, it is also recognized that the calculation of risk assessments include multiple assumptions that can be manipulated. The Policy, therefore, gives RWQCBs the flexibility to interpret data and justify the use of that data in fact sheets.</p>	
51.125	<p>Federal regulations explicitly require that attainment of narrative water quality standards should be assessed in developing the section 303(d) list. Although '[t]he SWRCB and RWQCBs have used a variety of guidelines or scientifically derived values to interpret narrative water quality objectives,' other narrative objectives defy such interpretation. Consequently, a state's policy for interpretation of these objectives must be flexible enough to provide for interpretation of such objectives.</p> <p>The proposed policy does not provide a flexible comprehensive policy for interpretation of narrative water quality standards. Rather, it unlawfully undercuts the basic requirement of section 303(d), which does not limit TMDL preparation or listing to violations of narrative objectives only when they can be translated under certain rules. By imposing these rules, the policy departs not only from the weight-of evidence approach required by state law, but also from the most basic mandates in section 303(d).</p>	<p>The Policy adheres to federal regulations regarding the assessment of narrative water quality standards. Following USEPA CALM guidance (2002a), it is recommended that listings based on narrative water quality objectives be interpreted using a translator. SWRCB staff interprets translator directly from USEPA (2002a) 'A "translator" identifies a process, methodology, or guidance that States or Tribes will use to quantitatively interpret narrative criteria statements. Translators may consist of biological assessment methods (e.g., field measures of the biological community), biological monitoring methods (e.g., laboratory toxicity tests), models or formulae that use input of site-specific information/data, or other scientifically defensible methods.' Under this definition, narrative water quality objectives can be translated using various interpretive guidelines. Additionally, the necessary criteria are provided in the Policy to validate evaluation guidelines outside of those recommended in the Policy.</p> <p>Further, the Policy includes a weight of evidence approach for evaluating data and information and has been amended to include a situation-specific weight of evidence listing or delisting process by which RWQCBs can list or delist 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.</p>	Yes
51.131, 51.123	<p>SWRCB should remove the following language from requirements on alternative guidelines or methods used to interpret narrative objectives: 'Previously used or specifically developed to assess water quality conditions of similar hydrographic units.' This requirement is nonsensical because it has no bearing on the quality and appropriateness of the guideline in question. For example, a new numeric guideline may be developed as a result of extensive studies to evaluate a specific water quality problem. According to the draft policy, this guideline could not be used in the listing process if it has never been used before or if the developer did not specifically state it's use for certain hydrographic units.</p>	<p>The Policy has been revised to incorporate this comment.</p>	Yes
51.149, 51.148, 51.129, 51.147, 51.126, 51.127,	<p>There are several types of impairment that cannot be adequately assessed by available numeric guidelines. Most significantly, there are no universal numeric guidelines for impairments such as those associated with nutrients, algae,</p>	<p>Several of the Listing Factors have been revised to include the use of interpretive guidelines; this would include the use of models, reference-based or indices approaches, biological assessment methods, and translators of all</p>	Yes

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51.128, 53.7	turbidity, trash, color and oil. Moreover, there are several reliable quantitative methods that assess narrative objectives that do not rely on available numeric guidelines, most notably reference system based approaches and use of translators of all types, as recommended by USEPA. The draft Policy does allow for the use of evaluation guidelines other than those specifically named in the policy. However, the provisions of the Alternate Data Evaluation section so narrowly circumscribe the use of these guidelines that many available numeric guidelines--particularly the reference-system based approaches and translators--would be unusable. Consequently, these restrictions eliminate much of the practical value of narrative water quality objectives.	types. These sections have also been revised to allow the use of reference system approaches when they are appropriate. The Alternate Data Evaluation section has been deleted and replaced with listing and delisting factors allowing RWQCBs to weigh data and information and make decisions to list or delist based on the merits of the site- and situation specific data and information.	
60.57, 60.56, 76.36	Recommends that Alternative 4 be strengthened and recommended. Urge that the SWRCB recognize the need for impairments to be 'suitable for calculation.' Narrative water quality objectives are insufficient determiners of impairment. The ramifications of a 303(d) listing are too great to allow listings without scientific basis. If this is not done, narrative water quality objectives should require multiple lines of evidence until numeric translators are developed.	The recommended Alternative 3 provides general guidance on interpretive guidelines to assess compliance with narrative water quality objectives. This is intentional to allow the RWQCBs the flexibility to incorporate the most recent versions of guidelines or the most recent applicable research.	No
113.2	The Policy allows inappropriate interpretation of narrative standards, for example through the health advisories and through bioaccumulation data. These water quality criteria were never officially adopted, and should not be the basis for 303(d) listings.	In order to implement a consistent approach for placing and removing waters from the section 303(d) list, the policy requires that quantitative guidelines be used to help interpret narrative water quality objectives. Without a translator to interpret these standards, there could be multiple and perhaps conflicting interpretations. The draft policy limits the use of these values to the section 303(d) list development process. For example, human health advisories are an acknowledgement that a beneficial use is severely impacted or lost. The only use of health advisories is as an indicator that beneficial uses related to consumption of fish are impacted.	No
DFED, Issue 4E: Interpreting Aquatic Life Tissue Data			
2.8	For DFED, Issue 4E either Alternative 3 (recommended) or Alternative 4 would suffice.	Comment acknowledged. For clarification, Alternative 4 was the recommended alternative.	No
40.87	The State should rectify Table 3 in the Policy and use the most appropriate screening value for arsenic in fish tissue—1.2 mg/kg ww for inorganic arsenic (see EPA (2000b) pg. 5-11 and discussion in Newport Bay Toxic Pollutant TMDLs pp. 69-70).	The table has been revised to identify this screening value for arsenic.	Yes
43.12	Agrees with the staff-recommended Alternative 4 as long as specific pollutants are identified.	Alternative 4 encompasses the use of NAS, OEHHA and USEPA screening values that are based on detected levels of chemicals bioaccumulated in fish tissue. Hence, the pollutant is identified.	No
60.58, 76.37	Supports the recommended Alternative 4.	Comment acknowledged.	No

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77.3, 77.2	<p>The text states: 'Bioaccumulation is the uptake and retention of chemicals by living organisms. A pollutant bioaccumulates if the rate of intake in the living organism is greater than the rate of excretion or metabolism resulting in an increase in tissue concentration relative to the exposure concentration in the ambient environment.' This definition is in error. First, bioaccumulation is generally considered to be the uptake from all routes (i.e., food and water, as opposed to bioconcentration which is only from the dissolved phase). A pollutant that is taken up but rapidly metabolized (no retention) still bioaccumulates. Secondly, for all compounds the rate of uptake is initially greater than excretion/metabolism. As the tissue concentration rises, and for some compounds as elimination/metabolism becomes more effective, a steady state balance is reached between uptake and loss. So the definition provided is nonsensical since the balance between rate of intake and rate of excretion/metabolism depends entirely on when during the exposure it is measured. Given enough time and constant exposure conditions, a steady state will be achieved and uptake will equal excretion/elimination. By the definition provided then, everything would be bioaccumulative in the early stages of exposure, and nothing would be bioaccumulative at steady state.</p>	<p>The definition has been revised to conform with USEPA's definition (USEPA 2000d) and reads 'Bioaccumulation reflects the uptake and retention of a chemical by an aquatic organism from all surrounding media (e.g., water, food, sediment). Bioconcentration refers to the uptake and retention of a chemical by an aquatic organism from water only. Both bioaccumulation and bioconcentration can be viewed simply as the result of competing rates of chemical uptake and depuration (chemical loss) by an aquatic organism (USEPA 2000d).'</p>	Yes
77.4	<p>There is an inconsistency in the statements "merely identifying the presence of a chemical substance in the tissue of an organism is not sufficient information to conclude the chemical will produce an adverse effect" and 'pollutants detected in fish not only indicate pollution impacts on aquatic life and other wildlife. ..'. Potential exposure to piscivorous predators is meant, not impacts, in the second case.</p>	<p>The second statement has been revised with the following: Concentrations in aquatic organisms from highly bioaccumulative chemicals may pose unacceptable human health risks from fish and shellfish consumption and may also biomagnify in aquatic food webs, a process whereby chemical concentrations increase in aquatic organisms of each successive trophic level due to increasing dietary exposures (e.g., increasing concentrations from algae, to zooplankton, to forage fish, to predatory fish) (USEPA 2000d).</p>	Yes
77.5	<p>In all the tables of tissue guidelines provided, in this section there is no indication of whether these values are on a wet or dry tissue basis.</p>	<p>The screening values are based on wet tissue samples. This has been added to the tables as a footnote.</p>	Yes
77.6	<p>It is claimed that the FDA action levels were developed to protect human health from consumption of seafood involved in interstate commerce. It is unclear how these levels would not be appropriate for the protection of human health if the seafood was consumed locally. The rationale for this distinction is unclear.</p>	<p>In their 'Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act (2003b), USEPA stated 'Finally, some fish and shellfish consumption advisories and NSSP classifications are based on Food and Drug Administration (FDA) action levels as opposed to EPA's risk-based methodology for the protection of human health. FDA action levels are established to protect consumers of interstate shipped, commercially marketed fish and shellfish rather than fish and shellfish caught and consumed within a State. FDA action levels also include non-risk-based factors (e.g., economic impacts) in their derivation, while WQC must protect the designated uses without regard to economic impacts. EPA has therefore concluded that FDA action levels do not provide a greater level of protection for consumers of fish and shellfish caught and consumed within the State than do human health criteria. In such instances, or where water bodies have a fish or shellfish consumption advisory, they need not be listed as impaired under Section 303(d) unless there are water-specific data (and the</p>	No

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		data were not considered during the development or review of a non-precautionary NSSP classification), showing nonattainment of Section 101(a) uses.' Staff incorporated this recommendation into the alternative.	
77.7	The preferred alternative (number 4) is unclear. The text either reiterates basic information given previously on why one would want to look at contaminants in tissues, or says nothing at all. The text does not clearly state what Alternative 4 is, and what little description there is makes it sound no different than Alternative 2.	Alternatives 2 and 4 are very similar. The basic difference is that Alternative 2 bases bioaccumulation data on a site-by-site condition without a process that would allow for consistency among the Regions. Alternative 4, however, provides guidance on the various measures available to interpret chemical residue concentrations in tissue. Under this alternative, RWQCBs would be able to compare site specific data sets to the most appropriate measure using a consistently applied and scientifically valid listing methodology.	No
77.8	Bottom-feeding fish are said to accumulate contaminants from direct contact with contaminated sediment. This is unlikely as fish skin and scales are very effective barriers. Uptake is more likely through consumption of benthic invertebrates on which the fish feed. The distinction between 'bottom-feeding fish' and 'predator fish' which forms the basis for this paragraph is unclear. A bottom-feeding fish can be a predator fish.	The sentence has been revised; the words 'from direct contact with contaminated sediment or' has been deleted. The distinction between bottom-feeding fish and predator fish was meant to emphasize the effect of food web structure on bioaccumulation, i.e., the effect of species with different dietary preferences; specifically, bottom feeding fish species (trophic level three) and on top predator species (trophic level four). This distinction has been clarified.	Yes
77.9	The last sentence of paragraph 4 of alternative 4, states that 'tissues from appropriate target species permit comparison of fish and shellfish contamination over a wide geographic area'. Not sure what is trying to be said here. If it is that one can compare data between sites, that is hardly a quality unique to tissue concentrations.	While the comparison of data between sites is not a quality unique to tissue concentrations, the point that tissue samples from appropriate species have a wide geographical applicability is an important one. With the small sampling budgets that most RWQCBs work with, the ability to accurately broaden the applicability of fish tissue sampling is a central consideration of where to allocate resources.	No

DFED, Issue 4F: Interpreting Data on Trash Impacts to Water Bodies

2.9, 43.13, 60.59, 76.38	Support the recommended Alternative 3.	Comment acknowledged.	No
109.13	Concerns about trash as a pollutant not being covered in the draft Policy.	The Draft FED addresses trash as a pollutant. Please refer to Policy sections 4.7.2, 3.1.7, and 3.1.7.2. Please also refer to Draft FED Issue 4F: Interpreting Data on Trash Impacts to Water Bodies.	No

DFED, Issue 4G: Interpreting Nutrient Data

2.10	Agree with the recommendation. Alternative 3 is OK, but Alternative 2 should be substituted when RTAG/STAG report is ready. Phosphorus is misspelled (as phosphorous) in a couple of places in this Section (p.82, paragraph 2 line 3 and p.83, paragraph 3 line 3).	Alternative 3 is written in such a way that once the RTAG/STRAG nutrient criteria is developed it can be used. Phosphorus misspellings have been corrected.	Yes
43.14, 60.60, 76.39	Create a new alternative 4 to require placement of water segments on a Pollutant Identification List and not the 303(d) List before RTAG/STRTAG criteria have	Alternative 3 provides guidance upon which to base nutrient listings in lieu of the RTAG/STRTAG criteria. The concept of a Pollution Identification List,	No

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	been established.	Monitoring List, or Planning List has been considered and is addressed in responses related to the List Structure. The structure of the list has been narrowed to two categories: a water quality limited segment and those waters not meeting standards where the attainment problem is being addressed. Waters without adequate information or that are clean would be acknowledged in the fact sheets but no judgement would be made on their disposition. This information will be used in the section 305(b) report.	
51.108, 51.105, 51.107, 51.106	Agree with the overall approach of Alternative 3. In particular, support the following '...RWQCBs should use models, scientific literature, data comparisons, to historical values or to similar but unimpacted streams, Basin Plan objectives, or other scientifically defensible methods to demonstrate that nutrients are to blame for the observed impacts.' However, the draft Policy seems to contradict this recommendation by strictly requiring the use of numeric guidelines that meet the requirements of Section 6.2.3 in conjunction with the binomial model. Section 3.1.7.1 of the draft Policy states that '[f]or excessive algae growth, unnatural foam, odor, and taste, acceptable nutrient-related evaluation guidelines are exceeded as described in section 3.1.1.' Section 3.1.1. specifies listing requirements when numeric water quality objectives are exceeded (specifically, the use of the binomial model), and Section 6.2.3 requires the use of numeric guidelines for narrative objectives.	Section 3.1.7.1 is intended to reflect the applicability of models, scientific literature, data comparisons to historical values or to similar but unimpacted streams, numeric Basin Plan objectives, or other scientifically defensible methods to demonstrate that nutrients are to blame for the observed impacts; this section has been revised to support their use. Additionally, the section of the Policy that describes an evaluation guideline process was not meant to rely exclusively on numeric evaluation guidelines; numeric has been deleted from this section.	Yes
51.109, 51.110	<p>To assess nutrient-related impairments, use of a reference system approach is a quantitative method that is scientifically sound and technically defensible. This approach is consistent with Alternative 3 in the FED. Therefore, we urge SWRCB to:</p> <p>Remove the language in Section 3.1.7.1 of the draft Policy that is nutrient-related and add in language from the FED Alternative 3, including the following: "RWQCBs should use models, scientific literature, data comparisons to historical values or to similar but unimpacted streams, Basin Plan objectives, or other scientifically defensible methods to demonstrate that nutrients are to blame for the observed impacts."</p> <p>Emphasize the use of a reference system approach for identifying impairments related to nutrients and algae as a defensible and technically-sound approach.</p> <p>Delete the language in the FED Issue 4G regarding the use of nutrient ratios, since there is no scientific bases for determine nutrient limitation in freshwater systems based on nutrient ratios alone.</p>	The language cited in Section 3.1.7.1 has been revised as suggested. The intent of this section is to evaluate the widest possible array of information supporting decisions regarding nutrients. While nutrient ratios may not be useful alone they should be considered when evaluating nutrient concentrations in water bodies. The Policy has been revised to state: 'If listing for nitrogen or phosphorus specifically, RWQCBs should consider whether the ratio of these two nutrients provides an indication of which is the limiting agent.'	Yes
63.8	<p>Alternative 2 is the preferred option. In lieu of that, Alternative 3 is acceptable with some caveats:</p> <ul style="list-style-type: none"> - Models for nutrients have drawbacks (e.g., aerial deposition). - Guidance is needed for how to work with aerial deposition of nitrates and 	While the comment is applicable to TMDL development, it is beyond the scope of the Listing Policy to provide detailed guidance on the impact of aerial deposition. Since the appropriate method for applying a nutrient model may vary from site to site, it is not possible to adequately address this subject in the	No

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	ammonia. - Along with those factors, pH and temperature must be considered. Weight of evidence should also be required.	FED. It will likely be necessary to consider pH and temperature but the extent to which that is needed is best determined by the chosen model.	

DFED, Issue 4H: Impacts of Invasive Species on Water Quality

2.11, 60.61, 76.40	Supports the recommended Alternative 3. Support USEPA's assertion that a pollution list would be an appropriate place for water bodies listed for invasive species.	Waters proposed for listing for invasive species will be acknowledged in fact sheets but no judgement will be made on their disposition. This information will be useful in the development of the section 305(b) report.	No
13.2	Support timely adoption of the proposed Policy in order to promote the rapid recovery of impaired water bodies by focusing resources effectively on water bodies where they are needed.	Comment acknowledged.	No
43.15	Agree with the staff-recommended alternative 3. Suggest that water bodies previously listed for invasive species should go to a pollution list.	Comment acknowledged.	No
51.23, 108.6	Disagree with the proposition that only those waters impaired by 'pollutants' shall be listed. Water bodies that are impaired, regardless of the source of pollution, must be listed. Strongly disagree with the FED's recommendation that waters impaired by invasive species not be listed because invasive species are not 'pollutants.' Invasive species clearly fit the definition of 'pollutant' under CWA section 502(6). Courts have interpreted the definition of 'pollutant' expansively, stating that it 'encompass substances not specifically enumerated but subsumed under the broad generic terms' listed in Section 502(6). In the definition of pollutant the term 'biological materials' has been interpreted by USEPA and the courts to include harmful organisms, which would include invasive species. For example, in proposing revisions to the TMDL regulations, USEPA stated that 'all microbial contaminants that may be discharged to waters of the U.S. (e.g. bacteria, viruses and other organisms) fall under the term 'biological materials'.' USEPA's finding is consistent with a common sense interpretation of the term 'biological materials' as including organisms, and makes no artificial distinctions as to the location or source of the organisms. USEPA similarly has acknowledged that different biological organisms, such as bacteria (e.g., fecal coliform), algae, dead fish, live fish, fish remains, and plant materials have been considered pollutants under this definition by various courts.'	<p>CWA section 502(6) definition includes 'biological materials' as a pollutant. However, although some courts have determined that some biological materials (bacteria, algae, dead fish, live fish, fish remains, and plant materials) are pollutants (Draft Report: Aquatic Nuisance Species in Ballast Water Discharges: Issues and Options dated September 2001). USEPA has not yet determined whether all aquatic nuisance species are pollutants. USEPA therefore currently believes that impacts from invasive species should not be included on the 303(d) list. During the 1998 303(d) listing process the San Francisco Bay RWQCB listed the San Francisco Bay for impacts due to invasive species. USEPA did not disapprove this listing but stated that neither the state or USEPA had the obligation under current federal regulation to develop a TMDL to address the problem.</p> <p>In 2002, USEPA added several water body-pollutant combinations to the State's adopted section 303(d) list. USEPA did not find that invasive species should be added to the section 303(d) list. The information provided regarding <i>Caulerpa taxifolia</i> did not indicate to USEPA that this invasive species was a pollutant or that water quality standards were exceeded.</p> <p>Furthermore, beyond issues of current federal regulation and associated regulatory definitions, implementation of a TMDLs may not be the most efficient or appropriate way to address this type of biological problem. This is a natural biological process exacerbated by human activities where natural biological entities are translocated from one ecosystem to another. When an introduced species becomes invasive they can affect some specific designated beneficial uses of water but most documented impacts to beneficial uses due to degraded water quality are not caused by invasive species. Invasive species</p>	No

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		can prevent indigenous organisms from maintaining a 'balanced indigenous population' but this impact is not the result of a water quality parameter being affected. A TMDL attempts to restore degraded beneficial uses of waters by reducing pollutant load amounts from different sources into receiving waters. If the intent is to prevent further introductions of self propagating organisms or to stop introduced species from becoming invasive, then it does not seem appropriate to allow a predetermined load of nonindigenous organisms to be discharged by human activities into receiving waters.	

DFED, Issue 5A: Interpreting Health Advisories

2.12	Prefer Alternative 2 for DFED, Issue 5A, unless the health advisory can be shown to be a one shot deal (accident, act of God, etc.).	Comment acknowledged.	No
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DFED, Issue 5B: Interpreting Data Related to Nuisance

2.13	Agree with the recommendation DFED, Issue 5B.	Comment acknowledged.	No
43.17	<p>Congratulate the SWRCB because during the 2002 listing process, water segments were not recommended for placement on the section 303(d) list for nuisance conditions related to assessments of color, odor, excessive algae, and scum.</p> <p>Many legacy listings related to nuisance remain on the list because they were carried forward from previous listings. These should be delisted and placed on either a pollution list or a pollutant identification list. Waters should not be placed on the 303(d) list unless pollutants identified are suitable for calculation. Suitability for calculation is a benefit of listing based on numeric water quality criteria. Agree with the staff-recommended alternative 3.</p>	Several listings on the current section 303(d) list would not be placed on the list under the provisions of the proposed Policy. If the water body no longer satisfies the requirements to be listed for nuisance conditions these listings should be removed.	No
51.111	Many of the pollutants characterized as “nuisances” may pose serious threats to aquatic habitat, recreation, fishing, and other important beneficial uses. The FED recommended a nuisance rule that would use both quantitative and qualitative information. The policy should contain a procedure that allows both quantitative and qualitative data and information in the evaluation of nuisance. According to the FED: 'When qualitative information is combined with quantitative data related to pollutants, such as excessive nutrients, multiple lines of evidence provide strong support for placement on the section 303(d) list.'	The Policy has been revised to require the use of both qualitative and quantitative information.	Yes
51.113	Other types of nuisance conditions, including taste, color, oil, sheen, turbidity, litter, trash and odor -- when they are not related to nutrients -- may be listed when 'there is a significant nuisance condition when compared to reference conditions.' We support the use of reference condition approaches in evaluation	The Policy has been revised to include the use of reference condition approaches for these parameters.	Yes

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	of these parameters, and we request that this provision be expanded to include nutrients and nutrient-related nuisance conditions. However, other qualitative approaches may be useful in assessing nuisance conditions as well, which the draft Policy does not appear to provide for the use of. The draft Policy should be modified to explicitly provide for the use of other scientifically-based, qualitative approaches.		
60.64	Supports recommended Alternative 3.	Comment acknowledged.	No
DFED, Issue 5C: Interpreting Toxicity Data			
40.112	Tables 5 and 6 must be updated with these following methods to be consistent with CFR Part 136. - 4th edition freshwater short-term test methods (USEPA 2002a) - 5th edition freshwater and marine acute test methods (USEPA 2002b) - 3rd edition marine and estuarine short-term test methods (USEPA 2002c)	The FED has been revised to include this information.	Yes
40.113	Under the discussion of toxicity test methods, the text needs to be clarified that the ambient water tests are compared to either standard control waters or uncontaminated receiving water as specified in the testing manuals whereas the sediment tests are compared to a reference condition.	The FED has been revised to incorporate this change.	Yes
40.114	Reword the sentence on page 103, 'Currently no single toxicity test can adequately characterize the toxicity pollutants may cause in water or sediment.' Change to testing with multiple test species of fish, invertebrates and plant species is important as no one test species is most sensitive to all toxicants all the time (see page 59 of the TSD).	The FED has been revised to incorporate this change.	Yes
40.115	Under the discussion of assessing significant toxicity, the 2nd paragraph is an approach for the sediment testing scenario. However, for ambient toxicity (see USEPA 2000 section 6.4), should recommend a percent MSD (PMSD) to minimize within-test variability (Denton et al., 2003). As stated on page 108, "The MSD considers lab variation only and is specific to each toxicity test protocol." The MSD provides an indication of within-test variability and smaller values of MSD are associated with increased power to detect a toxic effect (Denton et al., 2003). The minimum significant difference (MSD) represents the smallest difference between the control mean and a treatment mean that leads to the statistical rejection of the null hypothesis (i.e., no toxicity) at each concentration of the toxicity test dilution series.	Calculation of the percent MSD is not necessary for measurements of toxicity on ambient waters. The percent MSD is calculated using a dilution series test. The MSD is more appropriate for ambient water toxicity testing because the results of an ambient water sample is compared directly to a reference or control water.	No
40.116	Denton and Narvaez 1996 is cited as finding that toxicity measurements should be obtained quarterly, for three years, to provide a good basis of health of the system, this sentence is taken out of context and needs to be clarified.	This statement has been removed from the FED.	Yes

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40.117	<p>The section on persistence of toxicity needs to be rewritten to be accurate. Persistence of toxicity is typically examining whether a sample is persistent on the day of collection (baseline toxicity) compared to the sample being re-tested days later after being stored. What is needed is assessing the magnitude and frequency of toxicity. We disagree a higher false acceptance (alpha error) is not acceptable and appropriate for toxicity. The alpha error must be set at the specified level as discussed in the toxicity testing manuals of alpha error rate of 0.05. If any, regulators should be concerned with the beta error, that is not detecting toxicity when toxicity is present (USEPA, 2000).</p>	<p>The Policy has been revise to clarify persistence in water versus sediment.</p>	Yes
51.91	<p>At its most basic level, the toxicity section of the policy is inconsistent with existing Basin Plan standards, which address toxicity by requiring 'no toxics in toxic amounts.' The section should be revised to be consistent with the Basin Plans.</p>	<p>The provisions of the policy allows a listing for toxicity if there is toxicity alone or if there is toxicity with associated concentrations of pollutants at levels that cause or contribute to toxicity in the water body. This decision rule is consistent with toxicity objectives in the Basin Plans.</p>	No
51.92	<p>The draft Policy should require the use of lower effects level Sediment Quality Guidelines in addition to the 50% median level currently required when analyzing sediment toxicity for causative pollutants.</p> <p>The restriction of using only SQGs that correlate with observing effects in 50% or more of the samples is far too restrictive for evaluation of all contaminated sediments throughout the State. The imprecise predictive capacity of SQGs cited as the reason the policy is restrictive is exactly why it is imperative that the RWQCBs also considered SQGs that represent lower toxicity probabilities in their analysis of causative pollutants. Lower effects level SQGs indicate that toxicity was observed in numerous species, based on rigorous scientific and statistical analysis. For example, NOAA's 'Effects Range Low' (ERL) values were calculated based on observing toxicity in 10% of all test species represented in a nationwide database. According to the researchers who developed the ERL/ERM approach, concentrations above the ERLs indicate possible toxicity. Since exceedances of lower effect SQGs such as ERLs represent statistically significant toxicity observed in a percentage of species, exceedances of lower effect SQGs should be considered as one line of evidence in the analysis of causative pollutants.</p> <p>There are numerous situations in which restricted analysis of sediment toxicity to only ERM-equivalent SQGs could result in a failure to identify the pollutants causing the toxicity. For example, in situations where the sediment contains many different pollutants (which is often the case for sediment), if multiple pollutants exceed lower effects levels, it is highly likely these pollutants collectively are contributing to the toxicity, even if ERMs are not exceeded. In fact, SWRCB acknowledges that SQGs are most predictive of toxicity if several values are exceeded. Lower effect levels should also be considered if the toxicity is being observed in species that are particularly sensitive to benthic contamination, or for water bodies with special species of concern. For</p>	<p>ERLs and TELs are not highly or moderately correlated with biological effects in sediments. Only a small portion of the studies available show effects at these chemical concentrations in sediments. The likelihood of biological effects is low at the ERLs and TELs. No evidence is provided by commenter that synergistic effects of multiple low level chemical concentrations cause high levels of toxicity. If multiple ERMs, for example, are exceeded it is much more likely that toxicity will be observed.</p>	No

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	<p>example, the proposed ERM-based listing policy would allow sediments toxic to echinoderms (often the most sensitive category of marine organisms) without listing the sediments as impaired, thereby accepting this degraded condition.</p> <p>We therefore urge SWRCB to require consideration in draft Policy Section 6.2.3 of exceedances of lower effects level SQGs, including NOAA's ERLs and Florida's threshold effects level (TELs), in addition to the higher effects-level SQGs, for identification of pollutants causing sediment toxicity, and revise the language in Issue 5C of the FED accordingly.</p>		
57.2	In many respects, the local 1998 and 2002 303(d) listing processes appeared to border on the capricious, due to pollutant listings that were unidentified (toxicity), the construction and demolition of new lists (watch), wholesale listings and delistings based on scant or dubious data, and conservative water quality objectives (extrapolated CTR standards). The final Policy document should settle much of the confusion that clouds what should be a transparency regulatory process, thereby allowing municipal agencies to concentrate on the most significant and achievable water quality issues.	Comment acknowledged.	No
63.9	Agree with the choice of Alternatives 2 and 3 in concert. However, the cause of toxicity should be rapidly identified in order for the problem to be solved.	Comment acknowledged.	No
64.17	Disagree that fewer exceedances are acceptable to support a listing for toxicity.	Comment acknowledged.	No
77.10	Four approaches are listed that may be used to determine which pollutants are responsible for observed toxicity. A lengthy discussion is provided for the first 2 approaches (TIE and SQG), a brief discussion is provided for the third (correlations), but no text is provided explaining the fourth (measures of toxicological response). Explanatory text is needed for this approach since 'measures of toxicological response' is particularly cryptic. Also, a toxicity unit analysis can be used to establish probable causality, but I am not sure this is among the list of 4 approaches provided.	The FED has been revised to remove the fourth section and to rely on the TIEs, sediment guidelines, or correlations to establish association between pollutants and toxicity or other impacts on organisms.	Yes
77.11	Table 11 does not indicate the literature source for the 'other sediment quality guidelines' given for lindane and total PAH.	The FED has been revised to include the source of this information.	Yes
77.12	This Issue states 'EqPs were developed for non-ionic chemicals and metals'. This is simply wrong. The EqP approach is totally unsuitable for metals.	The FED has been revised to correct the statement.	Yes

DFED, Issue 5D: Interpreting Sedimentation Data

2.15	Agree with the recommendation. This type of pollution is so site/effect specific that a case-by-case consideration is better.	Comment acknowledged.	No
8.15	Adopt a policy that provides that river systems will not be listed for sediment	Comment acknowledged.	No

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	<p>impairment unless there is quantitative scientific evidence that clearly and convincingly shows that the sediment conditions in the subject river are beyond the range of naturally occurring conditions. Existing policies have resulted in rivers with naturally high sediment loads to be listed on the basis that sediment is impairing salmonid reproduction even while these rivers are producing salmonids at what are considered record levels. Where populations have evolved under heavy sediment conditions, they have adapted, and to try to fix such natural conditions is a waste of public and private resources.</p>		
8.16	<p>Support Alternative 2 instead of Alternative 1 under sedimentation. Specific guidance should be used in an effort to avoid unnecessary listings. Specific criteria may not be applicable throughout the state, however, the criteria must consider local conditions.</p>	Comment acknowledged.	No
8.17, 8.19, 110.6	<p>In the DFED, page 119, a mean based on a population of 60 cannot be averaged with a mean based on a population of one. Even if the studies were comparable, an assumption that may not be valid, the average that should be used would be very near to 21, not 15. Had this metric been subjected to public notice and hearing, it is likely an appropriate number would have been used, and perhaps some water bodies would not have been unnecessarily listed.</p>	<p>The studies were included to provide examples of what the RWQCBs have done in regard to sedimentation TMDLs in the past. The incorrect information has been removed from the FED.</p>	Yes
8.23	<p>If the understanding of sediments and it's effects on aquatic life is poor, a policy should not be adopted that leaves listing to bureaucratic discretion other than science. Necessary scientific efforts should be taken in order to make the appropriate decisions.</p>	Comment acknowledged.	No
10.16, 106.2	<p>Timber and agricultural proponents do not like the sediment science (thresholds) used [in the 2002 listing process]. This is because they do not like the cost in money to correct and fix problems. The science that was used was more than sufficient - with use of multiple lines of evidence (with biologic and function impairment scientific references) and best professional judgment. There was not a lot of evidence on sediment monitoring in all the files of the listed rivers. But, the multiple lines of evidence and scientific discussion supported the listings. Now, almost 10 years later and with more sediment monitoring and assessment, the monitoring data and science metadata is huge. In fact, if one were to review recent Timber Harvesting Plans (THPs) (Coast Cascade Region/North Coast Rivers) in any sediment listed watershed, the evidence can be in almost any THP that the watercourses and major drainages are suffering from ongoing impacts (sediment accumulation, loss of habitat, pool filling) from historic and near-recent timber harvest operations.</p>	Comment acknowledged.	No
13.11	<p>Bedrossian and Custis (2002) concluded that natural/background rates of sedimentation for North Coast watersheds range from 300 to 3000 tons/square mile/year in Franciscan terrain. This wide range in sediment</p>	<p>The requested change is too vague to be easily implementable. However, the public process required by the Policy will bring out those situations when inappropriate extrapolations or methods are proposed. While the Policy</p>	No

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	generation makes it very difficult to take absolute values from peer reviewed papers in one area and extrapolate them to another area. In adopting the proposed policy, the SWRCB should state that it is not the intent of the Board that inappropriate extrapolations or inappropriate methods be used in formulating sediment quality guidelines.	provides RWQCBs significant flexibility in selection of sedimentation guidelines, the guidelines used must be justified in fact sheets.	
43.19, 60.66	Staff-recommended Alternative 1 seems reasonable. Given the complexity and variability of sedimentation, general guidelines are appropriate.	Comment acknowledged.	No

DFED, Issue 5E: Interpreting Temperature Water Quality Objectives

2.16	Agree with the recommendation for DFED. Flexibility is needed to deal with case-by-case specificity.	Comment acknowledged.	No
8.18	Concerned with the evaluation of temperature data, in most cases, the input of thermal energy to water is not the result of human activity, cannot be controlled and should not be considered a pollutant unless artificially heated water is being discharged into the State's waters. Despite these concerns, it is recognized that it is impossible to determine whether most water bodies are affected by temperature pollution because there exists no evidence of the historic temperatures. This raises serious doubts as to the validity of a listing based on temperature. Even so, if the Policy is going to use evaluation of beneficial uses to determine thermal pollution, the adapted Policy should establish numeric objectives based on application of scientific, peer reviewed research that considers the differences in temperatures based on drainage area, stream size, geographic location, climatic conditions, elevation and other relevant factors. Numeric criteria must be based on an understanding of the needs of organisms that have evolved in the climates where we intend to regulate. The costs of listing should not burden this state based on inference and assumption about how cool the water in California used to be.	Comment acknowledged.	No
43.20, 60.68, 60.67, 76.44	In most circumstances, natural receiving water temperature is not defined. The water temperature of streams varies greatly. Also, flood control channels should not be subject to a temperature requirement. Concerned about what sort of waterbody this would apply to; it should not apply to intermittent streams, effluent-dominated waters, or flood control channels. Alter recommended alternative 2 to state that a water segment may only be placed on the 303(d) list if a specific thermal discharge is identified. If no specific thermal discharge is identified, a water segment may be placed on a Pollution List.	Basin Plans identify waters where water quality objectives for temperature apply. In virtually all waters, 'historic' or 'natural' temperature background data are not available. Alternative approaches are proposed to make sure potential impacts of increased water temperature are addressed in the Policy. It is too limiting to require that a specific, presumably point source, would have to be identified before listing could occur. Nonpoint sources may cause or contribute to temperature-related impacts. The identification of water quality limited segments is not based on the source of the pollutant but rather on whether water quality standards are attained in the water body.	No
51.89	The listing factors in the draft guidance should be revised to include the following statistical decision rule for temperature and dissolved oxygen:	The recommended decision rule provides an approach that appears to contradict Basin Plan water quality objectives for temperature. The Policy is	Yes

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63.10	<p>Ordinarily, water segments shall be placed on the section 303(d) list when numeric water quality objectives for temperature and dissolved oxygen are exceeded in more than one seven-day average of daily maximum (for temperature) or minimum (for dissolved oxygen) measurements.</p> <p>Temperature and dissolved oxygen vary on an annual cycle, and cause impairment only when there is too much or too little in the water. Water quality standards are designed to address the highest temperatures of the year and the lowest dissolved oxygen levels of the year, which generally occur during summer months, or sometimes fall months for dissolved oxygen. Therefore, any assessment decisions should be based on the highest and lowest measurements of these pollutants, respectively. When continuous monitoring data are available, the seven-day average of daily maximum (for temperature) or minimum (for dissolved oxygen) measurements should be assessed. When continuous monitoring data are not available, but data are available from at least seven days in any 30-day period, the average of the highest (for temperature) or lowest (for dissolved oxygen) measurement on seven consecutive days on which measurements were taken should be assessed.</p> <p>Sometimes, the data available for a water segment will be inadequate to properly evaluate temperature and dissolved oxygen under this approach. When data are available from fewer than seven days in any 30-day period, the highest (for temperature) or lowest (for dissolved oxygen) single measurement within that period should be assessed. A water segment should be placed on the 303(d) list for temperature or dissolved oxygen when these data show a violation of the water quality standard on at least one day in at least three different years.</p> <p>Under the water quality standards, a measurement of temperature (or other pollutant) in excess of a standard is not a violation of the standard if the exceedance results from natural conditions. In the case of temperature and dissolved oxygen, when natural conditions exceed the standard, listings will be based upon human contributions in excess of natural background. All relevant natural conditions issues relating to temperature and dissolved oxygen for which data or other evidence are available, such as peak hourly temperature increases and extreme air temperatures should be considered. The hottest days or years should not automatically exempt a water segment from consideration for listing based on temperature.</p> <p>Temperature varies with the shallow nature of Southern California streams that may have nothing to do with discharges, but are the natural condition of arroyo type systems. This natural condition could result in erroneous exceedances, and define a critical condition. Please consider providing specific guidance on the topic of temperature in dry streams for southern California streams that have low flows naturally at certain times of the year and in conflict with the critical</p>	<p>not intended to address revision of any water quality standard but, rather, to interpret the standards as they are presented in Basin Plans, statewide Plans, and regulation.</p> <p>The RWQCB Basin Plans water quality objectives for temperature and dissolved oxygen should be used. The Policy provides additional guidance in the Implementation section to assess impacts on beneficial uses related to increased water temperature. This section compliments the Basin Plan objectives and provides an approach that may be more straightforward to document than exceedance of water quality objectives based on background temperature conditions.</p> <p>Revisions have been made to the Policy to incorporate the suggested approach for using the minimum dissolved oxygen conditions. The use of the 7-day average for temperature is incorporated in the MWAT approach already included in the Policy. Using this averaging period when allowed by the standards, helps to make the measurements more independent. The suggested rule for small data sets conflicts with the intent of balancing errors described in the response to comments related to statistical testing and, therefore, has not been used.</p>	No

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	conditions.	In general, Basin Plans describe allowable changes in water temperature. For example, the Los Angeles RWQCB Basin Plan water quality objective for temperature states 'the natural receiving water temperature of all regional waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such alteration in temperature does not adversely affect beneficial uses. Alterations that are allowed must meet the requirements,' in the Basin Plan. The key provision that must be evaluated by RWQCB is what is considered to be natural receiving water temperature. Since low flow conditions are so prevalent, these must be considered by RWQCBs.	

DFED, Issue 5F: Interpreting Data Related to Adverse Biological Response

2.17	Agree with the recommendation. This is too complex for use of a simplified approach.	Comment acknowledged.	No
43.21, 60.69, 60.70, 76.45	In 2002, listings for adverse biological responses were not recommended. These should be on another list. Water bodies should not be listed for a condition without identification of a pollutant. Adverse biological response may be an indication that there is a problem, but the pollutant is not identified. Disagree with the staff-recommended alternative 1. A Pollutant Identification List is the appropriate list for water segments for which no pollutant has been identified.	The Policy does not allow listings related to this factor unless the pollutant is identified. The general guidance recommended for interpreting biological response requires the comparison endpoints to reference conditions, the identification of pollutants suspected of causing or contributing to the adverse response, and to associate the pollutant with an adverse response.	No
51.164	The Policy does allow the use of a reference system approach for evaluation of adverse biological response (Section 3.1.8). This type of approach, along with other scientifically-accepted methodologies should be allowed by the draft policy for consideration of listing related to sedimentation and degradation of biological populations and communities, in addition to adverse biological response.	The draft Policy and FED has been revised to allow the use of reference system approaches for assessments of biological populations and communities and for impacts related to sedimentation.	Yes
56.22	Support the requirement to assess multiple lines of evidence for this listing factor, and urge the SWRCB to exercise caution when evaluating adverse biological response, because, as acknowledged in the draft FED, 'These types of data are typically water body-specific; often are not collected using standard procedures: are usually the result of research projects; and are not part of major ambient monitoring programs.'	Comment acknowledged.	No
63.11	The Policy does not take a sound scientific approach to the issue of Interpreting Data Related to Adverse Biological Response. The SWRCB should adopt Alternative 2. Specific guidance and evaluation tools to interpret this data are needed.	The data and information used to interpret adverse biological response is diverse, therefore, it is very difficult to provide specific guidance. Many types of data and information could be used to determine the biological effect (e.g., reproduction, histopathology, growth, etc). If specific guidance was used it would eliminate potential sources of data to address and assess the impact. General guidance provides the flexibility necessary to address a variety of	No

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		circumstances.	
77.13	The title is awfully vague. This issue seems to be a 'catch-all' section addressing responses ranging from individual growth rates to carcinogens. Agree as the text points out, that with measurements of this type it is particularly important that there be strong evidence that the adverse effect is due to a pollutant before these data are used in 303(d) listing.	Comment acknowledged.	No

DFED, Issue 5G: Degradation of Biological Populations or Communities

2.18	Agree with the recommendation.	Comment acknowledged.	No
43.22, 60.71, 76.47, 76.46	Disagrees with the recommended Alternative 4, as well as the other three Alternatives. While bioassessments provide important information about water quality, they are not sufficient for listing. These sorts of assessments should be used in developing 305(b) reports. Pollutants must be identified to justify listing on the 303(d) list.	The FED does not recommend bioassessment as a lone listing factor. The FED recommends that proposed listings using bioassessment data need multiple lines of evidence; association with water or sediment concentrations of pollutants is required.	No
56.23	Support SWRCB's requirement to use bioassessment data and information only if it is associated with water and sediment measurements. However, the assessment of water bodies based on these listing factors can still be problematic due to the reliance on comparison of the response or community structure to that of a reference condition. Although, the draft FED provides some guidance on reference site selection and use, the selection of appropriate reference sites is difficult (e.g., highly urbanized watershed), yet critical to the determination of impairment.	Selection of appropriate reference sites is critical to the determination of standards attainment. The FED provides only general guidelines on reference site selection which may provide assistance to the RWQCBs in the development of their bioassessment programs.	No
56.24, 64.20	The FED provides some guidance on selection of reference sites. Concerned that: a determination may need to be made that a reference site represents the best attainable condition, how will this be determined? Comparison to reference sites may be difficult because ecologically more differences (due to factors not accounted for) could be found as sample size increases.	"Best attainable condition" refers to the selection of a reference site using the judgement of RWQCBs based on the site-specific factors present in a water body. Specific guideline cannot be proposed because of the diversity of water bodies in the State. The effectiveness of biological monitoring programs rest on choosing biological attributes that provide consistent and reliable signals about the resource condition. A successful biological monitoring program demonstrates that an attribute has a reliable empirical relationship--a consistent quantitative change--across a range, or gradient, of human influence. Comparison to reference sites is difficult but RWQCBs can optimize their comparisons by focusing on sampling design prior to the initiation of sampling and culminating with the use of indexes to compile and evaluate large amounts of biological data for evaluation. Sampling design will largely be determined by the region-specific needs of the RWQCBs but will include a determination of the site-specific or potential problem, the monitoring objective, and the availability, quality and applicability of information. A good sampling design also considers seasonal and spatial variation in the water body, sample representativeness, and variations in magnitude, duration, and frequency.	No

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		Further, RWQCBs will select appropriate water quality indicators based on the potential for impacts on specific beneficial uses of water.	
56.25	Reference sites may be difficult to determine because the site may be changing independently from the test site, due to factors other than water quality, however it may appear that the test is impaired due to the difference between it and the reference.	The general guidelines in the Policy should provide assistance in the selection of reference sites. However, reference site selection is dependent on many site-specific factors that cannot be adequately captured in the Policy (e.g., identification of least disturbed areas). Once reference sites are selected, biological surveys are necessary to evaluate the biological integrity of the site. Establishing the reference site condition provides the necessary information for making comparisons and for detecting impacts on beneficial uses. Monitoring of the reference site should remain a part of the bioassessment program; in which case, changes in the biological integrity of the reference site would be noted before comparisons would be made to test sites.	No
64.19	Supports the requirement to use bioassessment data and information only if associated with water and sediment measurements.	Comment acknowledged.	No
77.14	Benthic Macroinvertebrate Index discussion is ubiquitous. The text is referring to the macroinvertebrates and not the index.	The text has been revised to refer to the macroinvertebrates and not the index.	Yes
77.15	Alternative 4 is given as the preferred alternative, but it is not clear what alternative 4 is. The title of the alternative implies there has to be some linkage of bioassessment data with simultaneously collected chemistry data, yet there is never any mention of this linkage throughout the discussion. Similarly, the title indicates some requirement to do 'association assessment', but there is no further discussion of this assessment. Instead, the entire text is dedicated to how to choose a reference site and a listing of the type of biota that one might want to assess.	The alternative failed to clearly establish the link with Issues 5C (Toxicity) and 5D (Sedimentation). These issues contain the full discussion of chemistry data in water and sedimentation. Alternative 4 has been revised to make this link and discuss the importance of association assessment.	Yes
77.16	Alternative 4 discussion is an over-emphasis on superficial primary issues on how to do environmental assessments. I question whether this basic information is relevant to the question of what data can be used for 303(d) listing. Certainly one would want to use bioassessment data that included an appropriate reference site, but does this document need to spend pages describing how to pick that reference site? It is possible to go too far in describing how to do the assessment, and this document has done so. Its length could be substantially reduced if it assumed the reader had a greater a priori understanding of environmental assessments or let the reader obtain such information from other sources.	The information on the selection of reference site and indicator species was presented to provide RWQCBs with a reference on environmental assessments. There is not yet one environmental assessment method adopted in California and many RWQCBs approach bioassessment using different methodology. This information was presented in the interest of capturing available approaches in one place.	No
DFED, Issue 5H: Trends in Water Quality			
1.13, 1.14, 30.9, 57.7, 202.7, 212.8	The discussion on trend analysis should be expanded to consider trends in meteorological conditions, such as extended droughts or increasing temperature	These factors are already required under the data quantity assessment section of the Listing Policy. Data and information to substantiate the decline of water	No

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	regimes, which may exacerbate or improve contaminant concentrations. There are no widely accepted approaches for documenting trends, and the data is often difficult to interpret.	quality require the application of non-standard trend analysis approaches to account for such factors as seasonal or weekly systematic variations, autocorrelation of the data due to interventions, or sampling procedural changes. There are many widely accepted trend analysis approaches available but the use of any specific approach will depend on the data available for analysis or specific characteristics associated with the data. Providing specific guidance may not allow the use of the most appropriate trend analysis approach. For this reason only general guidance on how to address trends in water quality has been provided.	
2.19	Agree with the recommendation.	Comment acknowledged.	No
5.10, 9.3, 12.10, 18.95, 19.11, 21.27, 29.8, 39.4, 40.104, 40.17, 41.8, 41.7, 43.24, 47.11, 51.55, 51.59, 60.72, 60.28, 64.10, 64.8, 67.3, 68.3, 74.5, 76.15, 76.48, 208.7, 212.7	The use of trends in water quality as a basis for listing water segments is opposed. The use of such a basis allows water segments to be listed in the absence of information that water quality standards are exceeded or that beneficial uses are impaired.	<p>The Policy provides general guidelines for listing waters due to declining water quality. Waters that currently meet water quality standards but where a declining trend in water quality can be substantiated should be listed when a second line of evidence (e.g., adverse biological responses, degradation of biological populations and/or communities, or toxicity) supports determination of water quality impacts. The Policy does not allow listing waters with declining water quality by itself unless there is additional evidence showing that beneficial uses of such waters are being impacted. This is consistent with the provisions of the federal antidegradation policy.</p> <p>When substantiation of a declining trend in water quality or the second line of evidence cannot be established the information remains recorded in fact sheets but no judgement will be made on their disposition. This information will be useful in the development of the section 305(b) report.</p>	No
10.24, 13.5, 18.31, 19.10, 21.28, 40.106, 40.103, 40.105, 40.18, 51.60, 71.17, 108.10	<p>The requirement that adverse biological response, degradation of biological populations or toxicity is observed is too onerous because most water quality monitoring does not include these more expensive and sophisticated tests. Under this policy, many water bodies with declining water quality would not be listed because these tests were not conducted. Importantly, there would be a disincentive to perform these tests or assessments. The end result of this policy would be a severe impact must be observed before the State can determine that antidegradation requirements are being violated. This is unacceptable and in violation of the antidegradation requirements of the CWA and State policy, and as a result the requirement that staff must '[d]etermine the occurrence of adverse biological response, degradation of biological populations and communities, or toxicity' must be removed from the list of requirements the RWQCBs must meet to list a water body for declining trends in water quality.</p>	<p>The Policy requires that any decline in water quality be supported with data and information confirming that beneficial uses are being impacted. A declining trend in water quality is usually caused by the gradual increase of one or more pollutants in the receiving waters. However, it is possible to detect an increasing trend in pollutant concentration, and consequently a decline in water quality, without a water quality objective exceedance. In the absence of a water quality objective exceedance it is important that additional evidence is used to document that water quality impacts are actually occurring. The substantiated decline in water quality plus associated data and information pertaining to either adverse biological response or evidence of degradation of biological populations and/or communities helps list such waters in a more consistent, scientifically defensible manner.</p> <p>The approach proposed in the Policy is consistent with federal antidegradation requirements. Federal antidegradation policy applies to situations where existing water quality may be changed. These situations include: establishment or revision of water quality objectives, changes in water quality objective implementation procedures, permit and waste discharge requirement decisions,</p>	No

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		<p>some cleanup and abatement orders, remedial action plans, waivers or exceptions from Plans, and water right decisions. Where the antidegradation policy applies, it does not absolutely prohibit changes in water quality. The application of the policy depends on the conditions existing in water bodies. The antidegradation policy (40 CFR 131.12) lays out a three-tiered approach for the protection of water quality. 'Tier I' (40 CFR 131.12 (a)(1)) of antidegradation maintains and protects existing uses and the water quality necessary to protect these uses. 'Tier II' (section 131.12(a)(2)) protects the water quality in waters whose quality is better than that necessary to protect 'fishable/swimmable' uses of the waterbody. Outstanding national resource waters (ONRWs) are provided a high level of protection under the antidegradation policy ('Tier III').</p> <p>The focus of the Listing Policy provisions related to trends is focused on determining compliance with Tier I or Tier III. In general, States must assure protection of beneficial uses, including aquatic life. Reductions in water quality (declining trends) should not be allowed if this change would result in serious harm to any species found naturally in the water. Water quality must be maintained at levels that results in no mortality or significant growth or reproductive impact of resident species. If numeric water quality standards are met but there is a declining trend (the prohibited change in water quality) and beneficial uses are impacted, the antidegradation portion of standards is not met.</p> <p>Tier II waters are not addressed under the Listing Policy because (1) no action or activity is being proposed that would require a finding that the lowered water quality is necessary to accommodate important economic or social development in the area in which the waters are located, (2) beneficial uses are not impacted, and (3) numeric water quality objectives are achieved.</p>	

DFED, Issue 6: Statistical Evaluation of Numeric Water Quality Data

1.21	To address inherent sample bias, a note should be added to indicate that the sample population is representative of the criterion being measured.	The FED has been revised to incorporate this change.	Yes
2.20, 43.23, 60.73, 76.49	Agree with the recommendation.	Comment acknowledged.	No
10.7, 18.4, 20.10, 20.5, 21.10, 21.14, 37.6, 51.75, 53.6, 53.20, 66.2, 101.7, 104.5, 106.4, 221.2	Under the SWRCB's draft Policy, it will become extremely difficult, if not impossible under the current level of funding for water quality monitoring in the State, to develop the necessary information to list water bodies or waterbody segments that are truly impaired - i.e., do not meet water quality standards.	The provisions of the draft Policy identifies the data and information needed to create a credible section 303(d) list. The draft Policy was not developed considering the existing levels of monitoring efforts available to SWRCB and RWQCBs because the level of funding for SWAMP and other monitoring efforts fluctuates from year to year. The requirements of the draft Policy set the target for the kinds and amounts of monitoring and the statistical	No

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13.9, 51.166, 104.7, 218.4, 218.3, 218.2, 218.5	Volunteers sampled the San Gabriel River for contamination and found elevated levels of zinc. They found 4 out of 26 samples contained zinc at dangerous levels. And zinc is a toxin. It poisons aquatic wildlife. Under the proposed guidance policy, you would need six samples of zinc exceedances to meet the requirements of the binomial approach. So again, we have an example of a waterway that is clearly contaminated, has a lot of community investment, yet it would never have been put on the list to get cleaned up in the first place and is in danger of falling off the list if the suggested revisions are implemented.	<p>procedures that are necessary to ensure that the decisions made, based on inferences from sample data, are as error free as possible to support placement or removal of waters from the section 303(d) list. These statistical tools help increase the confidence and power of the available data and information evaluated to make section 303(d) listing decisions.</p> <p>Several comments focused on the specific data in creeks and the amounts of data available for these waters. These comments are based on the unfounded premise that the water body in question is impaired. How can the commenter know this with assurance? In contrast, the proposed Policy lays out a scientifically-defensible procedure to establish if a water body is not meeting water quality standards. Other valid, albeit less preferable, alternatives are possible and have been discussed in detail in the draft FED. But until a valid procedure is applied, the conclusion that a water body does or does not meet water quality standards is premature.</p> <p>Concerning the San Gabriel River example, the draft Policy requirement has been revised. At least three exceedances out of a sample of 26 needs to be seen in order to list the water body, this requirement is statistically valid. It ensures that on the average over five percent of possible water samples from the River will exceed the zinc standard with at least 80 percent confidence. A decision to list based on a sample with four exceedances would meet the desired level of assurance.</p>	No
20.4, 21.8, 21.6, 21.9, 21.16, 21.7, 40.16, 40.2, 40.67, 40.7, 102.9, 104.3, 105.6, 109.19, 109.1, 109.5, 222.2	The Policy ignores water quality standards, especially with respect to toxicity and the CTR toxic pollutants. It violates USEPA regulations that require the state to develop existing and readily available data.	<p>SWRCB has been criticized by USEPA and others for not interpreting toxics WQC consistent with the expressed frequency of the criteria. Specifically, USEPA has said 'acute and chronic standards are not to be exceeded more than once in every three consecutive year period.' SWRCB staff reviewed the provisions of the CTR (40 CFR 131.38(c)(2)(iii)) and the exceedance frequency is stated as:</p> <ol style="list-style-type: none"> 1. For acute criteria: 'CMC ... is the water quality criteria to protect against acute effects in aquatic life and is the highest in stream concentration of a priority toxic pollutant consisting of a short term average not to be exceeded more than once every three years on the average.' 2. For chronic criteria: 'CCC ... is the water quality criteria to protect against chronic effects in aquatic life and is the highest in stream concentration of a priority toxic pollutant consisting of a 4-day average not to be exceeded more than once every three years on the average.' <p>The CTR appears not to be expressed as a maximum not to be exceeded value but rather as an average. USEPA documentation related to the development of the CTR and water quality standards in general acknowledge that the exceedance frequency is 'on the average' (USEPA, 1999c; USEPA, 1991f;</p>	Yes

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		<p>USEPA, 1994d). Guidance documents related to the section 303(d) listing process describe the frequency portion of the WQC as a maximum (USEPA, 2003b; USEPA, 2002a; USEPA, 1997c).</p> <p>Exceedance frequency is not amenable to averaging like continuous data. However, exceedance frequency can be averaged as a proportion. The binomial distribution works well with these kinds of data. The average of a binomial distribution is the number of samples times the proportion of samples exceeding the value. To get an average of 1 with n = 3 (years), p has to equal 0.33. One exceedance each year over the 3-year period would be allowed. A water would be listed if more than three hits are observed during a 3-year period.</p> <p>Another way to interpret the 'on the average' phrase is that the 'once every three years on average' is based on the recovery time for various aquatic life organisms. The USEPA Technical Support Document (TSD) (1991f) describes that macroinvertebrates may recover in less than two years; whereas, fish may require two or more years to recover.</p> <p>Alternatively, once every 3-years on the average might be extended to mean three times in nine years is acceptable, using this scenario--three exceedances occur in the first 3-years and followed by no exceedances during the next six years, thus the aquatic life has recovered sufficiently. If the scenario is reversed, that is three exceedances were to occur in the most recent years (out of 9), then this would be considered impaired water quality conditions at present and sufficient reason to list the waterbody.</p> <p>Thus one exceedance is allowed per 3-year period and multiple 3-year periods are necessary to determine the average.</p> <p>Neither of these interpretations are particularly clear cut. The TSD seems to say that more than one excursion during the average period is acceptable and the only averaging period mentioned is 3 years (i.e., Appendix D (p. D-4): 'The purpose of the average frequency of allowed excursions is to provide an appropriate average period of time during which the aquatic community can recover from the effect of the excursion...') 'Excursions' seems to acknowledge that more than one is acceptable. Other parts of the TSD (p. 124) says that more than one violation of a effluent limit is allowed on a shorter time frame: '...EPA recommends that monthly average limitation violations be reviewed ... whenever two or more violations occur in a 6-month period. Seven-day average and daily maximum violations should likewise be reviewed if a minimum of two or four, respectively, occur during the course of 1 month.' Effluent limits are different than WQC but it seems impossible for effluent limits to be exceeded more frequently than WQC and still be in compliance</p>	

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		<p>with a once-in-three-year maximum.</p> <p>The TSD also acknowledges that most excursions will be minor and will be difficult to detect. The TSD states: 'These data indicate that as a general rule, the purpose of the averaging frequency of allowed excursions will be achieved if the frequency is set at once every 3 years on the average.' (Appendix D, p. D-5). An averaging frequency is not an average unless there is more than one value and 'excursions' seems to indicate that more than one excursion is needed.</p> <p>For section 303(d) listing purposes the sensible, workable, practical, and logical interpretation is to use the available data collected in usually relatively short time frames (<3 years) to make decisions on whether to place waters on the list. Perhaps the most clear way to resolve this matter is to use one of the CALM guidance (USEPA, 2002a) approaches for statistical guidelines to interpret chronic and acute criteria. In Table 4-3 of the guidance, USEPA compares acute and chronic criteria, associated exceedance frequencies, and example statistical approaches for analyzing chemical data. For these criteria, USEPA recommends using the binomial test with a 5 percent exceedance frequency and a 15 percent effect size where alpha and beta errors are held at <0.15. Presumably, this analysis corresponds to the USEPA-derived averaging frequency for acute and chronic criteria.</p> <p>This approach should be used to determine compliance with CTR and similar chemical water quality objectives. The FED and Policy have been revised to include the CALM guidance recommendation regarding error balancing. The response related to balancing errors is more thoroughly presented in Issue 6 of the FED.</p>	
21.67	<p>Emphasis on developing statistical evaluation of data is wrong. Most statistical manipulation of water quality data does not properly reflect how chemicals impact aquatic-life-related beneficial uses of water bodies. Toxicity is based on a concentration of toxic chemical forms-duration of exposure relationship for a particular chemical and type of organism. The USEPA national criteria and state standards based on these criteria are designed to be protective in all types of waters and for most organisms types.</p>	<p>Reliance on statistical inference is a valid approach to take when dealing with water quality sample data. Without complete knowledge of the water body in question, investigators must rely on samples. This introduces uncertainty. Only statistical analysis gives investigators some quantifiable level of assurance in conclusions based on samples.</p>	No
22.3, 22.1, 25.3, 38.10, 44.1, 47.3, 48.2, 60.45, 63.2, 64.6, 71.23, 71.19, 71.20, 71.14, 72.2, 72.1, 72.5, 72.3, 76.28	<p>Strongly supports the use of a standardized statistical approach for data analysis as well as a requirement to clearly document the weight of evidence that is needed to list and de-list a waterbody. Historic listings have at times been made with less than adequate documentation of an actual impairment.</p>	<p>Comment acknowledged.</p>	No
38.9, 59.2	<p>The precautionary principle mentioned by other commenters during the</p>	<p>Comment acknowledged.</p>	No

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	hearings is an extreme precaution that fails to base environmental threat or harm on evidentiary standards or procedural criteria.		
47.5	The 303(d) list developed by the final listing policy should only contain water segments with real water quality problems. Rather than maintaining an approach where virtually 'anything and everything' is placed on the TMDL list, regardless of the technical or objective merit for doing so, it is vital that the SWRCB establish a credible 'triage' approach that achieves the most benefit for the resources dedicated.	Comment acknowledged.	No
51.48, 105.4, 217.5	The bias in the Policy is evident in every statistical option chosen (in the FED)--in selection of the confidence interval, the so-called critical exceedance rate, the null hypothesis, the binomial method, and minimum sample size. For all of these decisions for which an array of choices is available, the policy always picks the choice that will reduce the chance of not listing unimpaired water bodies over the chance of failure to list impaired water bodies.	As outlined in the FED, the statistical alternatives proposed are intended to, if at all possible, reduce the chance of incorrectly listing a water body that is truly meeting water quality objectives. The second type of error, that of failing to list a truly impaired water body, can be controlled with larger sample sizes, larger effect sizes, or greater type I error rates. The Policy has been revised to include an approach for balancing the statistical errors.	Yes
51.57, 51.56, 51.58	The FED readily admits that the statistical method of establishing the 303(d) list will remove currently listed water bodies from that list without any new information that demonstrates that water body is not truly impaired. The resulting abandonment of TMDLs and their attendant waste load allocations for these previously listed water bodies would, or at least could potentially, result in an increase in mass emissions of pollutants to these water bodies over and above what would be allowed with a TMDL was in place. This increase in emissions is sufficient to trigger the state's antidegradation policy.	The Policy, as revised, would likely result in fewer listings. However, the provisions of the Policy on the section 303(d) list have no effect on existing permits. Consequently there would be no change in discharges if waters were not placed in the section 303(d) list. Antidegradation requirements apply independently of the Policy. Nothing in the Policy allows greater or less mass emission from point sources. Placement on the section 303(d) list does not control or prevent pollutant discharge.	No
51.73	<p>The methodology is virtually impossible to administer from a practical perspective. As noted in the NRC report, 'water quality standards must be measurable by reasonably obtainable monitoring data.' Data-hungry models cannot be the sole method by which water quality is assessed in situation where the state lags in monitoring. The NRC Report agrees, stating that government 'should not advocate detailed mechanistic models for TMDL development in data-poor situations. Either simpler, possibly judgmental, models should be used or, preferably, data needs should be anticipated so that these situations are avoided.'</p> <p>The draft Policy appears to assume that California has a database of surface water quality information capable of supporting numeric calculation requirements such as those set forth in the Policy. This is not the case. California currently relies upon anarchy as a data management strategy for surface water quality information. Because of this fact, the draft Policy as written cannot be implemented on a consistent statewide basis.</p> <p>One step California must take in order to begin to implement numeric requirements associated with a Policy of this type in a defensible fashion is to</p>	<p>The process described in the Listing Policy for summarizing data and information was implemented by SWRCB staff during the development of the 2002 section 303(d) list. During that process over 1,000 fact sheets were developed using a variety of information.</p> <p>Work to develop a database to hold all data continues through SWAMP. Storing other information has been challenging and is continuing to be addressed in revisions and updates of the Geo-spatial Water Body System.</p> <p>A data system that holds absolutely all data and information is not necessary for SWRCB and RWQCBs to implement the statistical provisions of the Listing Policy. Data evaluation can occur on a case-by-case basis depending on the decision rules of the policy. The NRC comments on the types of modeling to use for TMDL development are not relevant to the concepts presented in the Listing Policy which is focused exclusively on the development of the section 303(d) list.</p>	No

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	follow the lead of other states that utilize the USEPA STORET water quality data management system. SWAMP is moving forward to implement STORET compatibility, but this will solve only a portion of the problem; better integration of other available data will be necessary before the state can begin to even consider a statistical methodology as data-hungry as the one proposed.		
57.6	The statistical methods identified in the draft Policy are probably the most important aspect of this document. They have the potential to eliminate the perception that some listings have been set arbitrarily, or that delisting is overtly onerous and subject to political decisions that cannot be rationally objectified. With this in mind, we encourage the SWRCB staff to carefully review the descriptions and clarify their meanings to the greatest degree possible. The final policy should include additional language with respect to analytical limitations and the confusion resulting from matrix effects, detection/quantification limits and the impact of dubious data for one parameter (hardness) on the standards applied to other correlated parameters (metals).	Comments acknowledged.	No
83.1	Support the SWRCB's goal of establishing a standardized approach for assigning water bodies to the 303(d) list, including requirements for consistent statistically valid data evaluation, requirements for data quality and quantity, and implementation provisions.	Comment acknowledged.	No
102.4	The FED does not explain the methodology by which the proposed binomial model was developed, its implications, and the policy decisions behind it. The documentation does not show how this statistical model actually identifies impaired bodies because it does not do so.	The FED presents in detail the rationale and alternatives for the proposals made in the Policy. In FED section 6 the choice of whether to analyze numeric data is discussed. The FED then goes on to examine how data should be analyzed by looking at the initial hypothesis to analyze, the statistical test to use, the level of statistical confidence and power desired, the rate of exceedance judged critical for listing or delisting, and the minimum sample sizes required. The FED presents a transparent outline of the issues and procedures involved in analyzing numeric water quality data.	No
107.6	Use of scientifically defensible procedures for measurements and assessments provide a level of confidence equal to that for the listing factors in Section 3.1 and the proposed use of the 'standard' null hypothesis (i.e., water is not impaired). Statistical testing of a null hypotheses is not the only method of human reasoning. It can be problematic in many situations.	Statistical analysis is a recognized and objective way to analyze numeric information so that a level of assurance can be identified and quantified.	No
111.7	Based on a recent District Court opinion in the Florida case, the binomial approach is not a revision of water quality standards.	Comment acknowledged.	No
202.6	Encourage review of the statistical methods to clarify their meaning to the greatest degree and provide additional language to clarify any analytical confusion to the matrix effect, detection quantification limits, and impact of core data about one parameter or another.	Effort has been made to satisfy this comment in the draft Policy and FED. Several revisions have been made to clarify the descriptions of the statistical tests and concepts behind the tests used. A Definitions section has been added to the Policy in response to this comment.	Yes

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DFED, Issue 6A: Selection of Hypotheses to Test			
2.21	No comments. The details of statistical analysis are outside my area of expertise.	Comment acknowledged.	No
3.1	Discussion conforms to standard statistical theory.	Comment acknowledged.	No
10.1, 10.2	It is important for the management water resources that waters that do not meet water quality standards are listed, promptly, so that the planing process for protecting and restoring these resources may commence, and the heath, safety, and welfare of the citizens of California are protected.	Comment acknowledged.	No
18.59, 40.57, 51.64, 51.47, 51.162, 51.35, 102.13, 102.14, 102.3, 103.4, 103.1, 108.11	<p>The Draft Policy chooses as the statistical null hypothesis to be tested that a water body meets water quality standards. This alternative is counter intuitive and inconsistent with other water quality programs such as the Surface Water Ambient Monitoring Program and TMDL Guidance. It creates a disincentive for the regulated community to monitor because less monitoring will likely to result in fewer listings.</p> <p>The alternative premise, that a water body does not achieve water quality standards, is most appropriate when there is information indicating there is or may be impairment. Its use does not mean that all waters in California are assumed to be impaired. Use of the hypothesis should be restricted to situations where there is some information indicating impairment. Its use will create incentives to monitor and is consistent with the TMDL Guidance.</p>	<p>To apply the exact binomial test to analyze dichotomous water quality sample data (i.e., the sample either does or does not satisfy pertinent standards), investigators must start with one of two initial premises to be tested. The starting null hypothesis can be either:</p> <ol style="list-style-type: none"> 1. The water body under consideration is assumed to satisfy the pertinent water quality standard; or 2. The water body is assumed not to satisfy the water quality standard in question. <p>The null hypothesis represents an assumption that has been put forward, either because it is believed to be true or because it is to be used as a basis for argument, but has not been proved. Once data have been analyzed in an attempt to reject a null hypothesis, the null hypothesis is rejected only if the evidence against it is sufficiently strong. The alternative hypothesis on the other hand, is a statement of what a statistical hypothesis test is set up to establish.</p> <p>If it is concluded that the null hypothesis cannot be rejected, it does not mean that the null hypothesis is true, it only suggests that there is not sufficient evidence against it in favor of the alternate hypothesis.</p> <p>The form of the null hypothesis recommended in the Policy is appropriate because the intent of the Policy is to establish the section 303(d) list by using data and information that shows the water does not meet standards. Using the 'reversed' hypothesis would establish only which water meet standards. The distinction between the different null hypotheses is reduced if statistical errors are balanced (Smith et al., 2001).</p>	Yes
40.55	The policy discusses the null hypothesis yet it does not clearly define the state's definition of the null hypothesis for listing waters (which is buried in the FED). This is especially critical for the de-listing section of the policy.	The null and alternate hypotheses have been included in the tables of values used to list and delist waters.	Yes

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43.25, 47.6, 60.74, 76.50	Agree with the staff-recommended alternative 1.	Comment acknowledged.	No
51.1, 103.2	<p>The consequences for listing unimpaired waters are insignificant. Legal developments in California in recent years have essentially eliminated any negative consequence of a mistaken listing (i.e., including a 'clean' water on the 303(d) list).</p> <p>Given the undisputed fact that section 303(d) functions as the last effective regulatory approach to remedying threatened or impaired waters, it is clear that the implications of not listing an actually impaired waterway are far more severe than those attendant to any improper listing of a non-impaired waterway.</p>	<p>The impact of listing a water body that actually meets water quality standards is that the costs of developing a TMDL will be expended unnecessarily. The costs of failing to list a water body not meeting standards include potential threats to the environment and to human health. Both potential costs are significant.</p> <p>The costs associated with missing real water quality problems can be alleviated by expending resources to monitor more thoroughly. Presumably, significant water quality problems will be identified with sufficient monitoring efforts. The FED has been revised to discuss this more clearly and to include the estimated costs to avoid these errors.</p>	Yes
51.5, 51.9, 51.8, 51.7, 105.5, 219.1	<p>The Precautionary Principle is intended to deal with uncertainty. It expresses the 'safe' way of handling uncertainty. The draft Policy takes an anti-precautionary approach and tolerates a high level of potential harm before taking action. It uses uncertainty as a rationale for inaction. It adopts the position that a water body is clean until proven dirty. It creates disincentive for dischargers to contribute to additional, much-needed monitoring, because such monitoring might be used to build the case that the water segment is, in fact, impaired.</p>	<p>Several comments were received stating that the development and content of the draft Listing Policy and FED do not comply with the provisions of the Precautionary Principle (PP). The process undertaken to develop the Policy, the draft Policy itself, and the FED embody the spirit of the PP.</p> <p>The PP was developed in 1992 at the Rio Conference on the Environment and Development. The so-called 'Rio Declaration' was adopted at the conference. One of the principles of the Declaration (Principle 15) states: '...in order to protect the environment, the precautionary approach shall be widely applied by States according to their capability. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.'</p> <p>'States' refer to World Trade Organization countries. The PP is a provision of international law. PP as stated in the Rio Declaration is a very general statement; the Commission of European Communities (CEC) (2000) has developed guidelines for implementing PP to find the correct balance so that proportionate, non-discriminatory, transparent and coherent actions can be taken. The CEC process also links PP implementation with a structured decision making process with detailed scientific and other objective information.</p> <p>The relationship between the CEC guidelines for applying PP and the draft Listing Policy is presented below.</p> <p>1. 'Recourse to the precautionary principle presupposes: [a] identification of potentially negative effects resulting from a phenomenon...; [and b] a scientific evaluation of the risk which because of the insufficiency of the data, their</p>	No

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		<p>inconclusive or imprecise nature, makes it impossible to determine with sufficient certainty the risk in question.' The draft Listing Policy requires the assembly of all readily available data and information before decision are made to place waters on the section 303(d) list. Absolutely all data and information are to be considered.</p> <p>2. 'The appropriate response in a given situation is thus the result of a political decision, a function of the risk level that is acceptable to the society on which the risk is imposed.' SWRCB needs to make several policy decisions in order to develop a consistent listing process in California. Policy decisions that have to be made are which hypothesis to test, which statistical approaches to use, confidence, power, critical exceedance rate, meaningful sample sizes, etc. In each of these cases the reasons for the decision is presented in the FED and has been discussed at workshops and hearings.</p> <p>3. 'The implementation of an approach based on the precautionary principle should start with a scientific evaluation, as complete as possible, and where possible, identifying at each stage the degree of scientific uncertainty.' The draft Policy creates a structured approach to evaluate data and information that may be available for waters of the State. This evaluation is required to be as complete as possible in order to select the most appropriate course of action. Consequently, additional information such as sources of pollutants is necessary to be included in the evaluation. Uncertainty is quantified through statistical data analysis.</p> <p>4. 'An assessment of the potential consequences of inaction and of the uncertainties of the scientific evaluation should be considered by decision makers when determining whether to trigger action based on the precautionary principle.' The draft Policy presents the level of desired confidence, power, acceptable effect size, and acceptable exceedance frequency. All of these factors have been developed transparently through workshops and hearings. Most of the problems related to pollutant are reversible hence they are candidates for TMDL development.</p> <p>5. 'All interested parties should be involved to the fullest extent possible in the study of various risk management options that may be envisaged once the results of the scientific evaluation and/or risk assessment are available and the procedure be as transparent as possible.' The provisions of the draft Policy were developed through small meetings of stakeholders including USEPA, RWQCBs, the environmental community, and the regulated community; through larger meetings of the AB 982 PAG; and at SWRCB hearings.</p> <p>6. 'Measures should be proportional to the desired level of protection.' The measures for listing presented in the Policy are proportional to the types of</p>	

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		<p>information available to make decisions. All measures of water quality are inherently variable and subject to uncertainty. Implementation of the Policy will miss some water quality problems; the Policy is not aimed at establishing zero risk. But as new information is developed, problems will be identified and addressed by the TMDL program. The types of problems addressed by the Policy are long-term exposures to pollutants; shorter-term or periodic problems may not be caught but those are also not addressable by TMDLs (e.g., intermittent spills, etc.). TMDLs are best focused on problems that are reversible.</p>	
		<p>7. 'Measures should not be discriminatory in their application.' The Policy requires that comparable situations to not be treated differently. The Policy also has provisions that allow different situations to not be treated in the same way, unless there are objective grounds for doing so (e.g., the situation-specific weight of evidence listing and delisting factors). Further, there are provisions that allow RWQCBs to request additions to the list even if the conditions are not allowed by the provisions of the Policy.</p>	
		<p>8. 'Measures should be consistent with the measures already adopted in similar circumstances or using similar approaches.' The provisions of the draft Policy are consistent with many States (but not all) listing processes.</p>	
		<p>9. 'The measures adopted presuppose examination of the benefits and costs of action and lack of action. This examination should include as economic cost/benefit analysis when this is appropriate and feasible.' The impact of alternative actions are presented in the FED and the recommended approach is to balance the various kinds of errors and costs associated with those actions.</p>	
		<p>10. 'The measures, although provisional, shall be maintained as long as the scientific data remain incomplete, imprecise or inconclusive and as long as the risk is considered too high to be imposed on society.' The Policy will be used to create a list that will be reviewed every two years; consequently the provisions of the list are provisional and subject to change depending on the availability of scientific data and information.</p>	
		<p>11. 'Maintenance of the measures depends on the development of scientific knowledge, in the light of which they should be reevaluated. This means that scientific research shall be continued with a view to obtaining more complete data.' Monitoring data is key to implementing the provisions of the Policy. Monitoring must be continued and incorporated into the section 303(d) decision making process. Monitoring data can come from State programs as well as programs operated by others.</p>	
		<p>12. 'Measures based on the precautionary principle shall be reexamined and if</p>	

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		necessary modified depending on the results of the scientific research and the follow up of their impact.' CWC section 13143 allows SWRCB to periodically review and revise policy for water quality control. If provisions of the Policy they can and should be revised.	
		13. 'Measures based on the precautionary principle may assign responsibility for producing the scientific evidence necessary for a comprehensive risk evaluation.' The Policy provisions allow interested parties to develop and prepare fact sheets so RWQCBs and SWRCB can consider additions and deletions to the list. When necessary RWQCBs have authority to require the preparation of reports of water quality conditions (CWC section 13267).	
51.85, 51.161, 51.84, 105.9, 108.12, 217.8	<p>The draft Policy should rely on the following statistical decision rule:</p> <p>Water segments shall be placed on the section 303(d) list as impaired for conventional pollutants other than temperature and dissolved oxygen unless the numeric water quality objectives for conventional pollutants are exceeded in less than 10% of samples with a confidence level of 90 percent using a binomial distribution (Table 2).</p> <p>This recommended alternative adopts SWRCB's proposed statistical method in all respects but one: the null hypothesis has been reversed. Under this alternative, the null hypothesis is: 'the water segment is impaired' in contrast to the null hypothesis under SWRCB's recommendation: 'the water segment is clean.'</p>	<p>Using fixed significance approach (SWRCB, 2003c), this recommendation would place California water bodies on the section 303(d) list using very small numbers of exceedances.</p> <p>The 'standard' null hypothesis is the more cautious against incorrectly labeling a water body as not meeting standards, but at the expense of failing to identify all truly polluted waters. This null hypothesis choice is considered more appropriate when economic or social consequences are deserving of protection.</p> <p>The 'reversed' null hypothesis effectively guards against the error of overlooking polluted waters, but with a high likelihood of incorrectly listing unimpaired water bodies. This choice is considered fitting when ecological or public health consequences are deserving of protection.</p> <p>Both choices are statistically valid and would result in transparent listing/delisting procedures. The decision to use either form of null hypothesis is a policy choice. Balancing of decision errors minimizes differences between these hypotheses and the differences in the number of exceedances needed.</p>	No
104.11, 107.7	Contrary to common dogma, the use of the null hypothesis has little utility in science. Binomial methodology is highly controversial. There are hundreds of peer reviewed papers questioning the indiscriminate and inappropriate use of that statistical hypothesis test.	There are two basic procedures in statistical inference to base decisions on: hypothesis testing and confidence intervals. Both procedures arrive at the same conclusions and are, at their foundations, mathematically similar. Hypothesis testing is a valid and appropriate means to make decisions based on samples of quantitative information.	No
DFED, Issue 6B: Choice of Statistical Tests for the Evaluation of Water Quality Data			
2.22	No comments. The details of statistical analysis are outside my area of expertise.	Comment acknowledged.	No
3.2, 43.26, 60.75, 71.22, 76.51	Recommendation of exact binomial test seems reasonable.	Comment acknowledged.	No

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3.3, 51.118	Major shortcoming of exact binomial test is that it does not take magnitude into account.	Because of the nature of the TMDL program, and because other water quality programs exist to deal with other problems not handled by TMDLs, magnitude of an exceedance of an objective is not a critical issue for listing/delisting. Instead, the number of times a water body is seen to exceed, or not, an objective is the more crucial factor. In addition, magnitude as a factor is already built in to water quality objectives. For these reasons, use of the binomial model is adequate for section 303(d) listing/delisting purposes. Furthermore, RWQCBs are not prevented from using magnitude if justified using the situation-specific listing and delisting factors.	No
3.4	Figure 16 lacks information on the Critical Exceedance Rate used to model the rates of Type II error for the binomial and Raw Score approaches.	This has been corrected.	Yes
10.5, 14.4, 20.8, 51.50, 104.12	Use of binomial model is not tempered - spatial and/or temporal distribution problems may not fit with or work well with the model. If a pollutant has a seasonal variation, use of binomial model can not account for this - monitoring may miss a pollutant if done in the wrong time or season. Pollutant spatial concentrations can not, or are not likely to be taken into account - or missed entirely.	Nothing in the draft Policy prevents investigators from using data from certain limited times of the year in order to capture temporary or sporadic impacts to beneficial uses. If designed properly, water quality sampling, in conjunction with binomial analysis, will be adequate to locate true water quality problems.	No
18.84	The TMDL Roundtable recommended that a water body should be listed if any one of three recommended criteria is met. The draft Listing Policy is partially consistent with this recommendation. The draft Listing Policy allows the use of the screening values and guidelines suggested in this recommendation. The draft Listing Policy uses the binomial method with a 10% exceedance rate, rather than the mean or median as was originally recommended.	A more applicable, nonparametric statistical procedure was selected precisely because parametric statistics would not always be valid, especially for small samples based on non-normal populations of data. The binomial is the most readily applicable and most efficient statistical choice for dichotomous data from large populations (e.g., a water body such as a river or lake). Use of the median or arithmetic mean as an exceedance frequency is not sufficiently protective (50% exceedance frequency).	No
40.56, 43.29, 51.101, 51.88, 56.16, 56.14, 63.7, 104.13, 105.3, 105.1, 108.13, 203.4, 217.7, 217.6	USEPA guidance and professional literature recommend that Type 1 and Type 2 error rates should be balanced if there is no clear agreement that one form of error is more important than the other, as a policy matter, in that state (see USEPA, 2001; USEPA, 2003a; and Smith et al., 2001.)	<p>This recommendation has been incorporated into the Policy and FED, use of a test with 'balanced' statistical errors is now the recommended procedure for use in the statistical test in the Listing Policy. The following is a description of the technique used.</p> <p>Statistical error balancing using the exact binomial test attempts to 'balance' or make equal estimates of the two types of possible decision-making error that may result at each sample size. Precise equality between the two error rates is not actually possible for many sample sizes. Instead, Type I and Type II error rates are calculated at various exceedance frequencies to be as close to one another as possible with both at or below a critical maximum error rate.</p> <p>A key difference between the non-balanced procedure recommended in the December 2003 version and the balanced procedure is that two, not one, exceedance rates are employed. An exceedance rate stands in for the unknown true exceedance rate in the water body. Because the likelihood that a sampled allotment of water in a water body will exceed a pertinent water quality</p>	Yes

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		<p>criterion cannot be known, a maximum rate of exceedance, a highest tolerable rate above which a water body should definitely be listed, is chosen for binomial error rate calculations.</p> <p>In the previous draft Policy, one exceedance rate was used. However, for the balanced procedure, a second, higher exceedance rate is also needed. The lower exceedance rate is used as an estimate of the lowest quality acceptable as an average. This lower value is an estimate of the likelihood of making a Type I error (in the Policy, the error of incorrectly listing a water body). The higher exceedance rate is the highest frequency that would be allowed in a single sample. The higher value is used to calculate the likelihood of Type II error (the error of failing to list a water body). This second exceedance rate must be higher than lower exceedance rate in order for the two error rates 'balance' at an acceptable level. If the same exceedance rate (e.g., 10%) is used for both error rate calculations, balancing occurs at a mutual error rate of 50%.</p> <p>To 'balance' Type I and Type II error rates, the (a) critical number of exceedances (k) that must be observed in order to list the water body and (b) standard error rates at each likely sample size are first calculated using the lower exceedance rate to determine the estimated Type I error rate and higher exceedance rate to calculate estimated Type II error rate. Next, the absolute difference between Type I to Type II error rate is minimized by adjusting k up or down. When the two error rates are as close as possible, the modified k used to achieve this 'balance' is used in place of the original k.</p> <p>The FED has been modified to include a description of the balancing procedure as provided by USEPA.</p>	
43.60	In developing 303(d) policy, the SWRCB should address the following question: What is the statistical method on which to base 303(d) listings?	This issue is addressed in detail in the draft FED Section 6.	No
51.3, 51.54, 51.2	The current draft Listing Policy is inconsistent with both the clear mandate of section 303(d) and Congressional policy and intent underlying section 303(d) in a number of ways. For example, the Listing Policy's binomial approach fails to accurately assess impaired water bodies. Thus, the listing policy's binomial approach is contrary to section 303(d)'s clear mandate to identify waters in California where effluent limitations are not stringent enough to implement any water quality standards.	Assessments of the results of water quality samples are used to determine if a water body should be listed. The exact binomial test is one valid tool that can be used to analyze sample results and to quantify the likelihood of decision-making error. The alternatives for this task are outlined in FED Section 6.B. The use of and results from the binomial procedure do not violate federal or State laws.	No
71.21	The FED presents a thorough review of different statistical methodologies that were considered for use in testing compliance with a water quality standard (Table 12).	Comment acknowledged.	No
71.29	The SWRCB should incorporate the use of a statistical test or, at the very least, simple graphical methods to identify outliers or anomalous data, and that those	The exact binomial test, with its use of transformed data (i.e., numeric data is transformed into counts of nominal, 'yes' or 'no' information) addresses the	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	outlying data points be closely examined for validity and usefulness in the analysis. Even with sound QA/QC procedures, anomalous data will occasionally pass through the data quality screen.	problem of outliers. High and low values will not influence results unduly; as used in the Policy, there is no 'mean' to be greatly affected.	
102.5	The Policy is not scientifically defensible. Therefore, claims in the FED that the Policy does not have significant adverse environmental impacts are untrue. One of the problems is the effort by the Policy to be consistent by using the binomial model. The validity of the whole Policy really hinges on the proposed binomial model being appropriate. But the binomial model can not validly be applied across all pollutants, all stressors, and all streams throughout the state.	More sophisticated statistical procedures are available. The exact binomial test is a modest, yet appropriate, first attempt to introduce scientific validity into section 303(d) listing/delisting decision-making, other tests can be used if warranted.	No
207.16	What is the statistical method on which to base 303(d) listings?	As explained in the draft FED, the exact binomial test, a statistical procedure intended for use in analyzing dichotomous data, is proposed for use in evaluating 303(d) listing data and for listing and delisting decisions. This procedure is valid because water quality sample data either does or does not satisfy applicable water quality objectives. Once certain key variables are selected (exceedance rate(s) and a desired level of statistical confidence or power), the binomial test generates the critical number of exceedances that must be observed in a sample of a particular size in order to accurately decide whether or not to list a water body.	No
217.9	Another alternative is to consider using a simpler approach that doesn't assume a 10 percent exceedance rate in order to counter for variability, uncertainty, and error. A simple T test in which the samples compared to the standard with a certain confidence limit can be used and would account for variability, uncertainty, and error.	As the draft FED shows, the Student's t-Test alternative was considered. However, parametric tests perform more poorly than non-parametric tests (e.g., the exact binomial test) when sample sizes are small and in cases where the population of data is not normally distributed. The simple and efficient binomial test was the best overall choice for section 303(d) data analysis. This test is not precluded from use; the t-test may be used if warranted.	No

DFED, Issue 6C: Selection of Statistical Confidence Level

2.23	No comments. The details of statistical analysis are outside my area of expertise.	Comment acknowledged.	No
3.7, 3.6, 3.5	The statement, statistical confidence is the probability that a hypothesis is true., is not literally true except for Bayesian statistical testing.	The language in question has been revised.	Yes
3.8, 43.27, 76.52	The selection of the preferred a level appears to be justified.	Comment acknowledged.	No
51.41, 51.66	Under the draft Policy's binomial approach, the level of confidence required to reject the null hypothesis is too high. One consequence of requiring this level of confidence before the hypothesis can be rejected is that the data must not only demonstrate difference from the hypothesized condition, they must demonstrate significant difference. In the case of SWRCB's binomial approach, the evidence required is practically unattainable.	A desired 90 percent confidence is a commonly-accepted level in scientific studies; 80 percent is also acceptable if the preliminary findings are followed up with more research or monitoring (Hahn and Meeker, 1991). Many scientists insist on even higher confidence levels in order to reject a starting, null, hypothesis (e.g., 95% or even 99%). The Policy has been revised to use a lower yet justified level of confidence and to require more certainty when delisting.	Yes

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
51.87	SWRCB's proposed approach ('standard' null hypothesis) is 81 to 362 times more likely to fail to list an impaired water body than it is to list a clean one. We believe that this preference flies in the face of the precautionary principle and does not reflect the water quality priorities of Californians or those expressed in the CWA. A better policy would err in favor of listing, thereby minimizing the possibility of leaving impaired water bodies off the list and minimizing the attendant risks to human health and aquatic life. The reverse null approach, discussed above, would do this. At a minimum, though, the listing criterion should provide for a more equitable apportionment of these errors. A 'fair' listing criterion would be one for which the probability of making each type of error is equal.	<p>The claim that the non-'balanced' approach with 'standard' null hypothesis is 81 to 362 times more likely result in a Type II than Type I error is not accurate. These claims are too high. The statistical probabilities presented by the commenter are the sum of all possible statistical errors over all possible alternate exceedance rates. This unnecessarily changes the error estimates for the binomial test using a fixed significance level. The use of a ratio to compare errors is also misleading. With real sampling data, it is impossible to have both types of errors occur simultaneously.</p> <p>While there are differences in the details of how Type I and Type II error rates should be presented, the concept of balancing a priori the two types of errors to attempt to equally avoid the errors has merit. The Policy and FED have been revised to include options for balancing statistical errors.</p>	Yes
60.76	Supports recommended Alternative 3.	Comment acknowledged.	No

DFED, Issue 6D: Critical Rate of Exceedances of Water Quality Standards

2.24	No comments. The details of statistical analysis are outside my area of expertise.	Comment acknowledged.	No
3.12	The case for using a greater than zero critical exceedance rate is clear when considering measurement error, sample unit definition, and averaging period.	Comment acknowledged.	No
3.9, 3.11, 3.10	The discussion confuses the concept of proportion of samples between the proportion within a water quality sample and the hypothetical proportion within the population of all possible water samples.	The language in question has been revised.	Yes
14.2, 14.3, 18.5, 20.6, 21.13, 21.38, 21.12, 21.39, 21.2, 21.22, 21.30, 21.33, 40.58, 40.72, 40.69, 40.14, 40.66, 40.65, 40.68, 40.54, 40.71, 40.73, 40.74, 40.75, 40.76, 40.64, 40.15, 40.82, 40.61, 40.60, 40.59, 51.65, 51.38, 51.51, 51.42, 51.52, 51.90,	Although, the binomial method with a 10% acceptable exceedance rate is an approach that would provide consistency in how standards are evaluated, it is inconsistent which how standards are written. Few standards are written with a 10% allowable exceedance rate.	<p>The first step in applying the provisions of the Policy is to assess if standards are met based on the terms of the standard. The second step would be to apply the binomial statistical analysis, in order to determine the level of confidence and power that exists in the decision that the data have shown an exceedance of a water quality standard occurred.</p> <p>The actual proportion of water in a water body that truly exceeds applicable water quality objectives cannot be known with 100 percent assurance. Therefore, statistical analysis must be performed on data to establish with some quantifiable level of certainty how to make valid decisions on sample data. As detailed in the draft FED, this rates proposed have been proposed by USEPA (2002a) and as presented are considered by USEPA to provide a decision rule for assessing compliance with standards. Consequently, this approach is consistent with water quality standards as written. Some level of exceedance greater than zero must be seen in order to account for sampling and analytical uncertainty.</p>	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
51.49, 51.53, 80.3, 80.4, 103.3, 104.10, 106.9, 107.2, 109.6, 109.7			
21.65	The statement, 'The critical exceedance rate is the proportion of samples that exceed an applicable water quality criterion providing overwhelming evidence that a water segment fails to meet water quality standards for the particular pollutant is biased against listing and water quality protection.	The language has been revised for clarity.	Yes
43.28, 60.77, 76.53	Agree with the staff-recommended alternative 4. Although we would prefer the 15 percent exceedance data in alternative 3, we note that other states using the exact binomial test are using a 10 percent critical rate of exceedance.	Comment acknowledged.	No
51.160	The binomial model, as implemented in the FED, is framed in the following way: 'given that the true exceedance rate is 0.1, 90% of samples of size N will contain k or fewer exceedances; thus, if we observe k+1 or more exceedances, we have cause for concern.' The problem with this framing is that it assumes that the true exceedance rate is both knowable and known, and fixes it at 0.1. Since the exceedance rate is what we would like to know, this framing puts the cart before the horse. In fact, we don't actually know what the exceedance rate is.	The Policy and FED follow standard statistical protocols in using the binomial test (acceptance sampling by attributes). The commenter is correct that the true exceedance rate is unknowable. It is for this reason that a exceedance rates are used in calculations in place of the true exceedance rate. This rate is pre-selected and is a policy decision. It is the rate above which policy-makers have significant concern that the water body should be listed. For listing, the important question is related to whether the exceedance rate is below or above critical levels. The actual level is of interest but it is not necessary to determine the precise value before listing or delisting can occur. Language in the Policy and FED have been revised for clarity on this issue.	Yes
51.39	USEPA stated plainly that the reliance on the 10% exceedance rule is based on an incorrect reading of USEPA guidance concerning allowable water quality exceedance rates. USEPA recommended criteria development approaches based on a 95% compliance rate for conventional pollutants and a more stringent compliance rate for toxic pollutants of 'at least 99%' in the context of a binomial method, or 'where 2 or more samples exceed the [CTR rule standards for aquatic life] in any 3 year period.' USEPA also criticized the use of the model's arbitrary selection of five exceedances for sample sets less than 20, finding that 'there is no technical rationale for this decision.'	As detailed in the draft FED, many viable alternatives for exceedance rate choices were considered. The ten percent option for conventional pollutants may, now, be disavowed by various authorities. But as the draft FED shows, its use for water quality analysis has been widespread and well-established. The Policy has been revised to use one of the statistical approaches related to interpretation of the CTR criteria (please refer to CALM at table 4-3) (USEPA, 2002a). The approach listed in the comment is also suggested in the CALM guidance as a non-statistical approach for determining compliance. In developing the Policy it was assumed statistical approaches would be used (please refer to Issue 6 of the FED).	No
104.9	The reverse null hypothesis or a balanced probability approach are not necessarily protective. The 10 percent rule may be protective and comply with water quality standards. In Florida the binomial method lead to the delisting of a large number of waterways, which USEPA promptly put back on their list. I urge the Board to direct staff to convene a facilitated process that involves the RWQCBs, USEPA, the PAG, and interested parties to develop an approach that	There is admittedly more than one valid way to accomplish the goal of section 303(d) listing/delisting. The draft Policy presents an approach that is functional, protective, and transparent. A new 'facilitated process' is unnecessary. The SWRCB has worked with regulated and environmental community representatives (through the PAG), the RWQCBs, and interested parties, to craft the draft Policy.	No

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	is functional, protective, and transparent. A multi-step, peer-reviewed process that includes bio-statisticians is needed.		
DFED, Issue 6E: Minimum Sample Size			
1.12, 1.8, 1.4, 1.19	For conventional pollutants, suggest a minimum sample size of 30 representative samples for a valid listing.	Although a minimum sample size of 30 would help decrease Type II error somewhat, the advantage would be minimal. A better way to address error rates is a balanced approach.	No
2.25	No comments. The details of statistical analysis are outside my area of expertise.	Comment acknowledged.	No
3.13, 3.14	The last paragraph under Alternative 3 is not quite right in detail, although it is in spirit. By calculation, if $a=0.10$ and $n=22$, the decision to list would require five or more exceedances, while the decision to delist would require zero exceedances, when the exact binomial test is used. If the sample size were less than 22, it would be impossible to conduct an exact binomial test to delist with $a=0.10$.	The language in question has been revised.	Yes
10.4, 40.41, 40.83, 40.62, 40.40, 51.67, 71.28, 72.4, 106.5	Use of binomial statistical inference does not work well with small data sets. Small sample sizes will show no reliable effect or small data sets can not reliably show presence or absence.	Decision making with small data sets is difficult no matter what test is used. One of the reasons to use the binomial test is that it can be used if sample size is relatively small (Lin et al., 2000). If a great amount of data is available, one is more sure of the conclusions compared to situations where little data are available (Hahn and Meeker, 1991). Relatively small samples can be used if the level of confidence and power needed is not excessively high. High confidence is needed when the immediate outcome of a decision is to build a new facility to treat water or some expensive remedial action. With respect to the section 303(d) list, the outcome of the decision is to develop a planning document (a TMDL) that will ultimately address the standards exceedance. Lower confidence and therefore smaller sample sizes are appropriate because there is opportunity to perform additional research and monitoring to characterize the water quality problem during the development of the TMDL. Using a relatively low confidence in the statistical test (such as 80 percent) is supported because it is likely that when the TMDL is developed the initial conclusions to place waters on the section 303(d) list will be corroborated.	No
11.7, 19.7	The number of samples exceeding the evaluation guideline required for listing is inconsistent with Table 3.1; this statement allows for inclusion with only 3 samples. The use of a sample population of 20 may be more appropriate to place waters on the 303(d) list.	There was no inconsistency. As described in Table 3.1, three exceedances must be observed in order to list a water body. The FED has been revised to describe the rationale for using this value when sample populations are small.	Yes
13.13	The recommended minimum samples may work well for chemical pollutants, parameters with high variability like sediment, require many more samples. The proposed policy should state that highly variable parameters like suspended sediment and turbidity require larger sample sizes, and that sample size should	No justification is provided to require larger sample sizes for turbidity and sediment. No change is indicated.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	be appropriate to the variability of parameter being monitored.		
40.63, 71.26, 71.25, 109.9	In the proposed draft Policy, a small sample size is defined as fewer than 10 or 20 samples to list and fewer than 22 samples to delist. These are reasonable definitions of small samples, since statistical tests based on samples of smaller size will have less power than larger samples for making sound and reliable decisions. It is appropriate for listing purposes to set the lower limit for sample size at 10 or 20 samples, since raising the minimum sample size will most likely prevent listing decisions for intermediate-sized samples. It is also necessary, as shown by calculation associated with the binomial test, that the minimum size to delist must be 22 samples.	When Type I and II errors are balanced using the approaches proposed in the CALM Guidance (USEPA, 2002a; Smith et al., 2001), the lowest sample sizes with acceptable errors range from 21-26 samples. Rather than use these sample sizes as minimum the Listing Policy is focused on the minimum number of exceedances that are allowed for listing and delisting. For example, if the threshold for listing is 2 or more samples above the standard then the sample size could be as low as 2 to support the decision to list because the listing threshold has been reached. The FED has been revised to include the rationale for listing with small sample populations.	Yes
40.80	The policy should more clearly explain how data would be evaluated in cases in which fewer than 4-5 samples are available in any particular month. We are concerned that exclusion of data from further consideration simply because the minimum monthly sample sizes are not available could result in incorrect conclusions that the objectives are attained.	If water quality objectives call for the evaluation of duration through a short term average the policy allows for the interpretation of standards using the available data and information. The policy does not prevent the interpretation of data and information based on the absolute number of samples available for the evaluation.	No
51.40, 51.45, 51.46, 51.43, 51.44, 51.37, 104.6, 106.1, 107.4, 219.3, 219.5, 219.2, 220.3	The minimum sample requirements can only encourage dischargers to oppose increased monitoring budgets or lead them to structure sample collection to avoid toxic pulses; in other words, to arrange for the majority of the sampling to occur when there is not a problem.	There is nothing in the Policy to prevent investigators from scheduling monitoring to collect samples when toxicity is present. The binomial-based procedures with the minimum sample sizes are an appropriate choice for analysis of sampled data. By balancing errors, incentives to monitor would increase.	No
60.78, 76.54	Supports recommended Alternative 4. It provides target sample sizes while satisfying USEPA guidance.	Comment acknowledged.	No
DFED, Issue 6F: Quantitation of Chemical Measurements			
2.26	Not sure which of Alternative 2 or 3 is the better for DFED. Alternative 2 gives less wiggle room but I do not know if it is better from a statistical point of view.	Comment acknowledged.	No
2.27, 3.15, 60.84, 76.59	One of the advantages of the exact binomial test is that there is no ambiguity in how to treat measurements below the quantitation limit, so long as that limit is less than the water quality objective. When the quantitation limit is larger than the water quality objective, measurements between the two are indeed difficult to interpret. The labeling of Figure 22 is incomplete (the upper horizontal line should be labeled QL and the lower WQO).	The FED has been revised to clarify the figure.	Yes
43.30, 60.79, 76.55	Agree with the staff-recommended alternative 2. Guidance is needed to promote consistency.	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
63.12, 204.2	A third alternative, that non-detects should only be interpreted as unknowns, should be added to this issue.	This alternative is not needed because it is already addressed under Alternative 1. Nondetect values are not known but if the water quality objective is above the quantitation level it is known that the standard is achieved.	Yes
63.13	If more sensitive/expensive tests are desired, then the results of these tests should be used even if compliance monitoring costs go up. The stakes are too high to assume that pollutants are present when they may not be.	Comment acknowledged.	No
DFED, Issue 7A: Review of the Existing Section 303(d) List			
2.28, 43.44, 60.47	If just the recommended Alternative 2 section 303(d) list, is done and the Board staff situation remains the same you will also be behind in the task and it will get worse and worse as time goes by. Why not use a combination of Alternatives 1 and 2 in which a certain number (or a certain fraction) of the existing list that does not have new data/information is revisited in each cycle. In this there would be a chance of eventually catching up.	The FED has been revised to include an analysis of this alternative.	Yes
7.12, 7.11, 7.16, 7.14, 7.13, 7.10, 9.1, 47.12, 47.2, 60.63	It is both reasonable and fair to examine and adopt a third option that would allow review of existing segments upon submittal of a request showing why the listing was improper without requiring the data or information to be new.	This new option has been included in the FED.	Yes
43.31, 60.80, 64.4, 76.56	Disagrees with recommended Alternative 2. Recommend that an Alternative 3 be developed. This Alternative should include delisting of all listings for which pollutants have not been identified and creating a schedule to review the remainder of the water segments listed prior to adoption of the Policy. Priority should be given to reviewing water segment-pollutant combinations listed prior to 2002. The July draft provided for reviewing existing listings over three listing cycles. Three two-year listing cycles would be acceptable, but not three four-year listing cycles. The new Alternative 3 should address the possibility that the length of the listing cycle could be changed.	Delistings should be based on substantial evidence in the record. If it is found that an analysis of the water body indicates that it does not meet the requirements of the Listing Policy, the water should be removed from the list. RWQCBs should be given the ability to delist if no new information is available but a delisting is warranted. The draft Policy and FED have been revised to allow RWQCBs to remove waters from the list if the provisions of the Policy are not met.	Yes
56.10	The SWRCB should adopt Alternative 1 in reviewing existing listing of the draft FED, and incorporate a requirement to revise the existing list so it is consistent with the Listing/Delisting Policy. Support the SWRCB's recommendation to establish an application process, whereby an interested party can request that an existing listing be reassessed under the provisions of the draft Listing Policy.	Comments acknowledged.	No
60.81	SWRCB needs to ensure that the proper documentation occurs for each of the listings (past, present, and future) so that the history and rationale for each listing is preserved. If past listings do not have proper documentation they need to be questioned instead of simply carried forward.	The draft Policy and FED have been revised to include a requirement to carry forward the summary of data and information even if it does not support the finding that the water should be placed on the list. This information is needed to develop the CWA section 305(b) report.	Yes

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
63.14, 204.3	Add a third alternative: prior to developing a TMDL, the listing data should be evaluated with the new criteria. This is needed to take unnecessary TMDLs off the list, reduce the RWQCB/SWRCB time burden, and establish quality assured data sets that will reduce TMDL timelines.	This comment is addressed by the TMDL Guidance Policy.	No

DFED, Issue 7B: Defining Existing Readily Available Data and Information

2.29	Agree with the recommendation, but add that a review of current appropriate literature published in archival journals should be reviewed. This could be a task prepared by a contractor for all RWQCBs.	Comment acknowledged.	No
11.3, 19.3	Requests the inclusion of annual Municipal Separate Storm Sewer System (MS4) monitoring report data as a source of information for listing decisions and can also serve as additional data that can be used to re-evaluate listed waters.	This change has been made.	Yes
21.41, 51.24, 51.26, 60.43, 76.26, 76.2, 102.15, 109.10	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. USEPA's rules with respect to the use of data in listing decisions could not be clearer: All readily available information should be considered; Data should not be discounted solely on the basis of age; and use of minimum sample sizes are not appropriate.	All readily available data and information shall be reviewed when the section 303(d) list is developed. All data and information includes everything available from whatever source whether it identifies pollutants or not. The process of defining existing readily available data and information includes two phases. One is defining all the sources where the data and information can come from, the other is whether the data and information gathered is acceptable for listing. The FED discussed two alternatives and includes a non-inclusive list of possible sources for the data and information, and recommends that readily available data and information should be in written or in electronic form. In specifying the type of data and information to be solicited, the Policy establishes a preference for data and information that are documented on paper or in electronic form. Otherwise readily available data and information should be requested from all sources of whatever quality. The FED and the policy have been revised; data age and minimum sample size requirements have been removed from the Policy.	Yes
43.32, 60.82, 63.15, 76.57	Supports recommended Alternative 2.	Comment acknowledged.	No

DFED, Issue 7C: Process for Soliciting Data and Information and Approval of the List

2.30	Agree with recommendation number 3. Use the greatest possible number of resources to collect data! This will help reach the most informed decision.	Comment acknowledged.	No
43.33	Recommend that fact sheets be developed for 1998 listings that were carried forward to the 2002 list, indicating when they were originally listed. Agree with the staff-recommended alternative 3.	New fact sheets will be developed in accordance with the approved Policy when existing section 303(d) listings are reevaluated.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
60.83, 76.58	Supports recommended Alternative 3 with one change. RWQCBs should be required to consider the listing recommendations at workshops or hearings.	The RWQCB would evaluate all readily available data and information, prepare fact sheets on all pertinent information for each potential water body-pollutant combination and then hold public meetings to consider listing or delisting based upon the identified information.	No

DFED, Issue 7D: Documentation of Data and Information

2.31	Agree with the recommendation but add a catch-all section. Other Considerations/Information to include possible points that may not fit any of listed categories.	Comment acknowledged.	No
43.34	Agree with the staff-recommended alternative 2, but we advocate revising it to separate pollutants and pollution. Pollutant and type of pollution should be separated.	Comment acknowledged.	No
50.2	Standardizing the listing/delisting process should not be so inflexible as to preclude data, analysis, and monitoring if it does not meet some standard format. To do so would result in a significant impact that would have to be evaluated and mitigated.	Comment acknowledged.	No

DFED, Issue 7E: Data Quality Requirements

2.32	Agree with the recommendation. Obvious choice if data are to be defensible.	Comment acknowledged.	No
43.35, 60.85, 76.60	Agree that we need to know the quality of the data. Agree with the staff-recommended alternative 2.	Comment acknowledged.	No
51.36	Whether data was correctly collected, analyzed and reported - is addressed at the monitoring and analysis stage, for which the draft Policy sets 'data quality requirements.' QAPPs developed according to either the federal or SWAMP guidelines will contain assurances against erroneous laboratory procedures, systematic error sources, extraction and instrument error, and data transfer protocols to protect against transfer errors, and transcription, calculation, and input errors. These assurances substantially mitigate the possibility of operator and instrument error, and create a very high level of confidence that samples under these programs were properly collected, analyzed, and reported. The application of statistics in the manner proposed would duplicate the error-management mechanisms of QAPPs.	QAPPs only manage error, quality assurance processes do not remove the error. Sometimes monitoring programs allow substantial error because the only available cost effective procedures are inherently variable. The application of statistics is an acknowledgement that error in decision making is ever-present and that these errors should be considered transparently. The use of statistics along with the requirement of QAPPs (or equivalent) in the Listing Policy does not create a duplication of error management.	No

DFED, Issue 7F: Spatial and Temporal Representation

2.33, 43.36, 60.86, 76.61	Supports recommended Alternative 3. Concur that spatial and temporal representation of water body segments is essential information for use in the	Comment acknowledged.	No
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	listing and delisting process. Support the idea that samples can be less than 200 meters apart and still be considered spatially independent if justified in the fact sheet.		
217.12, 217.10	The end result of this policy will be that water bodies shown to have exceeded numeric standards through chemical analysis will be easier to list than those water bodies that are exhibiting more severe impacts, which are often caused by low levels of multiple pollutants.	The Policy provides a mechanism to address trends in water quality to assess problems where numeric water quality standards are not exceeded but severe biological impacts are present.	No
220.2	If the source of the problem is clear and ongoing, as it is in so many harbors and marinas, why should the timing of the samples prevent it from being listed? It is unclear whether samples can be accumulated over the years; the draft guidelines are silent; I can't find clear guidance.	Sampling representation can be either over short or long periods of time. Requirements for spatial and temporal representation can be found in the Draft FED, Issue 7F. The sections of the Policy focused on spatial and temporal representation have been clarified.	Yes

DFED, Issue 7G: Data Age Requirement

2.34, 8.21, 19.16, 30.10, 43.37, 44.7, 50.3, 63.16	Age of data per se is not important. The important things to determine are the quality and relevance to the current situation. If data score high on these counts there is every justification to use them even if they are old.	The most important aspect of age of data is its relevance to describing current conditions of the water segment and its quality. Recent data are always more representative of current conditions. However, if only old data are available, it should be used in the listing process. The age of data requirements have been removed from the Policy so that all relevant data and information can be used.	Yes
60.87, 76.63, 76.62	California should require that the data and information used to justify a listing decision are reasonably current. Other states have such requirements and we assert that this is another necessary method of infusing rationality into the listing process. Agrees with recommended Alternative 1, although we would prefer a shorter time period such as the 7.5 year old data limit used by Florida.	Reasonably current and representative data should always be used. If older data is all that is available it should be used as well. The data age requirements have been deleted to encourage the use of all data and information.	Yes

DFED, Issue 7H: Determining Water Body Segmentation

2.35	Agree with the recommendation. This allows better focus on problematic areas and concentrates resources on the real problem.	Comment acknowledged.	No
43.38	Agree with staff-recommended alternative 1 with modifications to policy section 6.2.5.6 to prevent incremental addition of segments to listed water bodies with only one sample exceeding water quality standards.	The last two sentences in the section have been removed from the Policy.	Yes
50.4	The Policy should not ignore the need to consider related and connected water body components or segments and the effects of conditions from one segment to the other.	Comment acknowledged.	No
60.88, 76.65, 76.64	Agrees with recommended Alternative 1.	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
DFED, Issue 7I: Natural Sources of Pollutants			
1.2, 18.51, 18.13, 19.20, 30.7, 40.19, 40.20, 43.39, 50.5, 51.98, 203.11	Inappropriate 303(d) listings due to legacy problems and natural sources are not adequately addressed in the policy.	The Policy has been revised to remove guidance regarding impacts relative to natural sources. This provides the RWQCBs with the flexibility to add, remove, or not list waters due to natural sources. Water bodies recommended for 303(d) listing in the future or existing listings recommended for removal from the 303(d) list due to natural sources will require review and approval by the SWRCB.	Yes
2.36, 8.7, 60.89	Agrees with recommended Alternative 2. Agrees with staff that waters should not be listed if the pollutant causing them to not meet water quality standards originated from natural sources.	Comment acknowledged.	No
DFED, Issue 8: Priority Ranking and TMDL Completion Schedule			
11.13, 18.73, 18.53, 18.15, 18.98, 18.72, 19.15, 20.26, 20.27, 20.25, 20.24, 21.40, 27.3, 37.5, 37.1, 40.111, 40.35, 40.109, 40.110, 40.34, 40.100, 42.4, 43.40, 43.50, 43.59, 51.158, 51.157, 53.4, 58.15, 60.37, 60.90, 60.36, 76.66, 76.23, 80.12, 80.11, 101.8, 109.15, 207.6, 207.15, 214.1	Supports the FED Alternative 2 recommendation. The TMDL process should be prioritized based on the factors listed in Alternative 2 in order to result in improved water quality listings. Further, the development of TMDLs should be linked to the priority of the water quality problem.	CWA section 303(d) requires the establishment of a priority ranking for listed waters and the development of TMDLs for such waters in accordance with the established priority. The schedule for TMDL development will identify which TMDLs will be established within the current cycle and the number of TMDLs scheduled to be developed thereafter. The general intent of prioritizing and scheduling is to assist in work planning and to help the public and USEPA understand the priorities for TMDL development. In developing schedules, the RWQCBs need to determine which TMDLs are higher priorities and which are not, but in doing so it is unnecessary to identify each TMDL as high, medium or low if the schedule for each TMDL is established. The Policy has been revised to require the establishment of a schedule for TMDL development as suggested in the 2004 USEPA listing guidance (USEPA, 2003b) and let the schedule in and of itself reflect the state's priority ranking. The Policy has been revised to drop priority-setting requirements to be consistent with the 2004 USEPA listing guidance.	Yes
50.6	Priority ranking and the TMDL completion schedule should incorporate effective implementation of any TMDL.	It is not possible to incorporate effectiveness of TMDL implementation at the list stage because the TMDL has yet to be developed.	No
50.7	Consideration for priority should be given, as appropriate, to more than just a singular water body if impairment is documented throughout the watershed or in more than one or two segments.	The Policy has been revised to consider scheduling waters for TMDLs when there could be water quality benefits of activities in watersheds.	Yes

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
51.156	<p>The CWA's TMDL program is a safety net that is designed to induce action on water segments in which water quality objectives are not being met. As such, water segments should be identified and TMDLs should be developed as swiftly as possible. The USEPA Integrated Guidance states that 'TMDLs should be established 8 to 13 years from the date of the original water/pollutant combination listing.' This is hardly an expedited schedule; but the draft Policy's provisions are even more relaxed, stating in Section 5 that low priority TMDLs: 'will be completed in more than 5 years.'</p> <p>The 2002 303(d) list tables indicate that approximately 800 TMDLs are required in California water segments. However, according to the 2002 305(b) report, only 18 have been adopted by SWRCB to date, and only nine completed TMDLs currently await adoption by SWRCB, OAL or USEPA. The lack of adequate monitoring also contributes substantially to the delay in TMDL implementation. As discussed elsewhere in this letter, monitoring efforts in the state of California often do not produce adequate data to comply with the minimum sample size requirements the draft Policy, let alone provide for review of already listed segments and development of TMDLs. This delay in implementation of our water quality safety net is unjustified and threatens further degradation in the quality of California's waters. Agree with USEPA that 'the description of medium priority in 5 years and low priority after 5 years needs to be rectified,' and that the state's schedule, which lags far behind what is recommended in the USEPA Integrated Guidance, and should be revised to be at a minimum consistent with the Guidance.</p>	The Policy and FED have been revised to include a requirement for a completion date for all TMDLs. The USEPA guidance (2003a) has not been included that requires TMDLs to be completed in 8 to 13 years because future resource levels can only be predicted one to two years into the future.	Yes

DFED, Environmental Effects Section

10.23, 10.22, 51.61	In the event that CEQA review is mandated for this project, discussion of alternatives (with analysis) may bring some insight to what may or may not help the process work more efficiently from both the environmental objective point of view and organizational policy.	The process the SWRCB used to develop the Policy has been certified by the Resources Agency to be functionally equivalent to the CEQA process. The FED fulfills the requirements of CEQA for preparation of an environmental document. The FED discusses alternatives for each issue.	No
18.54	The Alternatives Analysis in the FED should be revised to provide a rationale for each alternative that is chosen. Currently, the FED describes different alternatives and identifies the preferred alternative, but provides no apparent rationale for the choice of alternative. This approach does not appear to be consistent with CEQA requirements.	The alternatives analysis for each issue follows CEQA requirements by providing the pros and cons for each alternative; the rationale for the chosen alternative is contained within the pro argument. For each major section of the Policy, the FED describes how the Policy addresses the issue and briefly explains why the Policy was developed this way. Brief statements of the reason(s) an alternative was selected has been added to the preferred alternative.	Yes
21.68	The statements in 'Potential Adverse Environmental Effects' and the 'Potentially Significant Adverse Environmental Effects' are in error if the proposed Policy is adopted as proposed, properly defining the water bodies with impaired beneficial uses which need attention will be inadequately addressed. There will be far fewer 303(d) listed water bodies that really exist in accordance with CWA	The analysis of the environmental effects of the Policy focuses on the differences between existing RWQCB listing and delisting practices and the proposed Policy and whether adoption of the Policy would have a significant adverse effect. A significant effect on the environment is generally defined as a substantial or potentially substantial adverse change in the physical	No

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	requirements.	environment. Using this definition, the adoption of the Policy will not have a significant adverse environmental effect because the Policy comprises a process by which the SWRCB and RWQCBs will comply with the listing requirements of the CWA and in and of itself does not change the physical environment. In addition, water bodies with impaired beneficial uses will be addressed during the biennial listing process. CWA section 303(d) addresses impaired water bodies. The Policy provides a process, adhering to section 303(d) requirements, to document and list water bodies not meeting water quality standards. The Policy defines the existence of waters that do not meet standards.	
49.5	The draft Policy should direct the staff to revise the FED to bring it into compliance with SWRCB regulations and the CEQA.	SWRCB staff prepared the draft FED and Policy under the direction of California Water Code section 13191.3(a). The FED is in compliance with this section and meets the regulatory program exemption under section 21080.5 of the Public Resources Code requirements to prepare an EIR under CEQA and with other applicable laws and regulations. As such the FED and Policy comply with SWRCB regulations and the requirements of CEQA.	No
50.1	Baseline conditions described in the FED lacks evidence of current conditions and does not take into account that implementation plans for TMDLs languish.	The baseline conditions comprise the existing practices and procedures currently employed by the SWRCB and the RWQCBs for assessing the surface water bodies of the state in compliance with CWA section 303(d). The baseline is the process that occurred in the listing and delisting of water quality limited segments in the absence of the proposed Policy. However, the FED has been revised to include the type of water body, pollutant, and estimated area affected that were placed on the list as a result of the baseline process used by the SWRCB and RWQCBs that occurred in the listing and delisting of water quality limited segments in the absence of the proposed Policy. Implementation plans for TMDLs are addressed in the Draft Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options (SWRCB, 2004).	Yes
51.167	The Policy will cause a demonstrably higher level of pollution with consequent human health and environmental impacts. These effects are adverse and significant. Consequently, the FED must identify, analyze and mitigate for them. In the absence of such identification, analysis and mitigation any approval of the policy violates CEQA.	The adoption of the Policy will not result in human health and environmental impacts and meets CEQA requirements by identifying the issues, analyzing alternatives and selecting the superior alternative. The analysis of issues is based on the impacts due to the adoption of the Policy. Adoption of the Policy does not result in a higher level of pollution, consequences to human health or environmental impacts. The Policy provides guidance in methodology to be used to list, not list, or de-list water bodies. Identification and mitigation of significant adverse impacts due to pollutants in water bodies is part of the TMDL development process; identification, analysis, and mitigation for significant and adverse impacts will be addressed at that time.	No
51.62	The FED fails to identify, analyze and mitigate numerous significant and potentially significant adverse environmental effects of the project. The FED summarily concludes that there will be absolutely no impact from this sweeping	The analysis of the environmental effects of the Policy focuses on the differences between existing RWQCB listing and delisting practices and the proposed Policy and whether adoption of the Policy would have a significant	No

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	<p>and dramatic policy change, not even a 'less than significant impact.' Potentially adverse environmental effects are disposed of in a series of curt and conclusory paragraphs with no analyses whatsoever. Potentially significant adverse environmental effects are afforded only a single word of discussion -- the word 'None.' These findings are not supported by any evidence in the record and are in fact contradicted by numerous other findings and evidence set forth in the FED. Since the draft Policy applies to virtually every regulated pollutant, and determines whether discharges of these pollutants will be reduced in the future, it is self evident that the policy will impact the quantities of these pollutants being released into the environment.</p>	<p>adverse effect. A significant effect on the environment is generally defined as a substantial or potentially substantial adverse change in the physical environment. Using this definition, the adoption of the Policy will not have a significant adverse environmental effect because the Policy comprises a process by which the SWRCB and RWQCBs will comply with the listing requirements of the CWA and in and of itself does not change the physical environment. Additionally, the Policy provides guidance on using scientific data and information to document standards attainment to a water body and whether the impact warrants placement on the section 303(d) list. The Policy itself does not determine whether pollutant discharges will be reduced; the implementation of a TMDL deals with allocation and reduction of pollutant loads.</p>	
51.63	<p>The FED fails to identify, analyze and mitigate significant adverse impacts to impaired waterways that will not be listed or will be removed from the list. The Policy guarantees that numerous impaired water bodies will not be listed (or will be delisted) including: water bodies whose impairment is periodic or episodic; water bodies whose impairment is recent, even if the data shows a clear trend over time toward the current exceedance of standards; water bodies whose impairment is supported by older data even in the absence of more recent counter-indicative data; water bodies in which an impairment is not uniformly distributed in the water body; impaired waterways in which only a moderate number of samples have been taken; water bodies impaired with toxic chemicals whose sampling does not satisfy the 'Critical Exceedance Threshold' set forth in the Policy; water bodies whose impairments are not amenable to statistical testing; water bodies impaired by pollution rather than pollutants; water bodies impaired by exotic species; water bodies impaired by natural sources; and water bodies impaired by toxicity where no pollutant has been identified.</p>	<p>The analysis of the environmental effects of the Policy focuses on the differences between existing RWQCB listing and delisting practices and the proposed Policy and whether adoption of the Policy would have a significant adverse effect. A significant effect on the environment is generally defined as a substantial or potentially substantial adverse change in the physical environment. Using this definition, the adoption of the Policy will not have a significant adverse environmental effect because the Policy comprises a process by which the SWRCB and RWQCBs will comply with the listing requirements of the CWA and in and of itself does not change the physical environment. In addition, the Policy does not guarantee that numerous water bodies will not be listed or will be de-listed. The Policy provides guidance on the listing factors mentioned based on scientifically credible data and information and provides a process to evaluate data using a situation-specific weight of evidence listing factor. The Policy provides the methodology to assess all available data; as well as a process to validate data.</p>	No
51.69	<p>The FED fails to adequately consider and mitigate the cumulative impacts of the policy. No effort is made to analyze impacts that may result from individual or repeated failures to list impaired waterways. This contravenes CEQA's requirement that cumulative impacts be considered and mitigated. No effort is made in the FED to analyze impacts that may result from individual or repeated failures to list impaired waterways when combined with the impacts of other policy decisions such as the recently adopted waivers for agricultural and silvicultural waste in the Central Valley, the proposed California Non-Point Source Plan, the proposed amendments to the Ocean Plan, the ongoing NPDES permitting program or numerous other SWRCB water projects. Likewise no effort has been made to identify, analyze or mitigate the health impacts that arise from the repeated exposure of humans to the pollutants and pollution resulting from this policy when combined with other sources such as from air sources, food sources, workplace exposures, etc. Nor has a similar analysis of the cumulative ecological effects of these pollutants and this pollution when</p>	<p>The analysis of the environmental effects of the Policy focuses on the differences between existing RWQCB listing and delisting practices and the proposed Policy and whether adoption of the Policy would have a significant adverse effect. A significant effect on the environment is generally defined as a substantial or potentially substantial adverse change in the physical environment. Using this definition, the adoption of the Policy will not have a significant adverse environmental effect because the Policy comprises a process by which the SWRCB and RWQCBs will comply with the listing requirements of the CWA and in and of itself does not change the physical environment.</p> <p>In addition, in the alternatives analysis for the various issues, the FED addresses the impacts of listing and delisting decisions as compared to the baseline condition - decisions made without a Policy. Staff selected the alternative that best complies with the listing requirements of the CWA and</p>	No

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	combined with that of other sources been conducted. This contravenes CEQA's requirement that cumulative impacts be identified, considered and mitigated.	establishes a standardized listing approach. This Policy applies only to the listing process methodology used to comply with CWA section 303(d). The Policy is not intended to be used to determine compliance with any permit or waste discharge requirement provision; establish, revise, or refine any water quality objective or beneficial use; or translate narrative water quality objectives for the purposes of regulating point sources. The adoption of the Policy has no impact on health impacts from the sources cited nor does the adoption of the Policy result in ecological impacts; the potential for these types of impacts will be addressed during the TMDL development process. The adoption of the Policy will not result in a cumulative impact and under CEQA guidelines would result in a de minimus impact.	
51.71	The Policy does not make clear what legal significance the FED will have after adoption of the policy. Among the measures set forth in the FED which do not appear in the Policy are: a weight of evidence alternative listing procedure; a weight of evidence approach to determine the pollutants(s) that may cause toxicity; a procedure for listing nutrients which allows the use of 'models, scientific literature, data comparisons, to historical values or to similar but unimpacted streams, Basins Plan objectives, other scientifically defensible methods' in making a listing decision; a procedure, which allows 'both quantitative and qualitative data and information in the evaluation of nuisance.'; a case-by-case interpretive approach to the listing of sedimentation providing that 'general guidelines to trigger listing' and stating that a water body can be listed if any one of the following conditions are met: beneficial use impairment caused by increased sediment loads; evidence that beneficial use impacts are caused by sediment; nuisance caused by sediment loads, or exceedances of turbidity objectives. The FED repeatedly describes a robust alternative listing procedure that relies on a weight of the evidence test. The Policy does not contain such a procedure. Instead sections 3.1.11 and 4.10 of the Policy set forth a procedure that is no less restrictive than the binomial hypothesis statistical test. The procedure excludes qualitative information and other non-quantitative tools. The weight of evidence language in the FED appears to be both inaccurate and misleading. To the extent these measures are not a binding part of the Policy, a decision by SWRCB based upon the FED violates CEQA. The FED inaccurately describes the project and its mitigation measures. This is misleading to the public and defeats the central purpose of the statute. Additionally, the failure to incorporate these measures into the policy invalidates the FED's finding of no significant impact. Moreover, many of these policy provisions constitute mitigation measures, which lessen the policy's impact on the environment. CEQA mandates that such requirements be carried out contemporaneously with the project.	<p>The draft FED supports the Policy by exploring various alternatives, providing options and recommendations, and evaluating the environmental impacts of the Policy guidelines. SWRCB regulations require that such a document, equivalent to a CEQA document, accompany a policy proposed for adoption. In addition to supporting the Policy adoption process, the FED provides the rationale for provisions of the Policy and in some cases, more detailed information to guide the future implementation of the Policy.</p> <p>The process the SWRCB used to develop the Policy has been certified by the Resources Agency to be functionally equivalent to the CEQA process. The FED fulfills the requirements of CEQA for preparation of an environmental document. The FED discusses alternatives for each issue.</p> <p>'Weight of evidence' and 'multiple lines of evidence' as used in the draft Policy are accepted concepts in the scientific literature (e.g., Good, 1985; Smith et al., 2001), and are therefore discussed and promoted accordingly in the draft FED and draft Policy (see Section 3). As a first step, in implementing the Policy these approaches are required to be used in conjunction with the binomial test for numeric sample data. The use of hypothesis or significance testing is one way to weigh evidence (Good, 1985). The draft Policy also allows RWQCBs to recommend listings or delistings based on the situation-specific weight of evidence factor.</p> <p>RWQCBs will need to document all listings and delisting decisions in fact sheets and SWRCB shall determine if there is substantial evidence to list or delist.</p> <p>The new section in the introduction of the Policy presents the steps for implementing the Policy's weight of evidence approach. The approach includes the process for data and information preprocessing, data and information processing, and combining lines of evidence. The Policy also has weight of evidence listing and delisting factors that allows RWQCB to make recommendations as long as RWQCBs justify its recommendations by:</p>	No

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		<p>--Providing any data or information supporting the decision; --Describing in fact sheets how the data or information affords a substantial basis in fact which the decision can be reasonably inferred; --Demonstrating that the weight of evidence of the data and information indicate attainment status of the water quality standard; and --Demonstrating that the approach used in scientifically defensible and reproducible.</p>	
51.77, 51.72, 58.16	<p>The relative ease with which we found these waters belies the draft Policy's assertion that "no issues [in the draft Policy] were found to have the potential for significant adverse environmental effects," and illustrates the need for significant modifications to the Policy in order to ensure that similar, yet- unidentified waters are not left behind.</p>	<p>The analysis of the environmental effects of the Policy focuses on the differences between existing RWQCB listing and delisting practices and the proposed Policy and whether adoption of the Policy would have a significant adverse effect. A significant effect on the environment is generally defined as a substantial or potentially substantial adverse change in the physical environment. Using this definition, the adoption of the Policy will not have a significant adverse environmental effect because the Policy comprises a process by which the SWRCB and RWQCBs will comply with the listing requirements of the CWA and in and of itself does not change the physical environment.</p>	No
55.1	<p>SWRCB has complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the CEQA.</p>	<p>Comment acknowledged.</p>	No
60.91	<p>This section of the FED will also need to be revised. Recommend that you carefully consider all policy recommendations that you receive and make required changes to the FED.</p>	<p>All public comments on the draft Policy and FED have been carefully analyzed. Changes to the policy and FED were made where merited.</p>	No
65.1	<p>All segments of the coalition are potentially impacted by the draft Policy, including construction employees who rely on jobs in the State, landowners within the State's boundary and potential builders attempting to satisfy the ever-growing demand for housing.</p>	<p>There is nothing in the Policy that requires property to be used in a certain way or prohibits property from being developed. Adoption of the Policy would not affect housing or population growth.</p>	No
102.8, 105.7	<p>The proposed policy will violate antidegradation requirements by allowing significant degradation of state waters. The proposed binomial model will over counts errors and allow for significant lack of information about impaired waters. It will therefore allow impaired waters to continue to degrade rather than identifying them for clean up.</p>	<p>The Listing Policy does not allow degradation but rather identifies which waters do not meet standards, the pollutants contributing to or causing the standards exceedance (in most cases), which of these waters still need TMDLs, and the schedule for developing TMDLs.</p> <p>The binomial model does not overcount errors but rather identifies the errors that may be made given exceedance frequency, sample size, and other factors related to the decision.</p>	No
105.2	<p>If the RWQCBs and SWRCB implement a TMDL for every listed water body, pollution will be reduced when impaired water bodies are listed. That sounds to me like a significant adverse environmental effect.</p>	<p>It is true that the reduction of pollution and associated management measures required for the implementation of a TMDL may represent a significant environmental impact. However, the significance of the impact is reviewed during the implementation of the TMDL; pollution is not reduced when an</p>	No

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		impaired water body is listed. Impacts will be analyzed as a part of the TMDL implementation process. The implementation of the Policy itself does not result in a decrease in pollution in a particular water body; hence, the Policy does not result in a significant environmental impact.	
105.8	To implement the Policy, a statement of overriding considerations (SOC) is required. The SOC is designed to reveal exactly the kind of policy assumptions being made in the draft Policy--that economic consequences are more important than ecological consequences. The Policy should mitigate this significant environmental impact.	Section 21080.5 of the Public Resources Code provides that a regulatory program of a state agency shall be certified by the Secretary for Resources as being exempt from the requirements for preparing EIRs, Negative Declarations, and Initial Studies if the Secretary finds that the program meets the criteria contained in that code section. The draft Policy meets this exemption and, therefore, is not required to prepare an EIR which would contain the statement of overriding considerations. A statement of overriding considerations is not needed because there are no impacts. Further, the FED analyzes alternatives for each of the identified issues and has selected the superior alternative, per CEQA requirements.	No
Draft Policy, Section 1: Introduction			
10.3	<p>A consistent listing process should be sought for many reasons including but not limited to:</p> <ul style="list-style-type: none"> - economic efficiency, - reliance, - error limitation, - reasonable confidence levels. <p>These goals will all go down the drain if the policy fails to address the overriding goal of protecting and rehabilitating the state's water resources.</p> <p>Policy must take into account vast differences in water bodies, pollutants, biologic function, chemical interactions, drainage area, geology, and long term effects on these resources. Creating a consistent process (policy) with all of these variables is difficult, at best. The goal of consistency should not limit effectiveness of process to accommodate appropriate listing of impaired waters.</p>	Comments acknowledged.	No
18.21	Language regarding how the Policy is not to be used in section 1 should be deleted. The purpose of the Policy is already described, so it is unnecessary to identify how it shall not be used.	This information is necessary because the provisions of the Policy could possibly be used for purposes other than developing the section 303(d) list. It is, for example, inappropriate to use the provisions of the Policy in order to translate narrative water quality objectives into numeric effluent limits or receiving water limits using the Policy.	No
23.3	NRC recommendations are based on a recognition that listing decisions may be based on outdated or inappropriate data.	Comment acknowledged.	No
40.8	It is unclear how many policy elements will actually be interpreted and applied	All elements of the Policy will be implemented by SWRCB and RWQCBs.	No

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	by SWRCB and RWQCB staff because they are not explained clearly in the draft policy. The policy is inconsistent in its description of assessment methods as requirements or as discretionary guidelines.		
43.42, 60.19, 60.18, 60.17, 76.7, 76.8	Section 1 should be expanded by no more than a page to provide a more complete explanation of the legal and regulatory framework for 303(d) listing. Paragraph 2 of the introduction should be expanded to provide more thorough descriptions of both CWA section 303(d) and 40 CFR 130.7.	The explanation of the section 303(d) listing process is contained in the FED. Brief descriptions of section 303(d) and 40 CFR 130.7 have been included to enhance clarity. Repeating large portions of the CWA or federal regulation is not necessary and may not be in compliance with APA section 11349(f). The objective of the Policy has also been expanded to enhance the description of SWRCB's intent.	Yes
53.5	The introduction to the Listing Policy should state that the SWAMP program is intended for general assessment of statewide water quality. SWAMP is mandated as an ambient monitoring program, and the Report to the Legislature that laid the foundation for SWAMP specifically directs that RWQCBs shall not focus SWAMP resources exclusively on sites with known or suspected problems. Listing under the proposed Listing Policy guidelines will require additional monitoring resources that are not currently available through SWAMP.	SWAMP data will be used to help implement the Policy as will the data from many other monitoring programs. This statement does not clarify the section 303(d) list requirement, decision rules, or implementation procedures presented in the draft Policy.	No
76.9	The Introduction should also include the statement from the Notice of Public Hearing that specifies that the Section 303(d) list must include water quality limited segments, associated pollutants, and a priority ranking of the waters for the purpose of developing total maximum daily loads (TMDLs) in the next two years.	The draft Policy describes explicitly the decision rules and procedures to be used for placement and removal of waters from the section 303(d) list. The statement would be duplicative of descriptions already contained in the Policy.	No
222.1	Proactive approaches need to be used by the cities of the dischargers rather than spending the time to go back. We hope you are not going back to the 1998 listing.	The process proposed in the draft Policy is very different than the 1998 process.	No

Draft Policy, Section 2: Structure of the List

1.1, 19.6	The distinction between waters to be placed on the 'Water Quality Limited Segments Category' (section 2.1) and waters to be placed in the Enforceable Program Category (section 2.3) is not clear and seems circular.	The Policy has been revised; the Enforceable Program Category (section 2.3) has been redefined and is now encompassed in section 2.2 Water Quality Limited Sections Being Addressed category which also includes TMDLs that have been developed and approved by the USEPA.	Yes
5.7, 7.8, 7.4, 7.2, 7.3, 9.2, 11.4, 11.6, 12.4, 17.1, 18.65, 18.50, 18.22, 18.96, 19.4, 22.2, 23.7, 24.4, 25.6, 25.7, 25.5,	Strongly support the concept of dual lists, and encourage the SWRCB to re-instate the use of dual lists in its final listing/delisting policy. Use of a planning list would be appropriate for impairments with undetermined causes, for use when insufficient data exist to determine a water body impairment status, or for cases where water quality standards may be inappropriate.	The focus of the Listing Policy is to provide the requirements for the development of the section 303(d) list; guidance on other lists is not included in the Policy. The Policy has been revised to focus on those waters still needing TMDLs and to identify those waters where TMDLs or other regulatory actions have been completed. In all cases but one, the Policy calls for the identification of the pollutant that will become the focus of the TMDL. Federal regulation allows for developing TMDLs for the identified pollutants causing or expected	Yes

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
<p>28.2, 29.2, 29.15, 38.3, 38.7, 39.2, 40.25, 43.54, 43.55, 43.43, 43.46, 44.3, 47.7, 47.8, 47.1, 56.7, 56.9, 56.5, 57.3, 57.4, 59.3, 60.15, 60.20, 60.22, 60.23, 60.24, 60.5, 60.29, 61.5, 61.6, 64.2, 65.5, 65.6, 67.2, 68.6, 70.3, 70.2, 71.27, 71.5, 71.13, 71.12, 72.6, 74.2, 76.10, 76.18, 76.16, 79.2, 80.7, 83.3, 83.6, 108.9, 111.6, 114.6, 114.5, 115.3, 116.4, 116.3, 116.2, 117.2, 118.2, 201.5, 201.4, 202.4, 203.2, 205.2, 205.3, 206.3, 207.18, 207.20, 207.24, 207.12, 207.23, 207.25, 207.11, 207.21, 208.3, 211.2, 211.4, 213.4, 213.5, 213.3</p>		<p>to cause water quality standards violations (40 CFR 130.7(b)((4)). The exception is toxicity. The definition of a TMDL (40 CFR 130.2(I)) allows for 'TMDLs to expressed in terms of either mass per time, toxicity or other appropriate measure.' In order for TMDLs to be expressed in terms of toxicity it is necessary for TMDLs to be developed for toxicity. The draft policy allows for the listing waters for toxicity if the pollutant is known or not.</p> <p>The section 303(d) list now has two categories: Water quality limited segments and those waters not meeting standards where the attainment problem is being addressed. Waters without adequate information or that are clean would be acknowledged in fact sheets but no judgement would be made on their disposition. This information would be used in the development of the section 305(b) report.</p>	
8.20	<p>Assessments based on narrative standards or other qualitative assessments should be added to the list of excluded assessments. The Policy should allow for listing only where there is clear and convincing quantitative scientific evidence that human activity has caused impairment that can be reasonably remedied.</p>	<p>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.</p>	No
14.7, 18.12, 18.62, 20.20, 20.23	<p>Recommend that the policy should not describe the actions to be taken as a consequence of listing. The draft Listing Policy is not consistent with this recommendation. The 303(d) list would include priorities and schedules for the development of TMDLs for all listed waters. The Enforceable Programs Category specifies the types of actions that must take place for waters to be considered an Enforceable Program. These required actions may be in conflict</p>	<p>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 address</p>	Yes

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	with the Impaired Waters Guidance being developed.	<p>these problems. It seems to be 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 completely address the water quality problem.</p> <p>The Policy has been revised to allow RWQCBs to determine if a regulatory program can be used to address a pollutant-related water quality problem.</p>	
18.58	<p>Recommended that 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.</p> <p>The draft Listing Policy is not consistent with this recommendation. The draft Listing Policy would fail to identify water quality problems related to invasive species, habitat degradation, flow modification, or other non-pollutant sources. Only those waters not meeting standards due to pollutants (e.g. pesticides, nutrients, sediment, etc) would be identified.</p>	<p>Creating an 'impaired waters' list goes beyond the requirements of state law in developing the listing and delisting 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 TMDL program and total maximum daily loads pursuant to section 303(d). 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. Federal regulation requires states to develop a list of waters that do not meet water quality standards and where TMDLs are still needed. The draft Policy addresses waters impacted by pollutants that do not meet water quality standards and where TMDLs are still needed. The Policy also requires listing of waters where standards are not met and a TMDL has been completed or another program is available to correct the identified pollutant related problem.</p>	No
18.92, 18.94, 18.91, 42.3	<p>The TMDL Roundtable recommends that the 303(d) list should be an all-inclusive list of Impaired waters and not just a list of those waters USEPA determines to need a TMDLs. Establishment of an all-inclusive list of impaired waters include waters that do not currently meet water quality standards. Attainment of water quality standards is the only factor that is used to determine if a water should be listed. If a water is not attaining water quality standards, a separate and subsequent analysis is needed to determine the most appropriate regulatory remedy to address the impairment. Determination of the appropriate remedy is not part of the listing process as there is typically insufficient information to do so.</p>	<p>This recommendation is very similar to the structure of the section 303(d) list as adopted in 1998 and is included in the FED as one alternative. The 1998 list included all waters that were identified as not meeting standards. The expectation at that time 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.</p> <p>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 section 303(d) and 40 CFR 130.7.</p>	No
23.1, 24.1, 28.1, 29.1, 39.1, 49.1, 59.1, 71.8, 71.9, 207.1, 211.1	<p>Fully supports SWRCB's goal of a standardized approach for listing, consistent and statistically-valid data evaluations, requirements for data quantity and quality, and implementation provisions.</p>	<p>Comment acknowledged.</p>	No
39.9	<p>The most recently completed section 303(d) list should form the basis for any subsequent lists.</p>	<p>Comment acknowledged.</p>	No
43.41	<p>The current draft policy reverts back to considering the 303(d) list a list of all</p>	<p>The proposed list structure is predicated on the assumption that if water quality</p>	No

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	<p>impaired waters, rather than a list of water quality-limited segments still requiring TMDLs, pursuant to 40 CFR 130.7, and that two of the separate lists proposed in the July draft are now inappropriately considered part of the 303(d) list. We request that the SWRCB adopt a listing policy that is generally consistent with USEPA's Guidance for 2004 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act. No water segment should be listed on the 303(d) list unless specific pollutants are identified.</p>	<p>standards are not met, the exceedance is due to a pollutant (the exception is toxicity), and a TMDL is still required, then waters should be placed on the section 303(d) list. If standards are not met and a TMDL has been completed or there are other cleanup program addressing the problem then a TMDL is not needed. SWRCB is combining the 4A, 4B, and 5 Categories provided in USEPA guidance (USEPA, 2003b) because water quality standards are not met. When standards are met after implementation of a TMDL or other program these waters will be removed from the section 303(d) list.</p>	
<p>43.45, 43.56, 48.4, 49.2, 58.2, 60.25, 60.16, 60.21, 60.10, 60.13, 60.11, 60.12, 60.14, 61.4, 76.11, 76.6, 76.5, 202.3, 207.19, 211.3</p>	<p>The revised draft policy appears to have abandoned the concept of an Integrated Water Quality Report consistent with the 2001 EPA memorandum that provides guidance for integrating the development and submission of Section 305(b) water quality reports and Section 303(d) lists of impaired waters. The use of multiple assessment categories July 2003 Draft Policy was consistent with EPA guidance and would have provided a much needed mechanism for focusing appropriate resources and attention on the State's waters. Because resources are limited, cost-effective means must be used to address standards that are not met.</p>	<p>California is required to comply with the requirements of CWA section 305(b) as well as the requirements for section 303(d). The draft Policy and CWC section 13191.3(a) require SWRCB to develop guidelines for listing and delisting related to the section 303(d) list. The Policy is narrowly focused on addressing the section 303(d) list requirements. SWRCB is still bound by CWA to develop the section 305(b) report. The USEPA guidelines for developing the 2004 section 303(d) list and the integrated water quality report can be used when SWRCB develops the section 305(b) report.</p>	<p>No</p>
<p>51.19</p>	<p>The State must list waters impaired by 'Pollution.'</p> <p>Section 3.1 of the draft Policy similarly states that water segments for which standards exceedances reflect 'pollution' (e.g., 'physical alteration of the water body that cannot be controlled') shall not be placed on the 303(d) list. This position is reiterated in Section 2.1, which limits listing to waters impaired by 'a pollutant or pollutants.' We disagree with this proposition, and maintain that water bodies that are impaired by any source of pollution must be listed. This position is supported both by the plain language of section 303(d)(1)(A) and by legal opinions interpreting it, and has been supported by the RWQCBs as well in testimony and elsewhere.</p> <p>This position is also supported by the NRC, which found that the TMDL program 'should encompass all stressors, both pollutants and pollution, that determine the condition of the waterbody.' The NRC found this step to be important because 'activities that can overcome the effects of 'pollution' and bring about water body restoration -- such as habitat restoration and channel modification 'should not be excluded from consideration during TMDL plan implementation.'</p>	<p>The State must list waters for pollutants in compliance with 40 CFR 130.7(b) in order to identify and schedule TMDLs for water quality limited segments still requiring TMDLs. USEPA Guidance (2003a) holds that 'pollution' problems should be placed in separate categories from those waters that need TMDLs. This Policy is consistent with that guidance from USEPA.</p> <p>The Listing Policy does not limit listings to particular pollutant sources. Rather the policy requires listing of all waters that do not meet standards due to pollutants (the exception is toxicity). 'Pollution' like habitat modification, flow restrictions, etc. should not be included on the section 303(d) list.</p>	<p>No</p>
<p>56.8</p>	<p>Unclear what will happen to waters that are currently listed on the 2002 Monitoring List.</p>	<p>The information on the 2002 Monitoring List may be used to develop the section 305(b) report.</p>	<p>No</p>
<p>60.8</p>	<p>The December 2003 draft is not consistent with 40 CFR 130.7(a) and 40 CFR 130.7(b), which specify that the State is to identify those water quality limited segments still requiring TMDLs. It is for this reason that USEPA's Guidance (2003b), separated waters that are 'impaired or threatened and a TMDL is</p>	<p>All water quality limited segments not meeting water quality standards still requiring TMDLs should be placed on the section 303(d) list in accordance with the Policy and in compliance with 40 CFR 130.7(a) and 40 CFR 130.7(b). If toxicity is identified, the water will be placed on the list whether</p>	<p>No</p>

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	needed' from other waters that are 'impaired or threatened but a TMDL is not needed.'	the pollutant is identified or not.	
210.3	When listings are evaluated, maybe some waters may come off the 303(d) list in cases where impairments are undetermined, whether cause of impairment is unknown, or in cases where data is insufficient in order to determine if an impairment exists. Those are the reasons to establish a monitoring list. Waters for where there is this type of uncertainty should not be on the 303(d) list.	The draft Policy is focused exclusively on the development of the section 303(d) list. SWRCB is not precluded from developing a monitoring list as part of the development of the CWA section 305(b) report.	No
217.4	One of our concerns is that all too often the current approach results in sort of an approach of when in doubt, take it out, or don't list the water body at all. And one example that I heard, that this is much better than a watch list approach, which will never lead to a cleanup, I can't imagine any approach where anything on a watch list would actually get cleaned up.	Comment acknowledged.	No
221.5	This draft of the policy is much improved over the previous one because there is less lists. There are two lists, the 305(b) and the 303(d); the 305(b) is the planning list.	Comment acknowledged.	No
221.6	If there were a planning list, you might title it the section 13267 list because it is the only place you are going to get the resources to get the sample counts.	Comment acknowledged.	No

Draft Policy, Section 2.1: WQLS Category

60.6	If specific pollutants have not been identified, how can the SWRCB certify that a water segment is not expected to meet applicable water quality standards, even after application of applicable technology-based effluent limitations? Further, if we do not know the pollutants causing the impairment, we cannot know the applicable technology based effluent limitations.	The Draft Policy requires the identification of the pollutant prior to listings made on the 303(d) list, with the exception of toxicity.	No
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Draft Policy, Section 2.2: TMDLs Completed Category

207.22	Recommend that the California Impaired Water List contain a TMDLs Completed List consisting of water quality limited segments for which TMDLs have been completed.	The Policy has been revised to focus on those waters still needing TMDLs and identify those waters where TMDLs are being addressed either through other regulatory actions or a TMDL has been developed and approved by USEPA.	Yes
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Draft Policy, Section 2.3: Enforceable Program Category

17.2	The Enforceable Programs Category should be separate from the section 303(d) list. Separation from the 303(d) list acknowledges that alternative programs are an acceptable way to address impaired water in a timely matter without the need to devote additional resources to TMDL development.	The Policy has been revised to include a category that allows for attainment of the water quality standard through pollution control requirements other than TMDLs.	Yes
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41.9	The Enforceable Programs section of the Policy (Section 3.3) should be moved and instead addressed solely in the Implementing Policy section. Support the Enforceable Programs approach presented in the documents, but believe it is best to address this important issue in a single document to avoid confusion and differing interpretations.	The Enforceable Programs component of the section 303(d) list has been revised.	Yes
44.16, 76.41, 208.2, 208.4, 213.8	Legacy pollutants should be addressed through some other enforceable program.	The section 303(d) list, addresses waters that do not meet water quality standards and identifies the pollutant(s) that are the likely cause of the standards exceedance. The problems identified on the section 303(d) list should be addressed by mechanisms that most easily and completely address the problem. If legacy pollutants are better addressed by another program then they should be addressed that way.	No
51.10	The Enforceable Program list still remains in effect an 'off-ramp' list that must be integrated completely into the 303(d) list. Section 2 of the draft Policy makes the Enforceable Programs list a subset of the 303(d) list. The FED makes clear that the intent of the draft Policy is to allow impaired waters on the vaguely defined and often unenforceable 'Enforceable' Program list to specifically avoid TMDLs. In effect, then, these waters are not 'listed' waters, a point that must be corrected.	The Enforceable Programs component of the section 303(d) list has been revised and incorporated into the Water Quality Limited Segments Being Addressed category and acknowledges when pollution control requirements are reasonably expected to fix the identified problem. This section of the list is not an off-ramp because the waters will be addressed by the regulatory program identified by the RWQCB and within a specified time frame.	Yes
51.11	Strongly oppose SWRCB's proposal to create the Enforceable Program list for the following reasons: There is absolutely no basis under the CWA for failing to list any impaired water body, as that term is defined under section 303(d), on the section 303(d) list and preparing a TMDL for that water body. The proposed list will therefore seriously undercut the state's TMDL program.	The Enforceable Program Category has been revised. All waters in the Water Quality Limited Segments Being Addressed section of the list are on the section 303(d) list.	Yes
51.12	Strongly oppose SWRCB's proposal to create the Enforceable Program list for the following reason: The proposed Enforceable Program list is inconsistent with the plain text of section 303(d). Section 303(d) expressly requires each State to identify waters within its boundaries for which 'the effluent limitations required by section 301(b)(1)(A) and section 301(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters.' 33 U.S.C. §1313(d)(1)(A). Thus, waters are to be listed, and TMDLs developed, whenever the effluent limits described in section 301(b)(1)(A) and (B) are insufficient to attain and maintain water quality standards. In contravention of the clear dictates of the CWA, staff have proposed to exclude impaired waters from the section 303(d) list for a variety of improper reasons, including the alleged availability of a remediation planning documents,	The Policy has been revised; waters in this category are now included in the Water Quality Limited Segments Being Addressed category of the section 303(d) list. As certified by RWQCBs, waters in this new category will have programs in place to address the problem. These programs should be allowed to be implemented. If these programs do not work within the adopted time frame, TMDLs should be developed and implemented. Waters in this category are already on the 303(d) list. USEPA guidance (2003a) allows waters to not be listed if a program is addressing the water quality problem. The Policy goes beyond this by requiring waters to be placed on the section 303(d) list.	Yes

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	<p>unenforceable Nonpoint pollution best management practices, storm water permits, and enforcement actions.</p> <p>The draft Policy is proposing that the exercise of enforcement prerogatives can constitute a basis not to list an impaired waterway. This proposed 'out' is beyond the scope of section 303(d).</p> <p>Similarly, SWRCB has proposed to de-list or has refused to list several water segments for trash based on coverage by municipal storm water permits. Yet again, this exception exceeds the language of the CWA.</p> <p>More disturbingly, the draft Policy proposes to place on an Enforceable Program list impaired waters for which no enforceable program exists! None of these 'justifications' for failing to list impaired waters can be squared with the statute.</p>		
51.13	<p>Strongly oppose SWRCB's proposal to create the Enforceable Program list for the following reason:</p> <p>The language of section 303(d), when read in the overall context of the CWA as well as section 301, clearly indicates that Congress intended the TMDL program to coexist with other enforcement and clean up programs under the Act. There is no indication that Congress intended the operation of the CWA as a whole to disable any specific element of the Act. Yet, this would be the effect of the Enforceable Program list. Such an impact cannot be countenanced.</p>	<p>The Policy has been revised to include these waters where action are underway in the Water Quality Segments Being Addressed section of the section 303(d) list. The purpose of this new category is to allow coexistence of programs and to avoid duplication of program efforts.</p>	Yes
51.14	<p>Strongly oppose SWRCB's proposal to create the Enforceable Program list for the following reason:</p> <p>The proposed Enforceable Program list contravenes the USEPA's 2004 Integrated Water Quality Monitoring and Assessment Report Guidance ('2004 Integrated Guidance'). While the 2004 Integrated Guidance is also inconsistent with section 303(d), SWRCB's proposal goes beyond even what is contemplated by the 2004 Guidance. Specifically, the 2004 Integrated Guidance describes an alternative category of waters for which other pollution control requirements are stringent enough to implement any applicable water quality standard. On their face, the enforcement actions and clean up programs proposed by SWRCB do not fall within the ambit of 'other pollution control requirements.' Further, the 2004 Integrated Guidance states that 'these requirements must be specifically applicable to the particular water quality problem' and that 'monitoring should be scheduled ... to verify that the water quality standard is attained as expected.' The Guidance also requires that the water quality standard must be expected to be attained within a short amount of time. The FED instead expands this to allow the waters to remain without a TMDL unless there are 'unreasonable delays' (again, undefined).</p>	<p>SWRCB is not implementing the portion of USEPA guidance (Category 4B) that says waters that have an enforceable program should be placed on a separate list and not on the section 303(d) list. It is proposed that waters not meeting standards will be placed on the section 303(d) list.</p>	No

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51.15	<p>Strongly oppose SWRCB's proposal to create the Enforceable Program list for the following reason:</p> <p>The legitimacy of an Enforceable Program list is severely undercut by the timing of this proposal. The requirements of section 301 are over 25 years old, while many of the programs, permits, or enforcement options that would serve as bases to exclude waters from the section 303(d) list are also years if not decades old. California's patent inability to resolve water quality problems over the years through the use of the very same options it now touts as definitive solutions underscores that these programs are not, in fact, necessarily 'solutions' to the identified impairments. If they were, the waters at issue would be in attainment by now. Aside from the other legal problems discussed above, it is simply too late at this juncture to use the specter of section 301(b)(1)(A) and (B) effluent limits enforcement, municipal storm water permits, or any other program, such as BPTCP, as a basis to end-run section 303(d). This conclusion is also supported by the fact that impaired waters were required to be listed and TMDLs developed and implemented pursuant to section 303(d) over 20 years ago. California's own delay in establishing TMDLs cannot now open the door to the use of later-developed alternatives to further limit the operation of the already delayed TMDL program. Because the proposed Enforceable Program list ignores SWRCB's own experience with the 'alternatives' to 303(d) listing and the temporal intent of section 303(d), it is unlawful and unwise.</p>	Comment acknowledged.	No
51.16	<p>Strongly oppose SWRCB's proposal to create the Enforceable Program list for the following reason:</p> <p>We are concerned that the proposed Enforceable Program list will create a circular feedback loop whereby numerous impaired waters will never be properly listed and subject to a TMDL that will ensure the water body will be restored. For instance, under the proposed program, SWRCB may elect to place a water body on the Enforceable Program list due to the existence of an "alternative enforceable program" during any given listing cycle, with very little justification or assurance that water quality standards will be met. Then, at the next listing cycle, even if the water body is still impaired, SWRCB may again elect to place the water on the Enforceable Program list based on the same alternative program. This may continue indefinitely under the program as proposed by SWRCB. The result of such an indefinite feedback loop will be that numerous waters that are impaired will remain impaired. This is completely at odds with the intent of section 303(d).</p> <p>We urge SWRCB to eliminate the unimplementable and illegal Enforceable Program list.</p>	<p>The Draft Policy has been revised and the Enforceable Program category has been replaced with the Water Quality Limited Segments Being Addressed category. Waters shall only be removed from this category if water quality standards are attained or pollution control mechanisms are not effective. If the determination that the problem will be addressed by the regulatory program is removed, a TMDL must be completed.</p>	Yes
217.19	<p>If there is an enforcement program, then the pollutant can't be listed on the 303(d) list. That's throughout the document, and it's very, very confusing in a</p>	<p>Waters that do not meet standards due to pollutants (except for toxicity) are recommended for placement on the section 303(d) list.</p>	Yes

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lot of places. Instead, it gets put on the enforcement list.

Draft Policy, Section 3: Listing Factors

8.8	Support the exclusion of visual assessments or other semi-quantitative assessments as the sole basis for a listing. The Policy should allow for listing only where there is clear and convincing quantitative scientific evidence that human activity has caused impairment that can be reasonably remedied.	Comment acknowledged.	No
18.36, 20.14, 48.6, 51.112	The proposed Policy unnecessarily repeats the same information on the application of the binomial method. In the context of certain water quality information (e.g., bioassessments, nuisance), the repeated reference to the binomial method either does not make sense (how can it be applied to qualitative information? (see section 3.1.7) or raises more questions than it answers (i.e., different listing criteria are applied to the sediment quality guidelines (see section 3.1.6 vs. 3.1.9).	Sections 3.1.6, 3.1.7, and 3.1.9 have been clarified. The repetition of the application of the binomial model references was included to allow SWRCB the widest possible opportunity to consider alternate exceedance frequencies and confidence levels for the various parameters listed. To the extent that clarity of the section is not reduced, the repetition of the binomial model language has been summarized.	Yes
18.71	<p>Recommended delisting or not listing factors as follows:</p> <p>(a) Readily available data and information indicates that water quality standards are being attained.</p> <p>(b) Some data and information indicate past non-attainment of water quality standards, but other information or data indicates that the water quality problem is not recurrent or persistent. Overall, the available information indicates that water quality standards are currently being attained.</p> <p>(c) New data or information indicates that faulty data led to the original listing. Assessment of remaining (credible and non-faulty) data either indicates that water quality standards are attained or is inconclusive. Faulty data include, but are not limited to, typographical errors, improper quality assurance/quality control procedures, or limitations related to the analytical methods that would lead to improper conclusions regarding the water quality status of the segment.</p> <p>(d) Standards have been revised or beneficial use designations have been modified and have received all required State and federal approvals and available data and information indicate that water quality standards are being attained.</p> <p>(e) The RWQCB has made findings pursuant to SWRCB Resolution 68-16 to allow degradation of the high quality of the water body. Data and information indicates that the degradation does not exceed that which is permitted in such a finding.</p> <p>The draft Listing Policy is partially consistent with this recommendation. Recommendations (c) and (d) have been incorporated. A binomial distribution method is used to determine attainment, rather than Recommendation (a). Recommendation (b) is partially addressed by section 4.10 of the Draft Listing</p>	Readily available data and information are used to help make inferences regarding water quality attainment. Statistical procedures such as the binomial model only helps to ensure that the decisions made, based on inferences from sample data, are as error free as possible to support placement or removal of waters from the section 303(d) list. The sole purpose of the statistical tool is to increase the confidence and reliability of the available data and information evaluated to make section 303(d) listing decisions. The Policy also provides a list of factors to consider when removing listed water quality limited segments from the section 303(d) list. The Policy provides guidance in cases where data and information does not fit the conditions listed under sections 4.1 - 4.10 or when the line of evidence does not support removal. The policy also provides a new section, the situation specific weight of evidence factor, to provide the RWQCBs the flexibility to remove waters from the list if applicable water quality objectives are no longer exceeded.	No

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	Policy, but it is unclear how section 4.10 would be applied. Recommendation (e) does not appear to be included in the Draft Listing Policy.		
18.81	Recommend that RWQCBs should use the decision processes described by the TMDL Roundtable Figure 1 and 2 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 draft Listing Policy is partially consistent with this recommendation. The draft Listing Policy adopts many of the process steps contained in this recommendation. The draft Listing Policy goes beyond in providing prescriptive requirements for many of the process steps in terms of how data should be evaluated, allowable age of data, minimum sample size, and limitations on the temporal and spatial representativeness of individual data points.	Much of the information provided in this recommendation is descriptive of how data can be used and does not specifically establish a process that can be used predictably. The recommended 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 in the figures it is also important to present clear decision rules. Many of the terms presented in the figures are used without clear definition (e.g., recurrent, interpretative endpoints, persistent, etc.). The decision rules proposed in the draft Policy presents proposals that ensure consistency statewide while preserving the use of RWQCB judgement to establish which data sets or portions of data sets should be used in the section 303(d) assessments.	No
18.83	Recommended that the 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. The draft Listing Policy is not consistent with this recommendation. The tiered approach for assessing toxicity to aquatic life is not reflected in the draft Listing policy.	The approach recommended is impossible to assess for several reasons: (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 may 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. It is suggested in the recommendation that the pollutant be identified and correlated to an effect through SQG, TIEs or other evaluation criteria, although, it would not be a requirement in the Policy.	No
18.89	The TMDL Roundtable recommended that 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. The draft Listing Policy is not consistent with this recommendation. The proposal is for such waters not to be listed.	The Policy is focused on addressing problems related to pollutants that may cause water quality standards attainment problems. The Policy is not focused on addressing pollution problems such as habitat and physical changes in stream channels. Federal guidance does not require inclusion of problems related to habitat or physical changes in the water environment be included on the section 303(d) list (USEPA, 2003b).	No
40.5	Appreciate that the policy provides for the evaluation of all data and information types and the application of all numeric and narrative water quality standards in the assessment process.	Comment acknowledged.	No
43.47, 60.30, 70.5, 70.4, 76.17	This section should be redrafted to eliminate current sections 3.2 and 3.3. The TMDLs Completed List and the Enforceable Program List should not be part of the State's 303(d) list. Sections 3.1.10 and 3.1.11 should also be deleted. As currently drafted it would allow water segments to be placed on the 303(d) list even though water quality objectives were not exceeded and no specific pollutant was identified for water body conditions. This factor is inconsistent with 40 CFR 130.7.	Federal law calls for all waters not meeting water quality standards to be placed on the section 303(d) list. Declining trends in water quality should be included on the list if it is substantiated that there are impacts on aquatic life.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
44.10	Impairment listing decisions should not be based on probabilistic data or evaluated data.	As required by federal regulation, all readily available data and information must be used in the section 303(d) listing process.	No
51.74	<p>Table 3.1 of the draft Policy presents an extremely misleading view of the amount of samples available to RWQCBs. The high sample counts depicted in Table 3.1 are in excess of current resources allocations and are not scientifically necessary to conduct water quality assessments. Monitoring of conventional water quality parameters often takes place on a monthly basis. Monitoring of metals, synthetic organic chemicals, PAHs, bioassessments, and toxicity testing typically take place once or twice a year at a limited number of monitoring sites. The draft Policy's arbitrary minimum sample count requirement appears to prevent a water body that is out of compliance with standards four months out of twelve from being listed. For numerous conventional water quality parameters this is scientifically indefensible. For example, if surface water nitrate concentrations in a stream exceed the drinking water standard for three months of the year, the water body is most certainly impaired, yet the Policy would not recognize this fact.</p> <p>For many analyses, the high sample counts depicted in the Policy are unnecessary for making scientifically sound water quality assessments. Since the SWAMP budget is not likely to increase in the near future, the high sample count requirements could have the effect of either placing an unreasonable economic burden on holders of permits and waivers or, if that burden proves economically (or politically) infeasible, will ensure that impaired waters do not get listed.</p> <p>As an example, a typical sampling strategy conducted in a region often involves sampling conventional water quality analyses monthly and conducts other more costly sampling a few times a year at a limited number of monitoring sites. Table 3.1 depicts sample count requirements for a single monitoring site (or single water body), which range as high as 500 samples. For most sampling types, the sample counts depicted in the table are scientifically unnecessary and economically impossible.</p>	<p>Table 3.1 is included in the Policy in order to show the number of exceedances that will cause a water body to be place in the section 303(d) list. Most of the data sets available have less than 50 samples. Conventional pollutants can be greatly influenced by season, weather, and other factors. Having data from multiple seasons and years will only strengthen the case to place a water body on the section 303(d) list. The Policy does not require large sample sizes but rather provides the cut off values for both large and small data sets.</p> <p>The sample counts in the Tables have been reduced.</p>	Yes
56.21	Support the draft Listing Policy's requirement that if adverse biological response or degradation of a biological population is demonstrated, these impacts need to be shown to be associated with water or sediment concentration of pollutants in order to be listed.	Comment acknowledged.	No
60.26, 76.12	This section should be rewritten to clarify that the only factors to be used to develop the California Section 303(d) list are those factors in Section 3.1.	This section of the Policy constitutes the listing factors to be used in California.	No
61.15, 65.10, 83.10	Sections dealing with Treads in Water Quality and Alternate Data Evaluations will create loopholes for listing of waters without sufficient data or technical basis.	Please refer to the response for Comment No. 84.10.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
73.2	Waters should not be listed because of isolated or temporary incidents that may have no adverse impacts and for which development and implementation of a TMDL would be meaningless, and perhaps even impossible, given the transitory nature of the excursions.	Comment acknowledged.	No

Draft Policy, Section 3.1: WQLS Factors

8.6, 18.25, 18.9, 20.15	There are concerns regarding limitations put on the use of information from a spill, violation of a permit or WDRs, and visual information. These limitations are not justified or necessary. Any information and data on the conditions of a water body must be considered regardless of the source. It appears that the intent is to preclude listing a water body if the cause of nonattainment water quality standards is due solely to a spill or violation. This concept may be appropriate under certain scenarios such as when the nonattainment is short lived and/or remediated via corrective action. When there is a spill or violation in conjunction with other discharges and/or spills or violations, it would make no sense to limit use of information or data associated with the event to assess to water body. Furthermore, a responsive action to a spill or violation is often collection of data on conditions throughout a water body not only within the vicinity of a discharge. Limiting use of these data is clearly an unintended consequence.	Data on spills, violation of permit or WDRs and visual information can be used in conjunction with other data to demonstrate that there is an exceedance of water quality standards in the water body. However, this information cannot be used solely for the listing. This section has been revised clarify this language.	Yes
18.24	Delete references to other sections on data preparation, as well as references on limitations on the use of certain types of data. The sections on data preparation stand on their own. Reference to a limited number of those sections implies that the other sections on data preparation may not be applicable.	Reference to these sections allows the reader to obtain more description on the evaluation of data and information (i.e., data quantity and quality). In addition, it references the process of transforming data for evaluation and rules for using visual information.	No
18.30, 18.23, 18.8	The proposed Policy unnecessarily repeats the same information on the application of the binomial method. In the context of certain water quality information (e.g. bioassessments, nuisance), the repeated reference to the binomial method either does not make sense (how can it be applied to qualitative information?) or raises more questions than it answers (i.e., different listing criteria are applied to the sediment quality guidelines – see section 3.1.6 vs. 3.1.9).	The Policy has been revised to address this concern. Each listing factor in section 3.1 refers to standard exceedances as described in section 3.1.1 or 3.1.2. The use of qualitative and quantitative information to support listing has been clarified in the Policy.	Yes
30.5	The Draft Policy states: 'Visual assessment or other semi-quantitative assessments may not be used as the sole line of evidence to support a section 303(d) listing.' However, section 3.1.7 appears to suggest otherwise. What is the SWRCB intent?	The intent is to use semi-quantitative and qualitative assessments as ancillary lines of evidence. The clarification on the use of visual assessments and semi-quantitative data has been incorporated in the Policy.	Yes
40.23	The state would need to adopt and receive USEPA approval of water quality standards changes pursuant to section 303(c) in order to apply natural source exclusions or the reference watershed approach to implementing bacteria standards as part of the Section 303(d) listing methodology.	Re-evaluation of existing standards is accomplished under CWA section 303(c)(1) and implementing regulation (40 CFR 131.20). During the triennial review the RWQCBs hold public hearings for the purpose of reviewing water quality standards and as appropriate, modify or adopt new standards. This	Yes

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
51.163	<p>Data used to assess impairment related to biological impacts from sedimentation, adverse biological response, and degradation of biological populations and communities often does not lend itself to the narrowly allowed data analysis methodologies of the draft Policy. For example, the draft policy states sedimentation and degradation of biological populations and communities should be evaluated using the binomial model (Sections 3.1.8 and 3.1.9). Even if an alternative evaluation method was allowed by the Policy for these impacts (the Policy is unclear on this issue), the requirements for this alternative evaluation are severely limited by statistical requirements (Section 6.2.3).</p> <p>Evaluation of impacts related to sedimentation, adverse biological response, and degradation of biological populations and communities requires multiple lines of evidence (as noted in the FED). Currently, the draft Policy does not appear to allow a weight of evidence approach for these impairments. Furthermore, the draft Policy appears to eliminate the use of many, scientifically-accepted and recommended approaches to evaluating biological impacts. For example, the policy seems to not allow the use of the DFG's IBI. By doing so, the draft Policy effectively blocks the use of many types of biological datasets and bioassessment studies from consideration in the listing process, and effectively blocks most listing related to biological impacts.</p>	<p>Policy is not intended to change any water quality standards; therefore, the Policy provisions addressing listings for natural sources has been removed. This provides the RWQCBs with the flexibility to add, remove, or not list waters due to natural sources. Water bodies recommended for 303(d) listing in the future or existing listings recommended for removal from the 303(d) list due to natural sources will require review and approval by the SWRCB.</p> <p>It is not required or desirable that bioassessment data be evaluated using the binomial test.</p> <p>The purpose of incorporating the use of a statistical approach in the listing evaluations is to verify the validity of data collected to support a particular listing. Sedimentation can be evaluated using acceptable guidelines or numeric standards that calculate impacts on beneficial uses from measured biological effects due to sedimentation. The data is then submitted to a statistical analysis to help determine if the data is sufficient at a specified level of statistical confidence to say that water quality standards are exceeded. The Policy recommends the use of the binomial distribution but it also allows other approaches to be used.</p> <p>In addition, The Policy also requires documented impacts due to adverse biological response or degradation of biological populations and communities to be associated with water or sediment concentrations of pollutants prior to placement on the section 303(d) list. This assessment is separate from the analysis used to evaluate chemical or physical data such as turbidity measurements. The Policy has been revised to clarify this difference.</p>	Yes
220.1	<p>Some of the current waters on the 303(d) list would not have been listed under this policy.</p>	<p>Comment acknowledged.</p>	No

Draft Policy, Section 3.1.1: Numeric Water Quality Objectives and Criteria for Toxicants in Water

58.12	<p>The values on Tables 3.1 and 4.1 are too far disparate unless a vigorous confirmation program is implemented for all values that exceed the standards.</p>	<p>The values in draft Policy Tables 3.1 and 4.1 differ due to the nature of the mathematical foundation of the exact binomial test. In one case (listing, Table 3.1), the statistical assumption is made that each candidate water body in question is actually meeting water quality standards. This preliminary assumption is then tested.</p> <p>For delisting, the initial assumption, for statistical purposes only, is that the water bodies already on the list do not satisfy water quality standards (a reasonable assumption, since they were previously listed). The appropriate statistical analysis is performed.</p>	No
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
		As the draft FED discusses, each methodology is valid, and scientifically defensible. The differences between these tables is reduced if errors are balanced.	

Draft Policy, Section 3.1.2: Numeric Water Quality Objectives for Conventional or Other Pollutants in Water

1.11, 1.3, 1.7, 1.15, 1.16	If sediment is considered a conventional pollutant, guidance should be provided for listing/delisting of water bodies whose numeric criteria are expressed as Mean of Monthly Measurements.	Guidance is provided in the Policy in section 6. For any specific averaging period, data should be considered as the first step in evaluating compliance with water quality standards. For example, if the standard is established as a mean of 12 monthly means then the data would represent the compliance determination for a year. In this example, multiple years of data would be necessary to use the statistical approaches presented in the Policy.	No
11.8, 19.8, 203.5	Dissolved oxygen data is inadequate as a sole indication of impairment. Nutrient data should also be evident. Please revise Section 3.1.2 to reflect this.	It would be ideal to have a second line of evidence (e.g., nutrient information) for exceedance of dissolved oxygen standards. However, since there is a numerical water quality objective for dissolved oxygen, exceedances can be used to determine impacts. Therefore, a listing can stand alone based on the exceedance of the dissolved oxygen WQO as long as there is some indication that the exceedance is due to pollutants.	No
18.26	The discussion of the cause of depressed dissolved oxygen should be eliminated. Depressed dissolved oxygen can have a number of causes and it is confusing to have a limited discussion of one possible cause (nutrients). Since it is not clear why such direction is necessary to conclude dissolved oxygen standards are not met, the discussion is deleted.	The discussion is necessary to rule out non-pollutant causes of the depressed DO. For example, TMDLs are not needed for DO problems caused by modified physical habitats.	No
21.24	With respect to DO depletions related to nutrients, the impact of nutrients needs to be carefully examined in terms of what constitutes a nutrient that leads to excessive fertilization and diel DO changes. Of particular concern is the time of day that measurements of DO are made. If the time of the DO measurement is not documented, data can be generated that do not properly assess DO violations of the water quality objective.	The section on temporal representation has been revised to document the time of the measurement.	Yes
40.70	USEPA's 1997 guidance recommends methods for evaluating relatively small-sized sample sets to assess compliance with the applicable water quality standards, which specify allowable exceedance rates in the entire water body. The guidance does not directly identify allowable water quality standards exceedance rates for conventional pollutants.	Instead of using the section 305(b) guidance (USEPA, 1997b; 1997c) for this purpose, SWRCB used more recent guidance focused on the structure of the list and interpretation of standards (USEPA, 2003b) as well as guidance on statistical evaluation related to the section 303(d) list (USEPA, 2002a).	No

Draft Policy, Section 3.1.3: Numeric Water Quality Objectives or Standards for Bacteria Where Recreational Uses Apply

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
11.11, 19.13, 203.8	The term relatively unimpacted should be defined in order to help clarify the use of site-specific exceedance frequencies for bacteria in recreationally-designated areas.	This phrase was used to allow RWQCBs to consider a wide range of factors when using this reference condition approach. Too much detail in the Policy may limit the appropriate application of this concept for the evaluation of bacterial indicator data.	No
18.85	Recommended that data requirements and processes should be used in assessment of compliance with numeric bacteriological water quality objectives. The draft Listing Policy is not consistent with this recommendation. The TMDL recommendation focuses on an evaluation based on the existing water quality objectives, whereas the draft Listing Policy uses the binomial method and a 10 percent exceedance rate or a 4 percent exceedance rate for coastal beaches between April 1 and October 31.	The RWQCB recommendation provided no specific guidance on the approach for evaluating bacterial indicator data. The exceedance frequencies proposed to be included in the Policy were developed by BWQW. This group had several members of RWQCB staff that concurred in the recommendations.	No
29.5, 61.12	Clarify the language that applies specifically to contact recreation.	The section appears to clearly state the decision rules for interpreting bacterial indicator data and beach posting information.	No
29.6, 61.13	Impacts on contact recreation uses in freshwater should be evaluated in the context of seasonal and site-specific variation in actual use patterns.	Water contact-related water quality objectives should be implemented as stated in the Basin Plans. The fact sheets that will be prepared to implement the Policy will contain information related to seasonal variation and site-specific variation.	No
29.7, 61.14	Latitude should be allowed to consider actual pathogen data for the receiving water, if it exists, to support either listing or delisting, especially when the exceedance frequency is close to 10%.	If pathogen data (like virus density) is available it must be included in the assessment of all readily data and information.	No
40.22, 40.102	The provision that encourages application of a reference watershed approach to assessment of bacteria standards exceedances is inconsistent with state water quality standards except in Region 4, the only Region in which a reference watershed approach to bacteria standards implementation has been adopted as a component of its water quality standards.	This section of the Policy has been revised to acknowledge this point and to require that water quality objectives be implemented as adopted.	Yes
40.78, 40.77, 40.79, 51.102, 53.13	The policy provisions for assessing bacterial standards exceedances should be revised because the proposed criteria appear to conflict with the State's current two-number water quality standards or objectives which have both an instantaneous maximum as well as specific data requirements and 30-day evaluation periods. The 10% binomial aspect would potentially be consistent with the numeric standard using the 30-day geometric mean averaging period.	The use of the binomial approach is consistent with the use of the 30-day geometric mean because the standards must be analyzed first in terms of the expression of the standard and then using the binomial test. For example, RWQCBs would assess compliance with the 30-day geometric mean for each 30-day period with data and then it would be determined if the standard is exceeded. The 'yes' or 'no' answer would be used in the statistical test along with all the other appropriately grouped nominal data. Sample size is dependent on the level of error allowed and the extent to which standards are not achieved (please refer to the Issue related to statistical analysis for more complete description).	No
51.97, 51.96	SWRCB offers no justification for allowing any other type of assessment aside from the reference system approach. Based on Heal the Bay's comprehensive database of bacteria monitoring results from County health agencies across the	Under the Policy, RWQCBs are required to use certain decision rules to interpret existing water quality standards. To the extent it is consistent with water quality standards, a reference system should be used.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	State, it should not be very difficult for the RWQCBs throughout the State to identify reference beaches for all beaches used for recreational purposes. The draft Policy should be revised to require a reference-system approach for the evaluation of marine recreational beaches.		
53.12	The applicable bacteria standards are not specified. Recommend the need to specify which standards are applicable and consistently define a site-specific exceedance frequency as a percent of water quality exceedances in a relatively unimpacted watershed.	Applicable bacteria standards are contained in the Ocean Plan, California Code of Regulations (adopted pursuant AB 411), and Basin Plans.	No
71.24	If a site-specific exceedance rate is used instead of 10 percent (e.g., for bacteria in water quality where recreational uses apply), then similar tables should be constructed and used for determining compliance with bacteria in water quality objectives at those specific locations.	The fact sheet should contain the rationale for the use of a site-specific exceedance frequency. A large table is not necessary. A description of how the value is to be calculated and the critical values for confidence and power are included in the Policy.	No

Draft Policy, Section 3.1.4: Health Advisories

24.5	Modify the final sentence to read: In addition, water segment-specific data meeting the data requirements of this Policy must be available indicating the evaluation guideline for tissue is exceeded.	This request would make this section duplicative of Section 3.1.5.	No
44.12	The Policy should require that fish tissue data specifically come from the water segment that is suspected of being impaired; the use of generic or area-wide data is not appropriate.	This request would make this section duplicative with Section 3.1.5.	No
61.7	The proposed listing factor would facilitate continuation of the problem of water segments being listed without pollutants being identified. Health advisory is only an indicator of an impairment unless a pollutant is identified.	Health advisories are acknowledged indicators that a beneficial use has been lost. The Policy also advocates the use of water segment-specific data to show that the pollutant is present in the segment proposed for listing.	No

Draft Policy, Section 3.1.5: Bioaccumulation of Pollutants in Aquatic Life Tissue

18.27	The discussion on bioaccumulation should be eliminated. The limited nature of the discussion provides little policy direction, and, therefore is unnecessary.	The Policy discusses the exceedance criteria necessary to list based on tissue pollutant levels. Additionally, the Policy provides guidance on how those levels are measured.	No
21.35	The minimum 10 percent exceedance approach for numeric water quality objective for bioaccumulation of pollutants in aquatic life tissue is not a valid approach for the protection of beneficial uses of water bodies. Fewer exceedance than 10 percent can have significant adverse effect on a water body. The focus should be on assessment of impacts on beneficial uses, instead of some arbitrary percentage of samples with exceedances.	Past USEPA guidance recommends making non-attainment decisions for conventional pollutants where more than 10 percent of samples exceed applicable water quality standards. Additionally, this exceedance approach has been used by many states to place waters on the section 303(d) list. The use of the critical exceedance rate is appropriately used in statistical analysis after an assessment of impacts to the beneficial use has already been made; it is not used to justify allowing an exceedance 10 percent of the time. The 10 percent critical exceedance rate applies to the determination of the number of samples needed to place waters on the section 303(d) list.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
40.84, 40.85	In essence, an assessment based on as few as 3 composite fish sample results can be completed with sufficient confidence and it is probably more accurate than assessments made using 10 individual samples. (Composites generally consist of 3 or more individuals of the same species, where the smallest is 75% in length of the largest.) In addition, include guidelines on evaluating magnitude of tissue results.	The Policy has been revised to allow 'composite samples' to be used. The Policy now requires that at least three or more composite samples must exceed the evaluation guideline to be listed.	Yes
40.86	Concur that tissue results from muscle or whole body should be used in the assessment and that kidney or liver tissue alone are not suitable measures.	Comment acknowledged.	No
56.17	The SWRCB has essentially 'lowered the hurdle' for tissue based listings as compared to water column constituents. The draft Policy only requires 3 exceedances of aquatic life tissue evaluation for placement on the 303(d) list, while water column constituents for sample population less than 20, 5 or more sample exceedances are required, oppose this use of this minimum data requirement.	Comment acknowledged.	No
56.18	Listings based on exceedances of tissue evaluation guidelines, if used at all, should require an established relationship between tissue levels and water column concentrations. Support SWRCB's guidance to not use MTRs and EDLs to evaluate shellfish or fish tissue data.	There is not always a correlation between concentrations of toxic substances in the water column and in aquatic organisms. Concentrations in water bodies are often too low or transitory to be detected. Aquatic organisms are sampled because they bioaccumulate and bioconcentrate toxic substances to levels that may be many times the levels found in water.	No
56.19, 64.12	Listings for bioaccumulation of pollutants in aquatic life tissue should be based on a weight of evidence approach, as is required for the evaluation of adverse biological response and degradation of biological populations and communities.	Under a weight of evidence approach, some lines of evidence are sufficient by themselves to demonstrate standard attainment. Evaluation of tissue chemical concentrations, based on screening values from USEPA, OEHHA, and NAS, are appropriate measures upon which to base a listing decision.	No
64.14	Disagree with the minimum number of exceedances required for listing based on aquatic life tissue samples.	Comment acknowledged.	No

Draft Policy, Section 3.1.6: Water/Sediment Toxicity

5.8, 12.8, 23.8, 29.3, 39.3, 40.88, 40.24, 43.48, 58.8, 61.9, 71.15, 202.2	The language in Sections 3.1.6, 3.1.8, and 3.1.9 of the Policy would seem to allow a water body to be listed due to toxicity, adverse biological response, degradation of biological populations without a clear link to a specific pollutant. This is inappropriate for the 303(d) list, and more appropriate for the planning list concept.	With the exception of toxicity, documented impacts due to adverse biological response or degradation of biological populations and communities must be associated with water or sediment concentrations of pollutants prior to placing the water on the section 303(d) list. Toxicity can be placed on the list whether pollutants are identified or not.	No
10.9, 21.26, 21.19, 21.25	There are significant problems throughout the draft 303(d) listing Policy where chemical concentrations of potential pollutants are used, assuming that there is a direct relationship between the total concentration of a constituent in water or sediments and an adverse impact on the beneficial uses of water bodies. As far as chemicals impact aquatic-life-related beneficial uses, the total concentration	Adverse biological response of resident aquatic organisms or degradation of biological populations and communities within a water body are actual indications that the beneficial uses of the water body are being impacted. The establishment of a link between impacts to beneficial uses and a specific pollutant or pollutants exceeding established water quality objective or criteria	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	of a constituent is an unreliable indicator of a beneficial use impact.	constitutes an exceedance of a water quality standard and must be placed on the section 303(d) list.	
16.1	Submitted a memorandum dated 10/28/98 on the use of Sediment Quality Guidelines in Dredged Material Management Decision Making.	Comment acknowledged.	No
21.37, 21.21, 21.18, 21.46, 64.22, 65.12, 65.14, 67.6	The draft Policy includes a number of technically invalid approaches as listing parameters, such as the Long and Morgan/MacDonald co-occurrence-based sediment quality guidelines and the California SWRCB 'NAS criteria.'	The Policy does not require the use of any specific sediment guidelines. RWQCB are afforded significant flexibility to select the most applicable guideline. The guidelines mentioned as examples are acceptable, published values that may be used. Many of the sediment guidelines are predictive of sediment toxicity.	No
21.42	Care must be exercised in allowing dilution or other predictive models. Most of the predictive models do not adequately relate cause and effect. Dilution calculations can give erroneous results under conditions where the constituents of concern can accumulate at certain locations in the water body, such as those that accumulate in sediments.	Comment acknowledged.	No
40.89	The proposed toxicity evaluation method also needs to be revised to better account for the complexities of assessing the presence and magnitude of acute and chronic toxicity in multiple species tests.	Comment acknowledged.	No
56.15	Question whether 3 consecutive samples are required for toxicity and are the three toxic samples from different seasons of the same year. The reliance upon such few sample may make it more difficult to sufficiently represent the temporal characteristics of the water body, to determine if the conditions are persistent. The planning list or monitoring list may be a more appropriate place for these listing until it can be characterized.	The Listing Policy is not specific on which season toxicity should occur. Using the proposed binomial test with balanced error rates, if three samples showed significant toxicity it would sufficient to place the water on the list.	Yes
65.13	Sediment toxicity is heavily influenced by site-specific factors (e.g., organic carbon content, acid volatile sulfides, sediment grain size) and guidelines developed in other jurisdictions are not legally promulgated standards within California. Therefore, this approach is inappropriate and would not result in scientifically sound listing decisions.	Many approaches have been used to develop SQGs. Data was gathered from many available sources, including those from equilibrium-partitioning models, spiked sediment bioassays, and numerous field surveys. Model studies and spiked sediment bioassays establish cause-effect relationships for a single chemical, whereas data from field studies reflect complex mixture and real world, natural conditions in ambient sediments. Therefore, the most meaningful assessment tools are based evidence from the combination of these methods. Data compiled from different study areas, with different pollution histories and physical-chemical properties converge upon ranges of contaminant concentration that are usually associated with effects, therefore guidelines derived from these studies can be broadly applicable to may other areas and situations. Until California sediment quality objectives are developed and adopted, other scientifically valid SQGs can be used to assess sediment contamination. In addition, the draft Policy does allow the use of other evaluation methods such as; equilibrium partitioning, toxicity identification evaluation along with other lines of evidence (i.e. bioassessment, tissue	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
		analysis, adverse biological response, etc.).	
217.11	This cause and effect link typically cannot be established through simple or standardized tests. Instead, special studies are required. The listing policy is shifting the burden of establishing absolute cause to the Regional Boards.	Comment acknowledged.	No
Draft Policy, Section 3.1.7: Nuisance			
58.9	If it is currently impossible to identify the cause of the nuisance, it is unlikely that a source can be demonstrated.	Comment acknowledged.	No
217.20, 217.21	There are specific examples that talk about trash that are most troubling. If you have local anti-littering ordinances, for example, one can interpret that there is no way that body would be 303(d) listed, regardless of whether or not there is severe water quality impairment.	Waters can be listed for trash if evaluation guidelines are exceeded or if trash accumulation is greater than a reference condition. If there are enforceable mechanisms that solve the problem they should be used in lieu of a TMDL.	No
Draft Policy, Section 3.1.7.1: Nutrient-Related			
18.86	The TMDL Roundtable recommended that the parameters previously recommended for the evaluation of nutrients 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 this parameters, as appropriate, for each beneficial use designation in combination with the decision process in determining compliance with Water quality standards. Other scientifically defensible criteria may also be used. The draft Listing Policy is partially consistent with this recommendation. The draft Listing Policy discusses algae growth as part of a discussion of nuisance conditions and dissolved oxygen under Conventional Pollutants. A general discussion of nutrients is not included in the draft Listing Policy. In addition, the draft Listing Policy applies a 10% exceedance rate and the use of the binomial method to dissolved oxygen data.	Comment acknowledged.	No
58.7	The policy is becoming overly prescriptive; the appropriate solution is to take dissolved oxygen samples in the morning, when the critical condition exists, rather than making assumptions.	Diel measurements are recommended because DO levels fluctuate seasonally and over a 24-hour period. They vary with water temperature and altitude. Cold water holds more oxygen than warm water and water holds less oxygen at higher altitudes. Aquatic animals are most vulnerable to lowered DO levels in the early morning on hot summer days when stream flows are low, water temperatures are high, and aquatic plants have not been producing oxygen since sunset. Therefore, diel measurements are recommended to ensure that the data is sufficient to document the extent and severity of the impairment as well as any temporal/seasonal trends.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
212.6	There are some nuisance listings for the Burbank Western Channel: algae, odor, and scum that were on the 1998 listing and were carried to the 2002 lists. It's unclear how those listings were created and what additional data can be submitted to get those delisted. It's unlikely that individual observations will be accepted as new data to have those reevaluated, even though we believe that's how those listings were created in 1998.	If pollutants are not certified as causing or contributing to the observed conditions, then it is possible that the conditions are due to some non-pollutant factor (e.g., loss of habitat, natural algae growth, etc.).	No

Draft Policy, Section 3.1.7.2: Other Types

1.23, 1.5	Clarification of inconsistency warranted in section 3.1.7.2 appears to permit listing based solely on visual assessments or semi-quantitative assessments while section 3.1 states they may not be used as the sole line of evidence to support a 303(d) listing.	In using qualitative visual assessments and/or other semi-quantitative assessments to evaluate waters impacted by nuisance pollutants, the policy requires the use of established evaluation guidelines to determine exceedance of water quality standards as well as site comparison against reference site conditions, when available. Section 3.1.7 has been clarified further to reflect consistency with section 3.1.	Yes
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Draft Policy, Section 3.1.8: Adverse Biological Response

1.6	The term 'associated with' should be replaced with the term 'are scientifically and demonstrably caused by'. The mere association of effects with sediment loads should not be used as a listing criterion, particularly in the absence of a definition for the term associated with.	Determining if an effect is caused by the suspected pollutant is not necessary in order to list and to begin the development of a TMDL. If there is substantial evidence that the pollutant is linked to the observed effect that is sufficient to implicate the pollutant.	No
44.14	Biological impacts should have a strong association with (i.e., a known or suspected causation) water or sediment pollutants.	Comment acknowledged.	No
51.21	The policy must allow listing for adverse biological response and degradation of biological populations and communities alone, without identification of the causative pollutants. The draft Policy requires the identification of the specific pollutant or pollutants causing adverse biological response and/or degradation of biological populations and communities before waters can be listed for these impairments. The policy must allow listing and move forward with TMDL development even where the impairing constituents are not known.	Identifying the potentially casual agent provides a strong line of evidence that a problem exists. There are many environmental factors that can increase or decrease an organism response to a pollutant (e.g., temperature, flow, other pollutants, pH etc.). By identifying the potentially casual agent, we are more confident that there is adverse response in a biological community due to a pollutant.	No
210.6	When considering listing factors such as adverse biological response populations, the Policy doesn't really provide any guidance on how baseline or reference conditions are to be established. populations. Additional guidance should be provided in the Policy on how to establish these conditions.	The Policy is vague in identifying reference conditions because these condition depend on many site-specific factors. A discussion of these factors is contained in the FED under Issue 5G.	No

So that's -- as you can imagine, this is going to make all the difference on how

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	these evaluations turn out, what the baseline and the reference condition is. So therefore, we would recommend some additional guidance be provided in the policy on how to establish these conditions.		
Draft Policy, Section 3.1.9: Degradation of Biological Populations and Communities			
1.10	For population or community degradation related to sedimentation, the term associated with should be replaced with the term scientifically and demonstrably caused by.	The use of the term 'associated with' is deliberate. Association is precautionary and provides the RWQCBs some flexibility in analysis of their data.	No
1.22, 1.9	Guidance must be provided regarding the timeframe over which degradation must be measured to establish significance; at least several years of significant data must be considered.	Degradation of biological populations and communities measure the diminished numbers of species or individuals of a single species or other metrics when compared to a reference site. In the fact sheets, RWQCBs should document the index period that sampling will occur. For example, index periods should be established for a particular season, time of day, or other window of opportunity when signals are determined to be strong and reliable. Only results from similar index periods should be compared.	No
10.10	Flexibility must be demonstrated by this policy to accommodate biologic impairment. Again, the role of professional judgment, weight of evidence, multiple lines of evidence, should be acknowledged and encouraged as acceptable policy for developing criteria, thresholds, and making determinations of exceedance. Language should be altered in this section to reflect this need and be integrated with section 3.1.9 for consistency.	The Policy uses a multiple line of evidence approach to determine if standards are exceeded. Degradation must be exhibited as compared to a reference site and associated water and sediment concentrations of pollutants. The Policy provides guidance in the selection of evaluation guidelines but leaves the selection of the guidelines up to the RWQCBs with justification in the fact sheets.	No
18.88	The TMDL Roundtable recommended that 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. The draft Listing Policy is partially consistent with this recommendation. The draft Listing Policy discusses sediment issues in a manner generally consistent with this recommendation, but appears to apply the binomial method in Section 3.1.8 and 3.1.9, which was not recommended by the Regions.	The binomial method is to be applied to the associated water or sediment concentrations of pollutants only and not to the bioassessment data.	No
44.15	Comparisons of conditions in a water body to conditions in a reference water body must be made during similar season and/or hydrologic conditions for both water bodies.	The Policy has been revised to reflect this condition.	Yes
48.7	The proposed metrics to assess biological degradation should be conducted over a number of years (2-3) to accurately assess the impairment of the community. Using short term measurements may not be indicative of the long term effects on the community.	It is difficult to prescribe the appropriate test for the analysis of biological data. These data should be reviewed on a case-by-case basis.	No
53.16	Concerned that the draft policy does not appear to articulate how bioassessment data can be most efficiently utilized in listing and de-listing decisions.	The first recommendation is unnecessary; the Policy provides the necessary guidance to document the listing factors. The second recommendation,	Yes

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	<p>Recommend to amend sections 3.1.9 and 6.1(B) of the draft policy to split paragraphs.</p> <ol style="list-style-type: none"> 1. In the first sentence of the first paragraph under 3.1.9 Degradation of Biological Population and Communities add in ' pollutants are documented as described in section 3.1.6.' 2. After the first sentence in the first paragraph under 3.1.9 Degradation of Biological Population and Communities add the sentence, 'Association may also be made with other stressors, such as temperature, nutrients, dissolved oxygen, trash, etc. For impairments not associated with toxicity (i.e., where section 3.1.6 does not apply), a 'weight of evidence' approach may be used to document the associated pollutant(s).' 3. The last sentence in the first paragraph under 3.1.9 should read, 'Toxicity analyses should rely on measurements from at least two stations.' 4. Add a paragraph after the second paragraph stating, 'Bioassessment used for listing decisions shall be consistent with section 6.2.3.4 and section 6.2.5.11. For bioassessment, measurements at one stream reach may be sufficient to warrant listing provided that impairment is associated with a pollutant(s) as detail above.' 	<p>'Association may also be made with other stressors, such as temperature, nutrients, dissolved oxygen, trash, etc.' has been added after the first sentence. In response to the next statement, the Alternate Data Evaluation section has been deleted and situation-specific weight of evidence listing and delisting factors have been added. The third recommendation will not be added. Relying only on toxicity analysis would severely hamper the measurement of effects of the additional impacts that you requested be added to the section. The fourth requested addition will be added to the section.</p>	
53.18	<p>Because bioassessments can be used to indicate where or when an impact exists, but do not often reveal the specific cause(s) of the impact, it is reasonable to require that an association with a pollutant be demonstrated prior to listing. Section 3.1.6 (Water/Sediment Toxicity) provides only a partial list of the possible pollutants that could impair biological integrity. For example, altered levels of temperature, nutrients, dissolved oxygen, trash inputs, or transient chemical pollutants that act alone or in combination can also impair biological integrity without exhibiting toxicity in standard toxicity tests. The draft policy should be supplemented to allow for listing whenever bioassessment data indicates impairment and a scientifically valid association with a pollutant of any type can be demonstrated.</p>	<p>This revision has been made to the Policy.</p>	<p>Yes</p>
53.19	<p>Because bioassessments normally evaluate stream (and reaches), not discrete 'stations,' it is not clear what methods are covered by the sentence: 'The analysis should rely on measurements from at least two stations.' (We assume that this was meant to apply to toxicity tests, not bioassessment.) The integrative evaluation of a single representative stream reach - as is routinely performed by the bioassessment methods utilized by the SWAMP program - should be recognized by the policy as sufficient to demonstrate impairment.</p>	<p>The reference to 'stations' was meant to represent the vastly different water bodies through out the state. The sentence has been revised to include comparisons to similar locations. Evaluation of a water body, as performed by the bioassessment methods utilized by the SWAMP program, is sufficient to demonstrate impairment.</p>	<p>Yes</p>
53.21	<p>That paragraph is problematic because multiple issues are lumped into the same paragraph, which creates confusion and leaves the listing requirements open to wide interpretation. Specifically, it is unclear whether and how the second and third sentences modify the first sentence. The first sentence makes perfect sense</p>	<p>The binomial statistical test is not intended to be used for bioassessments. The first sentence of this paragraph has been separated as suggested. The language has been revised to reflect that the binomial applies to the associated pollutant only.</p>	<p>Yes</p>

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	if it is meant to stand alone, and we recommend that, for clarity, it be separated from the remainder of the paragraph. The last two sentences of this paragraph (i.e., requiring a minimum number of 'samples' with a confidence level of 90 percent using a binomial distribution) apply to guidelines for sediment quality, fish/shellfish consumption, or bioaccumulation. They are not applicable to bioassessments (which rely on integrative composites samples and multimetric or multivariate-derived indices). To avoid confusion, the policy should clearly acknowledge that bioassessments do not (and cannot) properly rely on the same statistical tests as guidelines for sediment quality, fish/shellfish consumption, or bioaccumulation. This can be accomplished by adopting the suggestions of the TMDL roundtable, or by splitting the second paragraph of section 3.1.9 and adding other language as recommended above.		
53.22	Acknowledges that Section 3.1.11 (Alternate Data Evaluation) may provide for 303(d) listings based on bioassessment data if 'corroborating evidence from independent lines of evidence show narrative standards are not attained.' However, given the wide acceptance and discriminatory power of modern bioassessments, the draft policy should be supplemented to articulate when bioassessments may be used without the need for 'independent lines of evidence.' This concern can also be resolved by adopting the suggestions of the TMDL roundtable, or by adding language to section 3.1.9 as recommended above.	The alternate data evaluation section has been deleted but the added situation specific weight of evidence factors can be implemented using bioassessments.	Yes
210.7	When considering listing factors such as degradation of biological populations, the Policy doesn't really provide any guidance on how baseline or reference conditions are to be established. Additional guidance should be provided in the policy on how to establish these conditions.	Guidance for the evaluation of bioassessment data is provided in section 6. The section purposely provides general guidelines to allow RWQCBs flexibility for adopting methodology that best meets their needs and at the same time allows for the use of data from existing bioassessment programs.	No
217.13	The trend at the federal level on regulation and research is to focus on biological effects and impacts, because the whole point is to protect our water resources, yet this listing policy is leading California in the exact opposite direction.	Comment acknowledged.	No

Draft Policy, Section 3.1.10: Trends in Water Quality

11.9, 13.4, 13.12, 13.3, 19.9, 22.5, 23.10, 30.8, 64.9, 74.4, 203.6	Item 1 states that at least three years of data will be used. Based on work conducted by several researchers, including Benda (USFS 2002, Benda 2003), it is clear that in many environments, including landslide prone terrain, background conditions and trends in water quality cannot be determined in such a short time.	In providing general guidance for assessing trends in water quality, the Policy establishes that the amount of data to be used in assessing trends, should not be less than three years. This timeframe was selected because there should be sufficient time to identify baseline conditions. The Policy calls for at least two years of data to list water bodies and this seems to be a reasonable amount of time and data to establish baseline conditions. An additional year would be the absolute minimum to establish the declining trend in water quality. The Policy does not establish an upper limit on the amount of data to be used by the RWQCB in listing for a decline in water quality.	No
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
51.17, 76.4, 102.10, 108.7, 115.4	Consideration of threatened water bodies is clearly required by USEPA CWA-related regulations. It is ignored in the proposed Policy.	The Policy section on trends has been revised to address these concerns. The definition for a water quality limited segment, as defined by 40 CFR 130.2 (j) states that, any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act. The Policy is consistent with this definition and requires that the assessment include a description of whether the declining trend in water quality is expected to not meet water quality standards by the next listing cycle.	Yes
212.9	For a normal listing with data, there is a requirement that 10 percent of samples with a confidence level of 90 percent, using binomial distributions, is how one gets listed. For the trends, it's not clear. There is no concrete guidelines on that. Perhaps specific guidelines, such as at least 5 percent of exceedances, or there is a 25 percent increase in the pollutant concentrations over a five-year period, or if there is a minute number of samples. The only statement is that there are three years, and they have to look at some general guidelines. So those criterion are so subjective, they need to be nailed down a little bit more if trends are to be used at all.	<p>The binomial test helps evaluate dichotomous data in order to assess compliance with water quality standards. Trend analysis methods help detect and estimate changes in water quality data over time. For example, one of the most common procedures for assessing trends is linear regression. This tool is used to determine temporal or spatial trends where temporal or spatial patterns are strong. Linear regression calculations are performed on a data set containing pairs of observations (Xi, Yi), so as to obtain the slope and intercept of a line that 'best fits' the data. For temporal trends, the Xi values represent time and the Yi values represent the observations, such as pollutant concentrations. An estimate of the magnitude of trend can be obtained by performing a regression of the data versus time and using the slope of the regression line as the measure of the strength of the trend. Using the binomial test is not appropriate for estimating declines in water quality.</p> <p>The Policy also establishes that the amount of data to be used in assessing trends, should not be less than three years but it does not establish an upper limit on the amount of data to be used by the RWQCB in listing for a decline in water quality. Furthermore, data to properly substantiate the decline of water quality may require the application of other unique trend analysis approaches to account for such factors as seasonal or weekly systematic variations, data auto-correlation or jumps in the data due to interventions or sampling procedural changes. There are many widely accepted trend analysis approaches currently available. The use of any specific approach will depend on the data available for analysis or specific characteristics associated with the data. Providing specific guidance does not allow the use of the most appropriate trend analysis approach in the area where the water body is located. For this reason only a general guidance on how to address trends in water quality is provided.</p>	No

Draft Policy, Section 3.1.11: Alternate Data Evaluation

5.1, 11.10, 12.11, 19.12, 29.9, 39.5, 68.4, 71.1, 73.3,	Concerned that inclusion of this section could result in the continued inclusion of water bodies on the State's 303(d) list in the absence of information that water quality standards are exceeded or that beneficial uses are impaired.	The Policy has been revised and the alternate data evaluation section has been deleted. The Policy now includes a Situation-specific Weight of Evidence Listing Factor. The justification to support listing on the section 303(d) list	Yes
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
83.11, 208.8, 220.4, 221.4	Alternate data evaluation methods as specified in the draft Policy could allow considerable discretion in evaluating water bodies and may lead to inappropriate listings. Encourage the SWRCB to carefully address these concerns so that objective methods are used to evaluate impairments and produce scientifically defensible 303(d) listings.	using this factor is now more inclusive and includes providing data or information to support the listing, describing in the fact sheets the substantial basis in fact from which the listing can be reasonably inferred, demonstrating that the weight of evidence shows the water quality standard is not attained and demonstrating that the approach is scientifically defensible and reproducible.	
8.9, 61.10, 102.6, 107.5, 203.7	This Section should be removed from the policy. Good decision-making results from limited discretion in others than the policy makers. Allows for alternative methods of evaluation off sets the positive policy changes otherwise effected and adds additional discretion at agency levels far below the policy makers. Move away from subjective policies and toward objective measurable criteria for listing.	The section has been removed from the Policy and replaced with listing and delisting factors that allow RWQCBs to use a weight of evidence approach to list or delist waters.	Yes
18.19, 48.8, 53.8	It is not clear if all or only a few of the justifications provided need to be met for listing on the 303(d) list. It is also not clear if only the exceedance frequency or biological and physical parameters will be used as the basis for listing. Exceedance frequency by itself may not be representative of an impairment unless it can be shown that there is biological degradation to the community or physical degradation to the water body that is negatively impacting the community.	The Policy has been revised to provide more discretion in establishing listings and delistings when the provisions of the Policy are not met or are not applicable.	Yes
18.32, 18.7, 18.17, 20.9, 20.11, 40.53, 80.5, 101.5	This section should be renamed the Weight of Evidence method. The Weight of Evidence method would be modified to describe the types of documentation that must be provided to justify listing a water body, if the binomial method is either inapplicable or would suggest not listing. Delete text from various identified Listing Factors and combine either into one section or include into the Weight of Evidence method.	The Policy provides guidance on the weight of evidence approach and employs a narrative process where individual lines of evidence are evaluated separately or combined using the judgement of the SWRCB and RWQCBs. Using this approach, for some listing factors, a single line of evidence could be sufficient by itself to demonstrate water quality standards attainment. For other listing factors, multiple lines of evidence would be needed to determine standards attainment. In still other circumstances, some information may still indicate non-attainment of standards. In those situations, situation-specific weight of evidence listing and delisting factors have been added to the policy that provide processes to allow the use of additional lines of evidence provided that the RWQCBs justify their decision.	Yes
18.33	It is not clear what types of scientifically defensible procedures would be acceptable for analyzing data and how certain types of procedures could be shown to be equivalent to the binomial method in terms of confidence level and hypothesis testing. For example, it is scientifically defensible to evaluate data graphically and to consider seasonal patterns of exceedances, but it is not clear how such an evaluation would meet this criteria.	This section has been deleted from the Policy. However, the use of statistical analysis is necessary to raise confidence in decisions that are based on limited information (i.e., that the samples are representative of actual conditions). Graphs are useful to observe relationships among variables but they do not numerically address the issues of bias, variability, uncertainty, and the potential for error that sampling inevitably introduces. Graphs are valuable tools that give a visual presentation of the data being gathered. When combined with statistics, graphs can provide an effective visual representation of the recorded counts over time. For example, graphs can provide an effective visual of seasonal patterns of exceedances. This is valuable information for establishing sampling design and parameters but not for establishing the validity of the sampling data.	No

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18.35, 18.34	This section appears to require that a narrative objective not be attained in order to list under the Alternate Data Evaluation.	This section has been deleted and replaced with a more narrative and inclusive situation-specific weight of evidence listing factor.	Yes
18.6, 40.90, 40.30, 40.92	The policy is unclear as to whether and how alternative data evaluation and weight of evidence analysis procedures will be applied in the assessment process.	The new situation-specific weight of evidence listing and delisting factors will be applied when RWQCBs have some evidence that water quality standards are attained or not attained but the amount or quality of data do not meet the requirements of the other factors in the Policy.	No
25.11	Concurs with concerns presented by the Executive Advisory Committee for the Stormwater Program, County of Los Angeles, and Richard Watson on the problems associated with trends in water quality and alternate data evaluation.	Comment acknowledged.	No
40.91	These provisions for listing waters based on alternate data evaluation should more clearly apply to all data types including sediment, tissue, toxicity, and biological response data.	The situation-specific weight of evidence listing and delisting factors apply to all types of data and information.	No
40.93, 51.29, 51.27, 51.121	Concerned that the draft policy currently states 'the measurements can be analyzed using a scientifically defensible procedure that provides an equivalent level of confidence as the listing factors in section 3.1.' This seems to require any and all data must have 90% confidence level to be used in assessing impaired waters, which may be inconsistent with the concept of a weight of evidence approach.	The alternate data evaluation section has been deleted and replaced with a situation-specific weight of evidence listing factor. This new approach is consistent with weight of evidence approaches used or suggested for section 303(d) purposes. In addition, Listing Policy's weight of evidence approach now allows RWQCBs to request placement of a water on the list even if the provision of the Policy are not met as long as there is evidence that standards are not attained and that the listing can be reasonably inferred from the information at hand.	No
40.94, 51.130, 51.142	The intent of SWRCB appears to be to allow the use of a weight-of-evidence approach in some circumstances. The weight-of-evidence approach is for the interpretation of narrative objectives because of the nature of the data and analytical methods necessary to evaluate narrative objectives. Such an approach should be outlined in a new draft Policy section 'Evaluation of Narrative Criteria.' In this section, use of interpretative tools other than the numeric guidelines--including biological assessment methods, biological monitoring methods, models or formulae that use input of site-specific information/data, reference-based systems, and other scientifically defensible methods--should be explicitly permitted.	The new situation-specific weight of evidence listing and delisting factors allow RWQCBs to use a wide range of data and information as well as approaches for listing and delisting. To use this information RWQCBs need to describe how data and information affords a substantial basis in fact which the decision can be reasonably inferred. RWQCBs also need to demonstrate that the approach used is scientifically defensible and reproducible.	Yes
53.9	The reference to Section 4.2 is not clear. Why does this section refer to delisting requirements?	The reference to Section 4.2 was in error.	Yes
60.32, 76.19	This subsection should be renumbered 3.2. Section 4: California Delisting Factors	Comment acknowledged.	No
64.7	Maintain the requirements for RWQCBs justifications currently included in the Alternate Data Evaluation listing factors.	Comment acknowledged.	No
107.8	The draft Policy says, 'RWQCB may use alternate exceedance frequency, if	A situation-specific weight of evidence listing factor has been added to provide	Yes

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	justified. Justification may include...' That can be interpreted in multiple ways. This section says, 'At a minimum the justification must demonstrate...' followed by a series of bulleted requirements. With proper modification, this can provide an outlet and mechanism for making sound decisions.	RWQCBs flexibility to interpret data for use in listing decisions that do not meet the listing decision rules.	
108.17	SWRCB Comment: If the binomial requirements can not be met, the alternative data evaluation can be used. RWQCBs will set criteria. There is sufficient flexibility. There are sufficient alternatives. Response: Disagree. The 'alternatives' are unguided. The RWQCBs will have no power to fix problems. The alternatives are burdensome. Your premise is incorrect.	Comment acknowledged.	No
109.3	Evidence from other states shows that the alternative data evaluation—the weight of evidence approach—could reduce conflicts between USEPA and the State over future 303(d) lists.	Comment acknowledged.	No

Draft Policy, Section 3.2: TMDLs Completed Category Factors

60.31	The special condition of this subsection should be revised to specify that a TMDL has either been approved by or established by USEPA for the pollutant-water segment combination. The special condition that an Implementation Plan has been approved for the TMDL should be deleted since implementation plans are not required by the CWA and USEPA establishes technical TMDLs without implementation plans.	This section has been revised for clarity.	Yes
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Draft Policy, Section 3.3: Enforceable Program Category Factors

13.6	This section clearly applies to forestry operations on non-federal lands in California where the Forest Practice Rules (FPRs) are an 'enforceable program', directed in large part to protect water quality that could be used to reduce TMDL assignments in the future.	Comment acknowledged.	No
13.7	It is not clear what is meant by 'site-specific study, case studies from similar locations, or research results from applicable situations.' Monitoring results suggest that riparian leave requirements, particularly under the Threatened and Impaired Watersheds Rule Package, are adequate to prevent water temperature effects related to forestry operations, with post-harvest canopy exceeding FPR requirements.	While the circumstances cited may very well be true, an assessment should be completed in light of all the information available for water segments with potential impacts from elevated water temperature. To allow more flexibility in RWQCB decision-making, this category has been eliminated and a new category has been created: the Water Quality Limited Segments Being Addressed. Under this new category, if the RWQCB has certified under the provisions of the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options that the pollution control requirements other than TMDLs are reasonably expected to result in the attainment of the water quality standard, the impairment will be addressed	Yes

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		under this category.	
13.8	SWRCB could greatly increase regulatory effectiveness and efficiency by acknowledging that California Forest Practice Act and FPRs are an enforceable program for purposes related to this category, while at the same time providing guidance on what additional studies or monitoring programs are needed for documentation under the proposed policy.	The Policy should remain general so that the RWQCBs can make their own determinations as to whether or not a program is working and/or should be considered. A blanket exception for any program acknowledged as an enforceable program can not be made. The RWQCB have the discretion to certify, under the provisions of the Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options, that pollution control requirements other than TMDLs are reasonably expected to result in the attainment of the water quality standard.	No
14.8	Recommend that the Listing Policy not address enforceable programs since the TMDL Guidance already provides a mechanism for recognizing such programs.	This section of the Policy has been revised to avoid duplication with the TMDL Guidance.	Yes
21.31, 40.26, 40.27, 48.9, 48.10, 108.3	In order for this Enforceable Program provision to apply, the policy states that the discharge source subject to the enforceable program need only comprise the majority of the pollutant load causing the impairment. This provision is potentially inconsistent with federal regulations because minority sources not covered by the enforceable program may be sufficient to cause water quality standards violations even if the majority source is controlled.	The statement has been removed from the Policy.	Yes
21.32	The Agricultural Waiver Program is not an appropriate Alternative Enforceable Program to control runoff/discharge from irrigated agriculture.	Comment acknowledged.	No
Draft Policy, Section 4: Delisting Factors			
8.10, 51.143, 51.144	We recommend that the delisting policy be revised to require the demonstration that the delisting threshold is more rigorous than the listing threshold. In most situations, the listing and delisting evaluation methodologies should be consistent to ensure that the delisting threshold is more rigorous.	Based on the comments received at the September 8, 2004 workshop, the delisting requirements have been made more rigorous by requiring more certainty to delist than to list.	Yes
18.63	Recommended that 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. The draft Listing Policy is partially consistent with this recommendation. Section 4 describes how waters can be removed from the 303(d) list. Waters can be delisted if fewer than 10% of the samples are not exceeding standards. The Policy, therefore, allows waters in non-attainment of standards to be delisted.	As it does for listing, the Policy establishes a statistical procedure to judge with a prescribed level of confidence and power when a certain number of exceedances (or less) observed in water quality samples should trigger the need to delist a water body. The rigor and validity of the delisting model equal that for the listing procedure.	No
40.107	For de-listing waters from the 303(d) list, the proposed policy appears to utilize the same statistical approach and underlying assumptions (fewer than 10% exceedances with 90% confidence level) as described in the listing methodology. We support the State's decision to apply a different null hypothesis in assessing potential delisting decisions.	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
40.108, 51.136, 51.138, 51.139, 51.140, 51.135, 51.133, 51.134, 217.15	Delisting requirements should include specific requirements on data representation. The draft Policy currently requires a minimum of 22 samples before a water body can be evaluated for delisting. However, the policy contains no specific data representation requirements for these 22 samples, such as the minimum timeframe in which these samples can be collected and specific conditions that should be captured.	All data representation requirement described in the Section 6 (Policy Implementation) must be met in the evaluation of delisting a water body. In terms of specific data representation, the Policy is intended to allow the RWQCBs the flexibility to use samples collected in a variety of ways to make listing decisions. The temporal and spatial representation requirements are the same for listing and delisting. These requirements are general so RWQCBs can make decisions to list or delist with all the available data and information. Too much specificity might render the Policy unworkable in certain circumstances.	No
41.2	The first sentence of the second paragraph should be modified as follows. All listings of water segments shall be removed from the section 303(d) list if the listing was based on faulty data. It is necessary to clarify that the RWQCB should not only reevaluate but delist water segments that were listed based on faulty data or information.	The Delisting Factors establish the criteria to remove waters from the list. This sentence is not needed.	No
43.49, 60.34, 76.22	The delisting factors section does not provide for removing water segments from the 303(d) list if specific pollutants have not been identified. A delisting factor should be added to specify that existing water segment-pollutant combinations that have been listed without specific pollutants identified shall be removed from the 303(d) List and placed on a Pollutant Identification List.	In the delisting factors, the Policy states that waters should not be listed if pollutants are not identified (toxicity is an exception). The Policy provides direction on the disposition of waters and pollutants relative to the section 303(d) list. Placement of waters on a 'Pollution List' is beyond the scope of the Policy.	No
48.11	The last sentence should be revised to clearly state that a water body can be removed from the 303(d) list if the applicable section requirements under which it was originally placed are no longer applicable. The sentence can now be interpreted to read that all conditions listed in the section must be met prior to delisting a water body. For instance, Section 4.3 is intended solely for bacteria and the impairing pollutant may be a metal. In this case, it does not make sense to require this section to be met.	The sentence has been clarified.	Yes
50.8	An effort to delist a water requires full compliance with all laws and should include a mechanism that verifies the existing condition and identifies any conduct that would defeat a delisting and would not be observed or documented until after the sampling results could authorize a delisting.	Any decision to remove a water from the section 303(d) should comply with federal law and regulation. There are several listings that should be reconsidered in light of the data that are available. Requiring new data in all cases seems to contradict federal requirements to base decisions on all readily available data and information.	No
51.141	This item should be added to this section. - Re-evaluation of existing data should not be conducted unless it can be demonstrated by the questioning party that the listing was based on faulty data or if objectives and standards have been revised.	Review of listings should be performed if warranted. The provisions of the Policy may influence which waters are included on the list.	No
51.146, 51.145, 217.18	The delisting policy for marine recreational waters should require the use of a reference system approach to ensure consistency between the listing and	The Policy has been revised to allow the use of the reference system approach to remove listings related to bacteria if the water quality standards allow.	Yes

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	<p>delisting decisions regarding these water bodies.</p> <p>The listing policy for marine recreational waters recommends the use of a reference site to account for exceedances of health-based bacteria standards that occur due to natural sources. The delisting policy for recreational beaches uses an exceedance threshold of 10% using the binomial distribution for a confidence level of 90%. These two approaches are inconsistent, and could result in a delisting threshold that is less rigorous than the listing requirements, depending on reference beach used to list. For example, a beach could be listed because it has an exceedance rate greater than its associated reference beach, but if the reference beach has an exceedance rate lower than those listed in Table 4.1 (the binomial model for delisting), the beach could then be eligible for delisting – not because water quality at the beach has improved, but because the delisting threshold is lower than the listing threshold.</p>	<p>A minimum of three-years of data to support removing a water from the section 303(d) list is not justified unless the requirement for 3-years of data is necessary for listing as well. Larger data sets that cover several years are preferable for both listing and delisting decisions but this amount of data is rarely available. If conditions repeat over a two year period, confidence in the assessment decision is increased. If a 3-year timeframe is used, water quality problems that are manifested within two years will be ignored.</p> <p>The 'margin of safety' concern is focused on the development of TMDLs not the section 303(d) list process. The 'minimum' sample size concerns are addressed in the FED sections related to balancing statistical errors.</p>	No
51.165, 51.137	<p>The draft Policy currently does not provide for the 'margin of safety' called for in the CWA. For instance, a fixed time period will not be sufficient for many circumstances. As an example, if a harbor is listed for synthetic chemicals that adhere to fine sediment particles, it will need to be monitored for a sufficient period of time to include rainy seasons that drive the fate and transport of the substances. A draft Policy that had an appropriate delisting margin of safety would include guidance establishing a minimum (rather than fixed) sampling time period, as well as a minimum sample count.</p> <p>In addition to requiring a minimum sample size of 22, the delisting policy should clearly require that data meet the following specific representation requirement for all delisting evaluations:</p> <p>- A minimum timeframe for data collection must be established. We recommend that the data represent a minimum of three years. It is imperative that a minimum time period be represented in the data to account for temporal variability, which can be significantly related to a host of factors including climate and seasons. In particular, rainfall conditions greatly influence water quality in most water bodies. In California, drought conditions have lasted for more than six years at a time. So, a three-year requirement should be viewed as an absolute minimum.</p>		No
58.10	<p>The second paragraph allows for delisting based on faulty data, however, it is unclear how this process might be initiated (RWQCBs and SWRCB) and how the quality of data might be assessed.</p>	<p>The review of existing listings has been clarified in the Policy.</p>	Yes
58.11	<p>The delisting criteria assumes an incorrect null hypothesis that the water is contaminated.</p>	<p>The hypothesis selected for assessing if a water should be removed from the section 303(d) list assumes that the water does not meet water quality standards because in a previous listing cycle the water was judged to not meet water quality standards. The hypothesis that the water does not meet standards will</p>	No

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		not be accepted if data and information show standards are attained. If data show that standards are not met then waters will remain on the section 303(d) list.	
60.33, 76.21, 76.20	Subsections 4.1 through 4.9 should be renumbered 4.1.1 through 4.1.9.	Comment acknowledged.	No
72.7	The draft policy suggests using a (worst-case) 'erroneous de-listing' probability of 10%-- i.e. a 90% worst-case probability of 'erroneous failure to de-list'-- for such decisions. This seems too stringent unless standards for subsequent data collection are imposed to monitor closely possible improvements in impairment levels. To be effective, such monitoring would probably require more sophisticated statistical sampling designs than the 'fixed n' design of the Exact Binomial Test.	If it is more appropriate to use a different statistical test or different confidence level RWQCBs are allowed flexibility to use alternate tests as long as the use is justified under the situation-specific weight of evidence delisting factor.	Yes
74.6	This section should be expanded to include specific language to allow the delisting of a water body if the data quality and data quantity requirements under the new policy are not met by the existing listing.	The Policy has been revised to address this comment.	Yes
216.1	Concerned about the delisting process; concerned that we won't be able to protect this water, and nor will we be able to improve this water.	Comment acknowledged.	No

Draft Policy, Section 4.5: Bioaccumulation of Pollutants in Aquatic Life Tissue

21.36	The concept that excessive tissue residues depend on fish consumption rates need to be considered especially for certain key populations who depend on fish from a water body as their primary source of food.	The issue of fish consumption rates and susceptible populations is addressed in Section 3.1.4.	No
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Draft Policy, Section 4.9: Degradation of Biological Populations and Communities

53.23	The use of bioassessments in de-listing decisions. A significant number of water bodies in California have been listed as impaired based on little (or no) actual data to document violation of objectives or impacts to beneficial uses. In many such cases, bioassessment could be a cost-effective tool to demonstrate attainment of aquatic life uses, thereby justifying de-listing and saving substantial resources for addressing real problems. For example, where water bodies have been listed for sediment based on anecdotal evidence, bioassessment could document non-attainment of aquatic life uses (thereby confirming impairment). Alternatively, bioassessment could document the attainment of aquatic life beneficial uses, thereby justifying de-listing. But the draft de-listing criteria could be interpreted to impede or even preclude reliance on bioassessment for such delisting decisions.	Revisions to this section have been made to address this issue.	Yes
53.24	For de-listing to occur under this section, the draft Policy specifies a minimum sample size of 22, and statistical tests not appropriate for bioassessment data.	The statistical test is to be applied to the associated pollutant not to the bioassessment data. This section has been revised to clarify this point.	Yes

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	These provisions would make it infeasible to de-list under this Section using bioassessments, because 22 bioassessment 'samples' would be prohibitively expensive, and bioassessment data cannot be meaningfully analyzed using the binomial distribution method.		

Draft Policy, Section 4.10: Alternate Data Evaluation

53.25	For delisting to occur under this section, there must exist 'corroborating evidence from independent lines of evidence,' and an alternative approach as defined by Section 3.1.11 must have been used originally to place the water segment on the list. These provisions could make it infeasible to delist under this section using bioassessments, because: (1) even though bioassessment may document healthy instream communities, independent lines of evidence may be unavailable or cost-prohibitive; and (2) few (if any) of the currently-listed waters that may be cost-effectively shown to be 'healthy' using bioassessment were listed following the criteria at Section 3.1.11.	The Policy has been revised to include a situation specific weight of evidence listing factor that provides the RWQCBs the flexibility to delist using bioassessment data if it can be documents that water quality standards are met and that the data and information affords a substantial basis in fact that the delisting can be reasonably inferred.	No
60.35	Subsection 4.10 should be renumbered 4.2.	Comment acknowledged.	Yes

Draft Policy, Section 6: Policy Implementation

7.6	The Policy should allow appropriate time frames to collect adequate temporally and spatially representative data.	Comment acknowledged.	No
11.14, 19.22, 203.9	Section 6.1 states that 'data and information older than 10 years' is inconsistent with Section 6.2.5.2.	Section 6.1 has been deleted. A general statement regarding revision of existing listings has been incorporated into the delisting factors, Section 4.	No
11.18, 19.21	Section 6 should be moved ahead of its many references in the Policy document.	The document is organized to describe the section 303(d) list, the listing factors, delisting factors, and then the supporting guidelines needed to develop the list. Moving Section 6 to the front of the document may confuse the main goal of the policy which is to: establish a standardized approach for developing California's section 303(d) list.	No
19.1	Supports the inclusion of requirements regarding (data) quality and quantity assessments.	Comment acknowledged.	No
25.4	There has been much discussion on the problems with water body listings in the 1998 and 2002 listing process, and better requirements for data quality and evaluations will prevent these problems from reoccurring.	Comment acknowledged.	No
40.97	The commenter developed and applied a semi-quantitative method of evaluating water column, sediment, and fish tissue data for toxic pollutants in the process of developing several TMDLs for Newport Bay, CA. Recommend that the State consider the use of this type of approach as part of the listing policy.	These approaches were considered.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
44.6	It is important for the SWRCB explicitly recognize in the Policy that the role of all available data assembled in determining water body impairment will be subject to data quality and quantity scrutiny.	Comment acknowledged.	No
61.18	Request clarification in the descriptions of spatial representation and representation temporal because the technical meaning of these sections is unclear.	Comments acknowledged.	No
65.4	Endorse the inclusion of requirements for data quality and quantity, requirements for consistent and statistically valid data evaluations, and implementation provisions. However, the building and construction industries want to ensure that these efforts are practical, achievable and effective.	Comment acknowledged.	No
217.23	Most NPDES permit programs are set up where you have the outfall and you're looking at water quality impact at the outfall and below the outfall. And if you were to combine those together, that just makes no sense. And the same sort of approach occurs for spatial distribution where if you collected samples within the same week.	Comments acknowledged.	No

Draft Policy, Section 6.1: Evaluating Existing Listings

5.6, 7.9, 11.15, 11.5, 12.7, 17.3, 19.5, 23.6, 28.3, 38.8, 41.3, 43.57, 43.51, 44.2, 47.13, 49.3, 60.39, 60.38, 61.11, 64.5, 65.9, 65.8, 68.5, 70.9, 70.7, 71.10, 71.11, 74.3, 76.24, 79.4, 83.4, 83.5, 109.18, 111.4, 112.2, 114.7, 115.5, 116.5, 203.3, 207.13, 208.6, 210.2, 212.5, 212.4, 212.3, 213.7	Requests re-evaluation of each previously listed water body as proposed in the July 2002 draft policy.	The Policy has been changed to allow for the reevaluation of an existing listing if new data are available or not. To reduce the workload on RWQCB and SWRCB staff, the request for a reevaluation from interested parties must include an assessment of all the readily available data and information.	Yes
7.7, 24.2, 39.6, 48.5, 56.11, 64.3, 67.4, 205.4, 211.6	The paragraph at the end of section 6.1 should be moved to a new section and modified as follows: 6.2. An interested party may request an existing listing be reassessed under the provisions of the Policy. In requesting the reevaluation, the interested party must describe the reason(s) the listing is inappropriate, state the reason the Policy would lead to a different outcome, and provide any new data	This recommendation has been incorporated into Section 4 of the Policy.	Yes

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	and information that would assist the RWQCB and SWRCB in conducting the review.		
8.11	The policy should set forth specific guidance for the RWQCBs as to the burden interested parties must show in order to trigger a procedure for a thorough reevaluation.	The Policy has been revised to add clarifying language.	Yes
10.18	Timber and agricultural proponents would like review of historical listings. Re-reviewing all these listing would result in the same outcome listing. Going through this process would be a huge waste of resources and set the schedule for implementation (you are not going to implement if you need to re-review) back another 2 or 3 years.	Comment acknowledged.	No
18.61	The Policy should be applied retroactively within time and resource constraints. Approaches for applying this policy to currently listed waters should be described. The draft Listing Policy is partially consistent with this recommendation. Existing listings must be reevaluated if new data and information are available; otherwise, reevaluation appears to be discretionary and based primarily on whether an interested party requests such an evaluation.	Comment acknowledged.	No
18.68	The TMDL Roundtable recommended that 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. The draft Listing Policy is partially consistent with this recommendation. The draft Listing Policy includes provisions for reevaluating currently listed waters, but does not give a timeline for completing the reevaluation.	The draft Policy does not state when the review of the section 303(d) list is to be completed. Revision of the list is a staff intensive effort and it is not advised that RWQCB be mandated to complete the review within a certain time frame.	No
24.3	The last sentence is misplaced and belongs at the beginning of section 4. It should read: The most recently completed section 303(d) list shall form the basis for any subsequent lists. This section provides the methodology for removing waters from the section 303(d) list (including the water quality limited segments category, enforceable program category, and TMDLs completed category).	Comment acknowledged.	No
25.10	Listings on the 1998 and 2002 lists may have been inappropriate.	Comment acknowledged.	No
25.9	SWRCB should consider the re-evaluation of each water body identified on the previous 303(d) list.	Comment acknowledged.	No
36.2	The draft Policy specifies that all water bodies on the 2002 303(d) list would be reevaluated using the Policy over the next two listing cycles. This would place a tremendous strain on RWQCB already limited staff resources.	The draft Policy does not mandate review of the entire section 303(d) list over two cycles. No timeframe for complete reevaluation is included.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
39.7, 41.5, 41.4, 41.6, 53.15, 53.14	The following steps should be used to complete the reevaluation of a faulty listing: A. Document the basis for the original listing. B. Provide information documenting that the listing was based on faulty data or information, including, but not limited to, typographical errors, improper quality assurance/quality control procedures, limitations related to the analytical methods that would lead to improper conclusions regarding the water quality status of the segment, or deviation from listing policies in effect at the time of the listing.	The Delisting Factor section contains provisions that allows a water body to be removed from the list data and information are faulty. This clarification is not needed.	No
39.8	The following steps should be used to complete a reevaluation based on new data and information: A. All readily available data and information shall be used to assess a water segment. Data and information older than ten years may be used if the original listing was based on the data. B. In performing the reassessment the RWQCBs shall use the California Listing Factors (i.e., water shall be assessed as if they had never been listed before) to assess each water segment-pollutant combination. The original listing was established using the provisions of this Policy, the California Delisting factors shall be used.	Comment acknowledged.	No
41.1	The Policy provision regarding listing reevaluation and delisting need to be clarified. The provisions are ambiguous and subject to varying interpretations.	The provisions of this section have been clarified.	Yes
44.17	The Policy should reflect that the delisting process can be initiated at any time and need not correspond to the listing cycle.	Development of the section 303(d) list is a resource intensive effort. If RWQCBs were to be required to consider listing and delisting decisions between biennial list reviews, it would be a substantial drain on staff resources. Staff would have to be redirected from other activities, such as TMDL development, to address these requests.	No
51.159	The draft Policy no longer calls for an automatic review of all of the currently-listed waters. A comprehensive review of every water body on the 2002 section 303(d) list would be costly, would not result in a substantial improvement in the accuracy of the list, and would cause inordinate additional delay in California's already dilatory implementation of the TMDL program. Time is of the essence if we are to reverse the further degradation of our limited and dwindling supply of clean water.	Comment acknowledged.	No
53.17, 53.26, 53.27	The first paragraph under Section 6.1 Evaluating Existing Listing it should read as follows. Water segment and pollutant on the section 303(d) list shall be reevaluated if new data and information become available. The steps to complete a reevaluation are: A. All readily available data and information shall be used ...	This section of the Policy has been deleted and a replaced with a brief statement in Section 4 on the process for reevaluating existing listings.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	B. In performing the reassessment the RWQCBs shall either: (1) use the California Listing Factors (i.e., waters shall be assessed as if they had never been listed before) to assess each water segment-pollutant combination, or (2) where bioassessment would be an appropriate indicator, follow the process specified at section 6.2.3.4.		
57.5, 202.5	Periodic reevaluation of contaminant listings should be mandatory and new listings should be balanced by delistings (due to new data or objective achievement) so that a predictable workload exists for both the regulated and regulatory communities.	The level of work does not drive which waters should be listed or delisted. All readily available data and information is used to assess waters.	No
58.13	Pre-policy listings should be revisited to determine whether appropriate criteria were utilized, especially as it relates to analytical Quality Assurance and Control.	Comment acknowledged.	No
70.8	SWRCB should adopt a policy that both allows and compels staff to evaluate previously listed water bodies if, based on current policy and available data, that review might reasonably lead to a different listing decision.	Comment acknowledged.	No
114.8	Some listed water bodies merit a reevaluation.	Comment acknowledged.	No
211.5	Commend the SWRCB for providing a mechanism for the reevaluation of water bodies identified in the 303(d) list using the Listing Policy.	Comment acknowledged.	No
218.6	I would just like to emphasize that when we're talking about this policy, what we really are talking about are very concrete waterways that are in jeopardy of falling off the 303(d) list. And what this means is a very real impact to communities and to the local economy, and I would urge you to look with great care at the suggestions of my colleagues in making your final determinations.	Comment acknowledged.	No

Draft Policy, Section 6.2: Process for Evaluation of Readily Available Data and Information

18.80	<p>The TMDL Roundtable recommended that staff from the RWQCBs and SWRCB should collaborate to specify some general guidance on managing data and information. DWQ and OIT staff of the SWRCB will investigate a networked data management system (e.g., utilizing ArcGIS and GeoWBS) in which the RWQCBs' data and recommendations will be compiled. Some approach for processing, storing and retrieving data and scanned information will be required. Accessible archives of all information submitted are an increasing challenge, due to volume and variety of formats. Support, with staffing, hardware, and software, will need to be long-term and distributed among the SWRCB and RWQCB offices. Office of Information Technology staff should evaluate the following alternatives:</p> <p>a. State Board investigates contract services, via commercial vendor, to provide a web site outside the state network, to improve access and security for public</p>	The development of a data management system is an administrative task that is outside the scope of this Listing Policy. Data management is being developed under contract. Data management is not a matter that should be included in the Policy because the technical aspects of the data system are best addressed by the scientists and engineers completing this task. In any case, the data management system will implement the Policy as adopted.	No
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	<p>and state employees.</p> <p>b. State Board and Regional Boards develop this web site using state network facilities.</p> <p>At the end of the list update process, the entire contents of the web site could be transmitted to a State Board server for preservation as the Administrative Record. The Draft Listing Policy is not consistent with this recommendation. The Draft Listing Policy does not discuss data management.</p>		
40.13	The proposed policy and supporting documentation do not contain sufficient rationale for a decision to exclude available data and information from consideration, as required by 40 CFR 130.7(b)(6). Data and information are often useful within a “weight-of-evidence” assessment context even if they do not meet every quality assurance expectation.	Data will not be excluded from evaluation. The policy has been revised to address this issue.	Yes
Draft Policy, Section 6.2.1: Definition of Readily Available data and Information			
18.37	Delete language regarding the order that information should be reviewed. It is unclear why the Policy should specify the order in which to evaluate information, since Regions would just evaluate all relevant information together; therefore this language is deleted.	The Policy has been revised to make this change.	Yes
Draft Policy, Section 6.2.2: Administration of the Listing Process			
14.10, 18.56	The Listing Policy does not establish a clear listing cycle. Currently, federal regulations require an update to the 303(d) list every two years. The process outlined in the draft Listing Policy is similar to the process used in 1998 and 2002. The requirements for RWQCB hearings may add additional time to what we have observed in the past. It should be noted that for the 1998-303(d) list update, the Regions began the assessment process in the spring of 1997 and USEPA did not approve the list until the summer of 1999. For the 2002-303(d) list update, the solicitation process began in February 2001 and US EPA did not approve the list until July 2003. The listing process defined in the draft Policy will likely continue to take more than 2 years to complete. This will put the State in a situation of continually updating the 303(d) list. As an alternative, the SWRCB should pursue a longer 303(d)-list update cycle (e.g. four years). If federal regulations require a 2-year update, the State Board could define an intensive update every four years (i.e. full review of all available data) with a less intense update in between (e.g. a review of specific requests for changes).	The two year cycle to update the section 303(d) list is required by federal regulation and is not defined by SWRCB. Performing a less intensive survey does not comply with federal regulation that requires States to evaluate all readily available data during each cycle. During the development of the 2004 list, SWRCB will use a modified approach to complete the list. SWRCB will complete all tasks related to the development to the 2004 section 303(d) list. The policy has been revised to acknowledge the abbreviated process to be used in 2004.	Yes
18.67	The TMDL Roundtable recommended that the RWQCBs should be responsible for assessing the existing and readily available information, including information received during the solicitation process. The RWQCBs should also	The last sentence is an administrative task that will be addressed when the list is developed.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	<p>be responsible for identifying waters on the List. The RWQCBs may hold a workshop and/or public hearing to take comments on staff recommendations. The RWQCBs should then take formal action to adopt recommended changes to the list. The RWQCBs will be responsible for submitting to the SWRCB the administrative record which supports their recommendations. The SWRCB should review each RWQCB's recommendations for consistency with the Listing Policy. The SWRCB should accept RWQCB recommendations, unless they are inconsistent with the Listing policy or applicable law. The SWRCB should then adopt the statewide List through a formal action. The draft Listing Policy is consistent with this recommendation. The draft Listing Policy also makes it clear that only issues raised before the RWQCBs will be considered. The Listing Policy may also need to explicitly limit the time period for submission of data and information.</p>		
43.4	In developing 303(d) policy, the SWRCB should address the following question: What are the roles of the State and Regional Boards in making and implementing policy?	The roles of the SWRCB and RWQCBs are explained in the Listing Policy.	No

Draft Policy, Section 6.2.2.1: Solicitation of All Readily Available Data and Information

18.66	The TMDL Roundtable recommended that each RWQCB should be responsible for soliciting information from interested parties within its Region. The SWRCB 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. The draft Listing Policy is consistent with this recommendation. The draft Listing Policy should explicitly state that the solicitation process will take place concurrently at the SWRCB and Regions.	The Policy has been revised to add that SWRCB and RWQCBs shall initiate the listing process by concurrently and actively soliciting all readily available data and information. The division of tasks to be completed will be accomplished administratively when the data solicitation is initiated.	Yes
18.69, 80.9, 80.10	The solicitation for data and information and assessment needed for changes to the list should take place every four years. The RWQCB 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., RWQCB adoption of the recommended change, SWRCB approval, and USEPA approval for Section 303(d) listed waters). The draft Listing Policy is not consistent with this recommendation. The draft Listing Policy makes no mention of the frequency of the assessment process. Currently annual 305(b) reports are required and biennial 303(d) lists. Without a defined State policy on the frequency of assessment, the State will likely be conducting continual and possibly overlapping assessment processes.	Federal Regulations (40 CFR 130.7(d)) currently requires that the water quality limited segments list be submitted to USEPA every two years. This deadline could be changed in the future. By not including any specific deadline in the language the Policy, it assures that the Policy will remain current with regard to submittal of the 303(d) list regardless of any federal regulatory change in submittal deadline.	No
18.75	The TMDL Roundtable recommended that to provide a minimum statewide level of consistency and completeness in soliciting existing and readily available	Language requiring that each RWQCB document its solicitation process is not necessary. This documentation issue is addressed when RWQCBs submit	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	<p>data and information, each RWQCB will solicit, and document its methods and sources for soliciting, existing and readily available data and information. In general, RWQCBs 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. The draft Listing Policy is consistent with this recommendation. A requirement that each Region document its solicitation process should be added to be fully consistent with this recommendation.</p>	<p>listing recommendations and fact sheets to the SWRCB (section 6.2).</p>	
<p>18.77, 18.76</p>	<p>The TMDL Roundtable recommended that the SWRCB 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 RWQCB staff requests) that the RWQCBs will, at a minimum, use to solicit existing and readily available data and information. The draft Listing Policy is not consistent with this recommendation. No description of the methods to be used to conduct the solicitation is provided.</p>	<p>The Policy provides general guidance regarding the type of data and information that should be solicited. Solicitation methods should be left to each RWQCB to determine.</p>	<p>No</p>
<p>18.78</p>	<p>The TMDL Roundtable recommended that the data and information submittals to the RWQCBs should contain the following:</p> <ul style="list-style-type: none"> (a) The name of the person and/or organization providing the information. (b) The name of the person certifying the completeness and accuracy of the data and information provided. (c) The person certifying data and information may also provide a statement as to what impairment they believe is occurring. (d) Mailing address, telephone numbers, and email address of a contact person for the information provided. (e) Two hard copies and one electronic copy of all information provided. Data should be submitted in electronic form. Data may be submitted in other formats negotiated with the pertinent Region. (f) If computer model outputs or GIS files are included in the information, submitters should provide bibliographic citations and specify any calibration and quality assurance information available for the model(s) used. Metadata for the field data should be provided (i.e., when measurements were taken, locations, number of samples, detection limits, and other relevant factors). For GIS files, the metadata must detail all the parameters of the projection, including datum. (g) Bibliographic citations for all information provided. (h) A description of, and reference for, the quality assurance procedures and whether data quality objectives were attained (see Section 4.1 below). (i) In addition, data from citizen volunteer water quality monitoring efforts 	<p>The Policy has been revised to include requirements whether data quality objectives were attained as part of the QAPP, certification requirements regarding data completeness, and accuracy, certification regarding what impairments the data and information demonstrate. The Policy provides guidance for the information required for photo documentation submittals.</p>	<p>Yes</p>

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	<p>should include an indication of any training in water quality assessment completed by members of the group.</p> <p>(j) For photographs, the information listed for photo documentation in Section 4.1.</p> <p>The draft Listing Policy is partially consistent with this recommendation. The draft Listing Policy contains most of the components of recommendation 20, but does not include a requirement to state whether data quality objectives were attained as part of the QAPP, nor does it include items b, c, or j.</p>		
48.12	The last bullet regarding citizen groups should be clarified. The current statement may be interpreted as suggesting that only the training received by such a group needs to be identified. It should be made clear that the requirements, including quality assurance procedures, are also required for citizen group data.	The Policy has been revised to include language requiring citizen groups data to be subjected to data quality assurance procedures.	Yes

Draft Policy, Section 6.2.2.2: RWQCB Fact Sheet Preparation

18.38	The section requires preparation of individual fact sheets. Rewording is suggested to ensure that the RWQCB documents the basis of each decision, but does not require repeat information that might be common to a number of recommendations. Redundancies in the type of documentation required should be deleted.	This section has been revised to remove unclear and redundant language.	Yes
21.44	It is important that the summary of non-numeric data and information is not based on chemical concentration data, but on data that relate to impacts through proper TIE or other valid and appropriate studies.	Comment acknowledged.	No

Draft Policy, Section 6.2.3: Evaluation Guideline Selection Process

1.18	Guidance must be provided regarding the means to establish Evaluation Guidelines' applicability and protection of beneficial uses.	The Policy provides guidance on the use of evaluation guidelines. The Policy requires that the pollutant, beneficial use and narrative water quality objective be identified when selecting an evaluation guideline. For some pollutants specific consideration in the selection process are detailed; for other parameters further guidance is detailed.	No
8.12, 8.5, 49.4, 64.21, 67.5	<p>Concerned about the adoption of numeric guidelines by other than policy-making bodies using rule-making procedures with public notice and opportunity to provide input. Numeric guidelines or thresholds should not be adopted summarily by board staff.</p> <p>The draft Policy should direct RWQCB staff to adopt numeric objectives when appropriate, consistent with the California Water Code (sections 13241 and 13242), rather than use 'numerical evaluation guidelines' to interpret narrative</p>	Adoption of guidelines as water quality objectives is beyond the scope of the Listing Policy. Evaluation guidelines use is limited to interpretation of narrative water quality objectives. Quantitative guidelines are used so narrative objectives interpretation can be more consistent and predictable among the RWQCBs. The Policy states in the Introduction that the guidelines are not to be used for any purpose other than the development of the section 303(d) list.	No

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	objectives.	In its listing guidance, USEPA (2002a) provides guidance on the structure for documenting listing and assessment methodology and provides information on the content of these methodologies. Additionally, justification for the use of an evaluation guideline must be presented in the fact sheet. Therefore, the use of the documentation will be subject to public scrutiny during the listing process.	
8.13, 14.6, 18.39, 18.10, 20.16, 36.4, 101.11	No justification is provided to support the statement that the Policy supersedes any regional water quality control plan or water quality control policy to the extent of any conflict when evaluating narrative water quality objectives.	This statement has been removed from the draft Listing Policy. Water quality control plans must conform to state policy for water quality control (CWC section 13240).	Yes
13.10	RWQCBs selection of sediment quality guidelines has led to problems in the past and will continue to cause problems in the future.	The Policy provides specific guidance in the selection of sediment quality guidelines and restricts the use of sediment guidelines to those that are most predictive of toxicity.	No
17.5, 22.7, 205.5	Recommend that only guidance approved and referenced by Basin Plan amendments be used in making listing decisions. Such guidance would thus be subject to the public review and comment process, ensuring that guidance are applicable to our water bodies. Promulgation and documentation of numeric guideline in Basin Plans ensure transparency of the listing process.	The Policy provides guidance on the identification of quantitative evaluation guidelines that represents standards attainment or beneficial use protection. Limiting the use of guidelines to only those approved and referenced in the Basin Plan amendments would, in some cases, exclude a way to predictably interpret narrative water quality objectives. In any case, the listing and justification of these guidelines in the fact sheets would provide an opportunity for public scrutiny during the listing process. Incorporation of these values in the Basin Plan is beyond the scope of the Listing Policy.	No
18.40	The procedure for selecting evaluation guidelines need to be clarified with State guidelines preferred over federal. This should be done to ensure consistency between State agencies and between Regions in selecting appropriate guidelines.	Distinguishing a priori between federal and state guidelines is impossible. To provide the ability for use of the most applicable guideline or newly developed scientific research, the Policy does not specify specific documents or preferences for state over federal values. By doing so, applicable federal guidelines or the most recent research may not be useable.	No
21.29	The most important parameter in evaluation of concentration data is to determine whether the concentration is a cause of toxicity or is a source of excessive bioaccumulation. The presence of a constituent above some numeric guideline (e.g. section 6.2.3) is not a valid approach for listing the water body as impaired.	The Evaluation Guideline Selection Process section has been revised. 'Numeric' has been deleted and will be rewritten to reflect the appropriate use of 'interpretive' evaluation guidelines.	Yes
21.45	Caution must be taken in the Evaluation Guideline selection process. The RWQCBs and SWRCB are not well equipped technically and financially to properly evaluate numeric water quality objectives.	The purpose of this section is to provide guidance to make the selection of evaluation guidelines more consistent and transparent throughout the state.	No
21.47	No provisions are necessarily included in the Evaluation Guideline for the Protection of consumption of fish and shellfish to protect populations whose subsistence depends on fish and shellfish. The population is not protected as long as regulatory agencies do not include appropriate consumption rate information.	Consumption rates protective of populations whose subsistence depends on fish and shellfish are recommended by OEHHA and is one of the listing parameters included in Section 3.1.4, Health Advisories, please refer to this section of the Policy for further clarification.	No
21.50, 21.49	Scientifically-based and peer review can be highly subjective. Peer review does	The selection of scientifically based and peer reviewed data relies on the	No

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	not necessarily lead to a credible or reliable discussion.	professional judgement of RWQCB staff. The Policy, however, does provide staff guidelines on how to determine data quality and requires that documentation used to verify impairment contain a QAPP.	
21.51	The statement, 'Identifies a range above which impacts occur and below which no or few impacts are predicted' can easily be an erroneous approach, especially if it is based on sediment quality guidelines.	Comment acknowledged.	No
44.11	Absent a promulgated translator, narrative criteria, with or without numerical guidelines cannot be used to make listing decisions.	A promulgated translator would be necessary if effluent limits were being developed. This Policy only applies to section 303(d) listing and delisting decisions.	No
67.7	Recommend that the final Listing Policy require the RWQCB and SWRCB assess the appropriateness of the guideline in the hydrographic unit and not only rely on guidelines previously used.	This section has been revised in response to this comment. However, evaluation guideline appropriateness will primarily be a determination of the RWQCBs.	Yes
71.18	The proposed draft policy would allow listing decision to be made on the basis of the concentrations of chemical constituents in sediment. California currently does not have adopted sediment quality objectives (SQOs) upon which to base listing decisions. Guidelines developed for use elsewhere are not legally promulgated standards within California, therefore this approach is inappropriate and would not the result in scientifically sound listing decisions. Request that the SWRCB modify the draft policy so that listing decisions be based upon actual measurements of sediment toxicity or upon properly adopted SQOs.	If sediment quality objectives were available sediment chemistry data would be used as a single line of evidence to support a listing decision. In the absence of the objectives, the Policy requires an effects measurement associated with potentially causative chemicals. With the currently drafted Policy, in no case would sediment chemical measurements alone be allowed as the sole basis for listing.	No
109.14	There are no clean sediment guideline or metrics. Recommend clarifying procedures for assessing sediment conditions.	This section has been revised to allow a reference system approach.	Yes

Draft Policy, Section 6.2.4: Data Quality Assessment Process

8.14, 11.1, 40.4, 213.2	We endorse the inclusion of requirements for data quality and quantity requirements for consistent and statistically valid data evaluations, and implementation provisions. This would immediately improve the scientific merit of the 303(d) list.	Comment acknowledged.	No
21.43	Data from such data sources such as; SWAMP, STORET, the Bay Delta Tributaries database, SCCWRP, San Francisco Estuary RMP, and data reported by local, state, federal agencies (including receiving water monitoring data from discharger monitoring reports), citizen monitoring groups, and academic institution, and the public may not necessarily valid and must be critically evaluated with response to their validity in properly assessing water quality. The dataset should be critically evaluated with respect to its reliability and applicability to properly characterizing water quality, independent of who generates the data.	Comment acknowledged.	No

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21.52	In regards to data quality assessment process, not all of the data produced by agencies/entities listed are reliable. To simply assume that data are reliable because they were generated by one of these groups is technically invalid. An approved QA/QC program by the SWRCB and RWQCBs doesn't mean that the data are reliable or appropriate for assessing water quality. Substantial amounts of unreliable data are generated that pass the QA/QC testing, which are not applicable to an evaluation of water quality.	Comment acknowledged.	No
29.11, 60.44, 61.17, 76.27	Subsection 6.2.4 should be revised to clarify that photographic documentation is used only as supportive information since listing requires scheduling of a TMDL and development of a TMDL requires data suitable for calculation in order to develop load allocations and waste load allocations.	This section has been revised to clarify this issue.	Yes
40.43	Encourage the State to define the basic QA/QC components that correspond to the 'equivalent' of a QAPP. For example, if a monitoring group were to provide documentation of study objectives, rational for selection of sampling sites, sampling frequency, field techniques, analytical methods, and personnel training, then we see no legal rationale to exclude the analytical results and monitoring data from the assessment.	This section has been revised to apply the same requirements for QAPPs or any 'equivalent' document.	Yes
40.44	The policy lists major monitoring programs in California considered to be of high quality. Recommend the State include all EPA monitoring data (not just EMAP) as well as other agencies that operate high quality sampling programs (e.g., U.S. Fish and Wildlife Service, U.S. Department of Agriculture, U.S. Army Corps of Engineers, and National Oceanic and Atmospheric Administration).	The commenter did not submit the named QAPPs so their quality can not be evaluated.	No
40.45, 40.42, 40.11, 53.11, 53.10	The policy includes provisions for excluding from consideration data and information that do not meet all of the State's preferred tests of data quality and representativeness. These provisions appear to conflict with 40 CFR 130.7(b), which requires the state to gather and consider all existing and readily available data and information in the listing process. This requirement creates a strong presumption that data and information will be used in the assessment process unless it is completely unreliable.	This section has been revised to make it clear that all readily available data and information will be considered. As outlined in the Policy, data without rigorous quality control (such as photographic documentation) can be used in combination with high quality data. Data that is not supported by a QAPP, or its equivalent, can not be used 'by itself' to support a listing decision unless justified by the situation-specific weight of evidence listing factor (section 3.1.11 or 4.11). The Policy provisions do not conflict with 40 CFR 130.7(b), and the state will gather and consider all existing and readily available data and information in the listing process as required.	Yes
44.4	Additional assessment categories of information should be included in the minimum QA/QC requirements. Suggest revising the bullets as follows: <ul style="list-style-type: none"> -Methods used for sample collection and handling; -Field and laboratory measurement and analysis; -Data management, validation, and record keeping (including proper chain of custody) procedures; -Quality assurance and quality control requirements (including matrix spikes, duplicates, blanks, lab QA/QC samples, lab 	This section has been revised for clarity.	Yes

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	certification, etc.)		
44.5	RWQCBs should be required to identify the criteria used to review, verify, and validate data. The fifth paragraph after the second set of bullets be revised as: The RWQCBs shall clearly evaluate and make a finding in the fact sheets on the criteria used to review and validate the data, the appropriateness of data collection and analysis practices, and the data verification process including the chain of custody, detection limits, holding times, statistical treatment of data, precision and bias, etc.	The suggested revision has been included.	Yes
51.31	The requirement should be removed to realistically allow the submission of data collected from a variety of different sources, in particular, nonprofit organizations, academic sources, and private citizens. Requiring all data to be in SWAMP format to be considered by SWRCB or the RWQCBs would substantially limit the amount of data that could be included in the review process because many entities such as nonprofit groups, academic professionals, and private citizens would have to invest significant resources to submit data in the SWAMP format.	The Policy is permissive on the format of data submittals. The preference is for all data to be submitted in a SWAMP-compatible format, for the purpose of data management.	No

Draft Policy, Section 6.2.5: Data Quantity Assessment Process

18.11, 20.17	Sections 6.2.5.3 and 6.2.5.4 provide direction on sample collection, which seems misplaced in a policy on how to assess available information.	<p>These sections are needed to assure that the assumptions of any statistical test are met. RWQCBs have approached many of these issues inconsistently in the past.</p> <p>A proper assessment of water quality requires that samples collected should be representative (spatial and temporal) of the area and conditions of the water body in question during a specific time period. Therefore, in order for assessments to be consistent within Regions and Statewide, guidelines need to be established. In addition to spatial and temporal representation, environmental conditions need to be taken into consideration. Environmental conditions (e.g., storms, fires, land use practice, etc.) can have a dramatic effect on the water body.</p>	No
40.48, 40.49	This section is inconsistent with federal guidance that water quality modeling results by themselves are sufficient means of assessing water quality conditions. Federal regulations require the consideration of information from dilution calculations or predictive models in the assessment process (40 CFR 130.7(b)(5)(ii)).	All data and information shall be considered. The relationships between standards exceedances and computer model outputs are dubious. Modeling information is useful in combination with numerical data.	No

Draft Policy, Section 6.2.5.2: Age of Data

29.10, 61.16	Clarify the language regarding use of data older than 10 years. Listings based on	It is ideal to use the most recent data in the evaluation of water quality	Yes
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	such data may have had inadequate scientific basis, or may not reflect current conditions and may no longer be valid.	<p>assessment. The disadvantage of the requirement limiting the data age to 5-7 year, for example, is the possibility that high quality data will be missed in the assessment. For example, peer reviewed and reports of some data (e.g., USGS) takes many years to get through the review process. If older data are the only data available it should be used in decision making. For this reason, the Policy has been revised; the age of data used is up to the RWQCBs discretion. It is ideal to use the most recent data in the evaluation of water quality assessment.</p> <p>The disadvantage of the requirement limiting the data age to 5-7 year, for example, is the possibility that high quality data will be missed in the assessment. For example, peer reviewed and reports of some data (e.g., USGS) takes many years to get through the review process. If older data are the only data available it should be used in decision making. For this reason, the Policy has been revised; the age of data used is up to the RWQCBs discretion. It is ideal to use the most recent data in the evaluation of water quality assessment.</p> <p>The disadvantage of the requirement limiting the data age to 5-7 year, for example, is the possibility that high quality data will be missed in the assessment. For example, peer reviewed and reports of some data (e.g., USGS) takes many years to get through the review process. If older data are the only data available it should be used in decision making. For this reason, the Policy has been revised; the age of data used is up to the RWQCBs discretion. It is ideal to use the most recent data in the evaluation of water quality assessment.</p> <p>The disadvantage of the requirement limiting the data age to 5-7 year, for example, is the possibility that high quality data will be missed in the assessment. For example, peer reviewed and reports of some data (e.g., USGS) takes many years to get through the review process. If older data are the only data available it should be used in decision making. For this reason, the Policy has been revised; the age of data used is up to the RWQCBs discretion.</p>	

Draft Policy, Section 6.2.5.3: Spatial Representation

21.53, 51.32, 217.22	Samples collected within 200 meters of each other shall be considered the same station or location is an arbitrary approach that should not be followed. Site-specific evaluations of how replicate samples collected at one time and location vary should be the approach that is used - not an arbitrary definition of distance as set forth in the Policy.	<p>In order to provide consistency within and between Regions, guidelines should be set in the Policy. The general guidance stated in the Policy for spatial representation is provided to avoid biasing samples in narrowly defined locations. For example, samples collected near each other, may not reflect the true condition of a large water body (if the listing is focused on the larger water body). Samples should be collected in a manner that characterizes the condition of the water being considered for listing. Guidance is provided to require that spatial independence of samples is maintained and, if smaller areas, must be characterized that this be described in fact sheets.</p> <p>A 200 meter sample site separation has been used by several states to maintain spatial independence of sites. The 200 m designation is not mandatory but rather used as a trigger to determine when additional justification is needed.</p>	No
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29.12	Clarify the descriptions of spatial representation. The technical meaning is unclear.	The Policy has been revised to clarify the description of spatial representation.	Yes
71.30	To the extent possible, data should be collected at more than one spatially independent station to better capture the true condition of the water body. Even if a network of stations is located in the same water body, the sample measurement will vary among stations and over time due to naturally occurring factors.	A single station may be representative of water body conditions if there are many samples in time and the samples were selected to represent the water body. It is impossible to provide a simple rule that would be applicable to the wide range of water body types in California. Of course, samples should be representative of the area being assessed and the representation of the samples should be described in fact sheets documenting the listing decision.	No
Draft Policy, Section 6.2.5.4: Temporal Representation			
18.42	Language in this section regarding how samples should be collected should be deleted, since this provides monitoring guidance that is not appropriate for a Listing Policy. Language regarding the use of data collected on a single day or during a single event should also be eliminated, since this language suggests that it should not be used as the primary data to support listing. The justification for such a requirement is unclear and the meaning of primary data in the context of this section is not clear.	<p>The language provided in the Policy is appropriate in order to avoid individual samples over- or under-representing conditions in the water body. Virtually any statistical test requires samples to be independent and random and unless these conditions are built into the policy it is very likely that inferences made from sample data could misrepresent water body conditions. If the Policy does not establish these simple rules for random and independent samples, it is possible that data will result in a higher probability of placement of waters on the section 303(d) list.</p> <p>Judgement should not be used in place of the randomization needed to make probabilistic inferential statements (Hahn and Meeker, 1991). This problem can be avoided by describing what the samples represent and making sure samples are independent.</p>	No
18.70, 51.168, 71.31	Data should be collected to capture temporal variability (e.g., by requiring data collected from at least two seasons). From a statistical perspective sampling should not be conducted only (or even mostly) when 'water quality objective exceedance would be expected to be clearly manifested' or during just the critical conditions for a particular pollutant. The best estimator of the true condition of a water body with respect to a given water quality parameter is some measure of central tendency, not an extreme value. The methodology for determining compliance with a numeric water quality criterion is predicated on the fact that random sampling will provide a representative data set from the population (i.e., that each individual sample provides a ransom snapshot of water quality at a given moment in time). The goal then is to estimate the true state of the water body, both spatially and temporally, not the maximum state at a single time or place.	<p>The goal is to determine if water quality standards are attained or not attained in the water segment under consideration. Data and information should be as representative as possible of true conditions of the water body but 'true' conditions are never actually known. If historical data and information shows that water quality standards are exceeded during particular events or seasons, then assessment should be limited to that period. Otherwise, these events may not be detected. Random samples can be collected that represents events. The significance of the timing of sampling must be included in the fact sheets.</p> <p>Average exceedance of standards equates to an exceedance frequency of roughly 50 percent (if the data are normally distributed around the mean). This exceedance frequency would prevent the Boards from listing many waters that can be identified with relatively small sample sizes.</p>	No
19.17	Requests that when known changes have taken place in a water body (such as implementation of management practices) only recent data be considered during re-evaluation.	The draft Policy has been revised to incorporate this comment. In order for statistical analysis to be used the data must be independent. The requirement would help in meeting the independence assumptions of statistical tests.	Yes

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21.54	The temporal representation approach stated in the Policy is technically invalid. Runoff from agricultural areas or urban areas where pesticide toxicity that occurs only during a runoff event can have a significant adverse effect on the beneficial use of water bodies.	Samples collected during storm events (e.g., during runoff) may be used in the assessment as long as they have been collected over two or more storm events. This is to ensure that the exceedance of water quality standards reoccur over several events and the problem exists.	No
29.13	Clarify the descriptions of temporal representation. The technical meaning is unclear.	The Policy has been revised to clarify the description of temporal representation.	Yes
51.33	The temporal representation requirement is unclear and could be misinterpreted. Temporal independence is based on site-specific conditions, and prescribed guidance or requirements should be avoided to ensure all valid data is used in the listing process. The provisions of the current draft Policy should be replaced with a requirement that data evaluations consider the temporal representation of the samples, particularly in light of site-specific characteristics including seasonal variability and input events.	The reason for this section is to avoid problems related to independence of the samples. Consideration of temporal independence is not enough. For results to be most useful some control on temporal representation must be included in the Policy.	No
217.16	Critical conditions must be sampled, and this includes a representative number of wet weather samples during varying levels of storm duration intensity. The policy related to small sample size must be modified as well.	Samples collected in storm events should be representative of the entire event in order to accurately assess the potential problem. In addition, samples should be collected over two or more events to accurately reflect the reoccurrence and extent of the problem.	No

Draft Policy, Section 6.2.5.5: Minimum Number of Samples

18.43, 29.14, 61.19	The section describing minimum number of samples, should be eliminated. This section refers to a Planning List, which is not described elsewhere. In addition, the application of the binomial method already discusses how small sample sizes would be handled, so this section appears unnecessarily redundant. There is no need to restrict the number of samples for the RWQCB staff Weight of Evidence method, since multiple lines of evidence can be used to support a listing or delisting decision.	The section has been removed from the Policy. The second paragraph has been included in the 'Aggregation of Data by Reach/Area' section of the Policy.	Yes
111.2	Confused that USEPA does not support minimum sample sizes. Seems contrary to the 2002 CALM guidance. Supports the Policy's minimum sample size requirements. Also supports consistent and valid data evaluations and the strong move towards more elaborate, public and stakeholder involvement.	Comment acknowledged.	No

Draft Policy, Section 6.2.5.6: Aggregation of Data by Reach/Area

1.20, 28.5	If data is to be pooled for consideration, the data should be combined regardless of whether one of the measurements is above the applicable water quality objective.	References to pooled data have been removed from the Policy.	Yes
5.9, 11.16, 12.9, 19.19, 19.18, 23.9,	Concerned with language contained in Section 6.2.5.6 that would allow data to be pooled together for the purpose of impairment evaluations. It appears that a	References to pooled data have been removed from the Policy.	Yes

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25.8, 29.4, 38.6, 51.28, 51.22, 51.34, 57.8, 58.14, 60.40, 60.41, 61.1, 64.23, 65.7, 66.3, 71.16, 74.7, 76.25, 79.3, 83.9, 116.6, 118.3, 202.8, 203.10, 213.6	reach could be listed as impaired if only one sample from that reach met the listing criteria, provided that sufficient data related to the same pollutant were available from adjacent reaches.		
18.41	This section should be eliminated since Section 6.2.5.6 discusses aggregation of data by reach (e.g. spatial representation).	This section is needed to provide specific guidance on how to address water body segmentation.	No
18.44	The first paragraph in the section should be eliminated since a similar description of aggregation of data can be found in the following paragraph.	This section has been revised.	Yes
18.64	Recommended that 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. The draft Listing Policy is consistent with this recommendation. Section 6.2.5.6 describes how data should be aggregated by reach/area and presumably how such reaches should be defined. There is an apparent inconsistency between sections 6.2.5.3 and 6.2.5.6. Section 6.2.5.3 (Spatial Representation) implies that data from a given station can only represent 200 meters of a stream section, whereas, section 6.2.5.6 suggests a number of factors be used to define stream or waterbody segment.	Section 6.2.5.3 is needed to make sure assumptions of statistical tests are met. Section 6.2.5.6 addresses a completely different issue regarding ways to aggregate data within segments. RWQCBs have used dramatically different approaches in assigning areas of impact. This section provides some modest guidelines to make listing decisions more predictable.	No

Draft Policy, Section 6.2.5.7: Natural Sources

11.17, 20.21, 22.4, 40.99, 40.21, 40.101, 40.98, 41.11, 51.18, 58.3, 109.8	<p>The State must list waters impaired by natural sources.</p> <p>Section 3.1 of the draft Policy states that water segments for which standards exceedances reflect 'natural background conditions' shall not be placed on the 303(d) list. This directly contradicts the 9th Circuit's recent rejection of the proposition that section 303(d) only applied with respect to waters where effluent limits existed for a particular pollutant. In doing so, the court emphasized that both the listing obligation and TMDL development obligation are triggered when water bodies do not attain water quality standards, regardless of the source of pollution. It also contradicts the position of the NRC, which found that the TMDL program 'should encompass all stressors . . . that determine the condition of the waterbody.'</p> <p>More significantly, it contradicts both the CWA (which contains no exemption for impairments due to natural sources) and the TMDL regulations. For</p>	<p>If a water body does not meet water quality standards it should be placed on the section 303(d) list. Some Basin Plans contain language regarding the applicability of narrative and numeric water quality objectives to uncontrollable sources. For these regions no listing for natural sources would occur. For other regions waters would have to be placed on the section 303(d) list. In these cases, it is unlikely that a TMDL would be completed because the source is uncontrollable. The Policy will not provide any guidance concerning the listing /delisting of water segments due to natural sources of pollutants. RWQCBs will determine how to proceed with listings or delisting related to natural causes.</p>	Yes
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	example, 40 C.F.R. § 130.2(g) defines “load allocation” for purposes of developing a TMDL as “[t]he portion of a receiving water’s loading capacity that is attributed either to . . . nonpoint sources of pollution or to natural background sources.’ The regulations thus clearly contemplate the listing for waters impaired by natural sources. Moreover, the language of section 130.2(g) indicates that Pronsolino’s approval of TMDLs for nonpoint pollution extends logically to natural sources as well, as both are addressed in the definition of ‘load allocation.’		

Draft Policy, Section 6.2.5.8: Quantitation of Chemical Concentrations

21.55	Using a value at one-half that leads to a particular conclusion on listing is an inappropriate approach. Usually, a more appropriate analytical method can be used to define the actual concentration.	This section of the Policy has been revised and the reference to one-half the quantitation limit has been removed.	Yes
58.4	Standard deviation from a single sample analysis may rise as the detection limit is approached and samples are often subject to matrix interference effects that introduce an additional source of error; these false positives may lead to unwarranted diversion of effort.	Comment acknowledged.	No
58.6, 215.1	Concerned about how these new rules interact with things like CTR, when we have seen past listings based on very, very low and unusual hardness levels. CTR listings for metals that are interacting with very, very low hardness measurements that are essentially atypical and require the CTR to be extrapolated beyond what is represented in CTR documents at the level of, like, two parts per million hardness when the CTR tables stop at 25. There are exceptions that pop up; it’s not a perfect science. We appreciate that the Regional Board would take those kinds of analytical anomalies essentially into consideration.	The RWQCBs have the discretion to interpret the CTR at low hardness levels where appropriate. It is beyond the scope of the Listing Policy to modify standards.	No

Draft Policy, Section 6.2.5.9: Transformation of Data consistent with expression of numeric water quality objectives, water quality criteria, or evaluation guidelines

2.4	Agree with the recommendation. This reflects real effects/conditions better than instantaneous maxima (which overstate the severity of the condition) and statistically are rare events.	Comment acknowledged.	No
18.3	The Policy, as proposed, does not reflect the details of many specific water quality standards such as spatial and temporal applicability and frequency and duration of allowed non-attainment.	The Policy requires all water quality standards to be interpreted based on the structure and form of the standard as adopted before any statistical tests are performed. Staff will compare data to the applicable standard and applicable averaging period(s) and the result will be either ‘yes’ the standard is exceeded or ‘no’ the standard is not exceeded. Then the series of ‘yes’ and ‘no’ answers will be analyzed statistically using the binomial test.	No

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		The form of the standard is preserved, the averaging periods are used, and a statistical assessment of the strength of the data sample is completed. No standard is changed in this evaluation.	
18.45, 43.8, 60.53, 76.33	Alter the staff-recommended alternative 2 to require sampling greater than the single sample requirement currently recommended where RWQCBs do not have enough data to match specific averaging periods.	The Policy does not seek to change the form and expression of the water quality objective used in list assessments. Therefore, the Policy provides guidance to ensure that sampling data is interpreted appropriately. Recommendations for a single sample to represent the averaging period allows the use of available data in a manner that is precautionary and provides the RWQCBs some flexibility to use what's available to assess compliance.	No
37.3	The draft Policy's direction on transformation of data for use in the binomial model is inappropriate for assessment of compliance with most of the Lahontan RWQCB's numeric water quality objectives. This direction could result in listing of water bodies that are actually attaining standards.	Sampled data for virtually all water quality objectives lend themselves to analysis by binomial statistics. This is because data are easily transformed into nominal information: 'yes' the sample falls below the standard or 'no' the standard is exceeded.	No
51.30	The policy's generalized requirements for data averaging and combining data from adjacent reaches do not seem to be based on scientific methods and will have the effect of eliminating data that should be considered. For example, the policy indicates that 'If the averaging period is not stated for the standard, objective, criterion, or evaluation guideline, then the samples collected less than 7 days apart shall be averaged.' Samples collected within a 7-day time frame may be considered temporally independent if justified. The seven-day time frame is arbitrary. No justification or data are presented that indicates that the duration of seven days between sampling events is required to ensure temporal independence. More importantly, the time frame required for temporal independence is specific to each location and site-specific conditions that existed at the time of sample such as the weather conditions.	The 7-day averaging period is recommended in order to reduce the possibility that the results used in statistical analysis are auto-correlated or dependent. Autocorrelation of the measurements has been observed in some data sets from California waters. Spurlock et al. (2000) showed that a chlorpyrifos sample collected on a given day is influenced by concentrations 1 to 6 days prior to the sampling (positive autocorrelation). If the data are positively autocorrelated then it is probable that the observed variance to be smaller than expected. This could then leads to an inflated Type I error. Averaging samples collected during a 7-day period would reduce this problem.	No
107.9	The draft Policy states all samples taken in one day should be averaged and represented as one sample. This is scientifically problematic for certain kinds of parameters, e.g., dissolved oxygen. A characteristic problem with dissolved oxygen due to nutrients is that readings are high in the daytime and fall sharply just before dawn. An average of the high and low values gives results that would not allow listing, yet fish will be dying at dawn for lack of oxygen and at noon from super-saturation. The test requirements do not fit this real-life situation. With only a few minor modifications the problems can probably be remedied.	This section of the Policy has been revised to recognize to use of dissolved oxygen minima.	Yes

Draft Policy, Section 6.2.5.10: Binomial Model Statistical Evaluation

18.46	The redundant language in this section should be eliminated and references to samples and measurements should be changed to data points. The change to the	The section has been revised for clarity. Although numeric sampled information is transformed into nominal (named) information, it remains data.	Yes
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	term data points is proposed because once individual samples or measurements are averaged or transformed the binomial method is applied to the new data point and not to the individual samples or measurements.	Samples either provide readings above a numeric objective or not. The Policy and FED use of sample data is appropriate, even if it takes the form of a 'yes' or 'no'.	
18.82, 21.15	The draft Policy focuses on developing statistical evaluation of the data. Rather than statistical manipulation of the data, the focus should be on protection of water quality. Most statistical manipulation of water quality data does not properly reflect how chemicals impact aquatic-life related beneficial uses of water bodies. Toxicants do not impact fish based on the mean, median, mode, maximum, range, etc., but rather toxicity is based on a concentration of toxic chemical for, duration of exposure relationship for a particular chemical and type of organism.	The focus of the Listing Policy is to provide direction on the consistent development of the section 303(d) list. Statistics are used as a tool to make decision making more transparent and to allow policy makers to establish the parameters that should be used when listing decisions are made. The relationships between toxicity and chemical concentration is a standards issue that is beyond the scope of the Listing Policy.	No
40.28, 40.29, 40.52, 40.51, 40.50, 51.76	The policy does not require verification that data sets are suitable for analysis through the proposed binomial statistics method. Unless evaluated data exhibit particular characteristics (e.g. normal distribution, sample independence, absence of systematic biases) it may be invalid to draw valid statistical inferences based on binomial statistical tests (see Lin et al., 2000).	The data collected in most, if not all, water quality sampling program is applicable to appropriate statistical evaluation. The use of the exact binomial test requires that the likelihood of 'success' and of 'failure' (i.e., standards not met and standards met) remain constant in the population (i.e., water body), and that samples be independent of one another and be representative (e.g., random). The requirements are now included in the Policy. However, being a nonparametric procedure, the exact binomial test does not require an assumption of normally distributed data.	Yes
104.4	Rigorous QAQC procedures, perhaps a standard deviation method, is the proper way to address sample uncertainties. The hypothesis testing procedures described in USEPA testing manuals and guidance documents certainly provide adequate protection against indirectly concluding that waters are toxic when they are not.	Comment acknowledged.	No

Draft Policy, Section 6.2.5.11: Evaluation of Bioassessment Data

18.90	Recommend that the assessment process for biological standards (biocriteria) when incorporated into RWQCB's Basin Plan should be followed. At that time these standards would necessarily guide listing decisions for the affected geographic areas. RWQCBs (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 recommended process. The draft Listing Policy is partially consistent with this recommendation. The draft Listing Policy discusses evaluation of bioassessment data in a manner generally consistent with the recommendation in Section 6.2.5.11. The draft Listing Policy requires that a link between specific pollutants and degraded conditions must be made before a water is listed.	The development of biocriteria is beyond the scope of the Listing Policy.	No
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
51.115, 51.114	As currently drafted the draft Policy appears to block the use of bioassessment studies that are not completed by the RWQCBs. SWRCB's chosen alternative for assessing degradation of biological populations or communities repeatedly contains language requiring the RWQCBs to "clearly document how reference sites are selected and used" and "describe the habitat they are sampling and why it was chosen." This language appears to imply that only data collected from bioassessment studies conducted by the RWQCBs can be used in the assessment of biological communities for the purposes of listing. In practicality, bioassessment studies are completed by other State and federal agencies (resource agencies), research groups, academia, the regulated community, and non-profits.	The Policy has been revised to allow bioassessment data from all sources to be used.	Yes
51.116	We therefore urge SWRCB to revise the language in the FED that all readily available bioassessment data will be considered for listing purposes, and add this language to appropriate sections of the draft Policy. In addition, the draft Policy should explicitly state that assessment for biologically-related impacts often requires the use of multiple lines of evidence, in a weight of evidence approach.	Under the provisions of the Policy, bioassessment-related impacts always require multiple lines of evidence for listing.	No

Draft Policy, Section 6.2.5.12: Evaluation of Temperature Data

18.47	The language in this section that provides examples should be removed to emphasize the parts of the discussion that provide policy direction.	This revision has been made.	Yes
18.87	Recommended that when data of sufficient quantity and quality 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 SWRCB's Thermal Plan should also be considered. When historic or natural temperature data are not available, alternative approaches must be employed to assess temperature impairment. One such approach is based on the assumption that the beneficial uses associated with aquatic life are most sensitive to modifications to natural temperature regimes. Other beneficial uses that may also be affected by temperature include recreation and aquaculture; other approaches for assessing temperature impairment may be more appropriate for these beneficial uses. The draft Listing Policy is partially consistent with this recommendation. The draft Listing Policy discusses temperature issues in a manner generally consistent with this recommendation in Section 6.2.5.12, but appears to apply the binomial method in Section 3.1.2, which was not recommended by the Regions.	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
Draft Policy, Section 6.3: RWQCB Approval			
8.22	There is no policy regarding appeal of RWQCB decisions to the SWRCB. Provisions should be added to specifying the procedure for requesting re-evaluations of existing listings, including an appeal procedure.	Provisions requesting reevaluation of existing listing is included in the Policy.	No
18.48	Changes should be made to the description of the RWQCB approval procedures to be more consistent with legal requirements and standard practices.	The RWQCBs approval procedures are consistent with all legal requirements.	No
Draft Policy, Section 6.4: SWRCB Approval			
18.49	References to fact sheets should be changed to documentation for consistency with changes suggested to Section 6.2.2.2.	If the requirements were changed to provide simply documentation consistency, it is unlikely that RWQCBs would provide consistent, combinable data and information needed to support SWRCB's adoption process. The specificity of the information needed is intended to make the listing process consistent among regions and to allow for easy combination of the data and information summaries.	No
Comment related to Policy Adoption Process			
21.20	SWRCB should start over with respect to drafting a 303(d) listing policy that properly incorporates protection of aquatic life from adverse impacts of chemical constituents, which reflects how USEPA national water quality criteria are to be used to protect the designated beneficial uses of water bodies.	The Policy recommendation for listing decisions due to adverse impacts of chemical constituents implements water quality standards as they exist in plans, policies, and regulation and is consistent with USEPA guidance and policies.	No
30.6	Recognize that economic concerns are not a factor in developing the list. It should be recognized that both the listing and the subsequent development of a TMDL and associated BMPs and Management Measures (MMs) may have significant local and regional economic impacts. The overall process does not address how various sectors of the economy will absorb the costs.	Economic considerations are addressed when TMDLs are developed.	No
40.10	When the State develops its 2004 Section 303(d) list based on the adopted policy, USEPA will carefully scrutinize the proposed listing decisions and associated assessment rationales. If the actual listing decisions are consistent with applicable water quality standards and federal listing requirements, the list will be approvable.	Comment acknowledged.	No
40.36	USEPA expressed these concerns in comments to SWRCB staff dated June 2003 on the previous draft of the proposed policy. Concerned that most of the inconsistencies with federal listing requirement identified in previous comments remain in the December 2003 draft policy.	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
40.37	Unless the policy is modified to address our remaining concerns, it appears likely that the State will develop section 303(d) listing decisions that do not comply with federal listing requirements.	Federal listing requirements are contained in CWA section 303(d) and 40 CFR 130.7. The Policy is in compliance with these requirements.	No
60.2, 60.3	Several of these concerns are related to what appears to be a policy reversal from the July to the December drafts. Instead of building on the listing process improvements that resulted in the 2002 303(d) list, the December draft policy moves back toward the policy that produced the inclusive but flawed 1998 303(d) list in which many water segments were erroneously listed.	While there are some significant revisions between the July and December draft Policy, a standardized approach for the consistent identification of waters that do not meet water quality standards was retained. The Policy outlines the decision rules for different kinds of data; an approach for analyzing data statistically; and requirements for data quality, data quantity, and administration of the listing process.	No
60.4	Concerned that the December draft Policy does not comply with the federal regulations for implementing section 303(d) of the CWA. As noted on page 1 of the Notice of Public Hearing for the January 28 and February 5 hearings on the draft listing policy, 'The section 303(d) list must include the water quality limited segments, associated pollutants, and a priority ranking of the waters for purposes of developing Total Maximum Daily Loads (TMDLs) in the next two years.'	The Policy complies with federal regulations for implementing section 303(d). The CWA requires states to identify waters that do not meet applicable water quality standards and prioritize for the development of TMDLs. USEPA guidance allows the States to develop a TMDL schedule that itself can reflect the priority ranking and further believes this is a reasonable, efficient way to demonstrate priority ranking. The Policy follows this guidance.	No
65.11, 70.6, 73.5	Encourage the SWRCB to adopt a policy that will ensure scientifically defensible and appropriate methods are applied consistently in evaluating all potential 303(d) listings.	Comment acknowledged.	No
101.9	RWQCBs will provide assistance (e.g., ideas and support) to ensure that the policy is workable, effective, and technically and legally valid.	Comment acknowledged.	No

Miscellaneous Comment

4.1	No comment at this time.	Comment acknowledged.	No
5.4	Endorse SWRCB's intention to evaluating the appropriateness of water quality standards prior to the development of a TMDL.	Comment acknowledged.	No
5.5	Support the following concepts from the SWRCB' s draft listing/de-listing policy: - Many listings contained in the State's 1998 and 2002 303(d) lists were based upon limited data, or have occurred despite evidence that natural sources have caused or contributed to the impairment. The basis and rationale for additional listing decisions is unclear. - Support guidance regarding the requirements for and transparency of listing decisions. - Encourage the SWRCB to reinstate language from the July 2003 draft that would provide for a re-evaluation of each water body identified on the 2002	Comments acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	303(d) list.		
7.1, 8.1, 8.3, 13.1, 25.1, 30.11, 56.4, 56.2, 60.1, 67.1, 70.1, 83.2	Support the SWRCB's efforts to establish a statewide approach to assessing California's Surface Waters. Applaud staff's efforts in seeking broad stakeholder input into development of the current draft of the Listing Policy. Staff has gone to extraordinary lengths to work with all interested parties in developing, for the most part, a very objective and scientifically sound Listing Policy.	Comment acknowledged.	No
14.1, 36.1, 42.2, 53.1, 53.3, 66.1, 101.2, 101.3, 115.2, 205.1	Support the comments submitted by the TMDL Round Table, which includes RWQCB staff and managers who have years of experience interpreting water quality standards and evaluating a vast array of environmental data and information.	Comment acknowledged.	No
15.1, 25.2, 31.1, 38.1, 40.39, 43.2, 48.1, 56.1, 56.26, 56.28, 56.27, 61.3, 61.2, 64.1, 65.3, 65.2, 68.2, 71.2, 74.8, 74.1, 79.1, 112.1, 114.2, 115.1, 116.1, 117.1, 118.1, 121.1, 201.1, 210.8	Commend SWRCB staff for their efforts to develop the proposed Listing Policy. The accessibility and willingness to answer questions and clarify issues raised during the review of these documents has been extremely helpful. Support the SWRCB's goal of establishing a standardized approach for assigning water bodies to the State's 303(d) list.	Comment acknowledged.	No
18.1, 80.2	We provided detailed recommendations on a multitude of technical and procedural issues for consideration in developing the policy, but regrettably, most of these recommendations have been ignored or overlooked in the proposed Policy.	Recommendations from the TMDL Roundtable dated 18 December 2002 were evaluated by staff. Of the 35 recommendations made as presented by the RWQCB staff, SWRCB staff agreed with 9 in their entirety; 7 for the most part; 2 provided a good starting point; and agreed that 3 of the recommendations should form the basis for the listing policy.	No
18.2, 20.3, 41.10, 101.1	The Policy should be compared to the draft Process Guidance and the Draft Implementing Policy and any consistencies identified should be resolved. Inconsistencies between the document will likely lead to inconsistencies between RWQCBs in how they interpret and apply the policies.	The Policy has been revised to make sure that inconsistencies are minimized to the extent possible.	Yes
18.52, 80.8	Change references of pollutants to pollution in order to eliminate the additional burden on RWQCBs beyond that of performing the assessment of whether water quality standards are being attained. Section 303(d)(1)(A) of the Clean Water Act requires the identification of all waters not attaining standards, and requires a priority ranking based on the severity of the pollution. TMDLs are only required for certain pollutants. These distinctions are important since the Clean Water Act defines pollution broadly, whereas, pollutants are defined as a subset of pollution. The Listing Policy should require the identification of all waters not meeting standards to be consistent with federal law and use the TMDL	The focus of the Listing Policy is to provide the requirements for the development of the section 303(d) list. Federal regulation limits the section 303(d) list to those waters where water quality standards are not met, pollutant contributing to or causing the exceedance are identified (with limited exceptions), and TMDLs are still required. Including all pollution on the section 303(d) list goes beyond the basic requirements and USEPA guidance.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	Guidance to identify the options for addressing different pollution problems. Trying to distinguish between pollution and pollutants may require additional evaluation that is not part of the water quality assessment process.		
18.55, 30.1	The Listing Policy should include a clear sunset provision. The Listing Policy is largely untested and the consequences of implementation of this Policy are not clear. A sunset provision would allow the SWRCB and public to review whether the Policy is effectively implementing federal law and meeting the goals of the Policy. A sunset date of 2008 or 2009 is suggested to allow the Policy to be applied at least twice prior to review.	The requirements for developing the section 303(d) list have been in place since the mid-1970s and it is not likely that the requirements will be repealed any time soon. If the Policy sunsets or was made non-effective at some future date, SWRCB would have to re-adopt the Policy to address future listing processes. To avoid this resource intensive effort, SWRCB could address provisions periodically, review the Policy and revise any section that is ineffective or less effective than it could be. This process is consistent with the review and revision requirements for State policy for water quality control (CWC section 13143).	No
18.74, 20.1, 51.150	It appears as if the detailed recommendations provided by the TMDL Roundtable have been ignored or overlooked. There are still significant, technical, procedural, and legal problems with the proposed Policy.	Approximately two-thirds of the TMDL Roundtable comments were incorporated into the draft Policy in the preferred alternative. Most of the remaining comments were included in the draft FED as alternatives to be considered by SWRCB. Comments focused on administrative matters such as the creation of the data system, were not included in the draft FED or Policy because these issues should be addressed based on feasible options given staffing and contract resources and not as a matter of SWRCB policy.	No
18.79, 20.13, 43.53, 101.10	The Policy should be brief, non-repetitive, and focused on the requirements SWRCB wishes to establish to assess the status of the State's surface waters. Any guidance or suggestions should be developed as separate technical modules (as is being done with the TMDL Guidance).	One of the goals of the draft Policy is to provide consistent and transparent approaches for the identification of water quality limited segments using a standardized set of tools and principles to be used by RWQCBs to evaluate data. The Policy has been drafted to include sufficient detail so the listing approaches are consistent among Regions and so the tools are standardized. If the approaches and tools were voluntary guidance or suggestions then it would be unlikely that SWRCB would achieve the stated goal. The draft Policy is as brief and focused as necessary to provide consistent approaches and a standardized set of listing and delisting tools.	No
20.12, 27.2, 53.2, 101.6, 102.1	In many places the Policy is confusing, is redundant, or includes unnecessary direction.	The Policy has been revised and several of issues have been clarified.	Yes
20.2	Suggest that you revisit the recommendations and consider the comment submitted by the TMDL Round Table.	Each of the recommendations have been carefully considered by SWRCB.	No
21.17	Rather than trying to make it more difficult to have a water body listed on the 303(d) list as proposed in the draft Policy, there should be a need to increase the number of water bodies that are listed as beneficial use CWA 'impaired.'	Comment acknowledged.	No
21.3	The proposed approach is drastically different from the approach that has been used in the past and that should be followed to protect aquatic-life-related beneficial uses of the State's waters and that is necessary to properly implement the CWA.	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
21.4	The proposed 303(d) listing approach is technically invalid and strongly contrary to protecting the beneficial uses of the state of California's waters.	Comment acknowledged.	No
21.5	The draft Policy is based on a fundamentally flawed interpretation of the federal CWA's key provisions regarding the intent and approach that is to be followed in protecting and, where degraded, improving the beneficial uses of the nation's waters.	Comment acknowledged.	No
21.66	The TMDL implementation approach should, as the first step, verify the reliability of the listing with respect to current violation of WQS. This evaluation should include determination of the need for adjusting the WQO for site-specific conditions. If the validity of the listing is confirmed through a special-purpose studies, then it is appropriate to precede to implement the TMDL to control the WQS violation.	Comment acknowledged.	No
21.69	The draft FED falls far short of presenting a credible discussion in support of the staff's draft Policy. It contains numerous technical problems, which reflect a lack of understanding of how chemical constituents potentially impact the beneficial uses of water bodies and how the USEPA national water quality criteria and state standards based these criteria should be used in developing the CWA 303(d) list.	Comment acknowledged.	No
22.8	Strongly recommends that a review of the applicability of a water quality standard be made part of all TMDL development.	Comment acknowledged.	No
22.9	Joins and incorporates by reference herein comments that have been submitted on the Draft Policy by Tri-Tac and CASA.	Comment acknowledged.	No
23.2	NRC recommendations from its July 2001 report on the TMDL program are important and should be incorporated into the Policy.	Comment acknowledged.	No
23.4	Per the December 2003 SWRCB TMDL Guidance, water quality standards should be evaluated before a TMDL is developed.	Comment acknowledged.	No
23.5, 114.4, 206.2, 212.1	Supports transparent process. Supports public access to the supporting data.	Comment acknowledged.	No
26.1, 75.1, 82.1, 217.1, 222.3	Support and join in the AB 982 Environmental Caucus Comments on the State's proposed 303(d) Listing Policy and the TMDL Guidance.	Comment acknowledged.	No
33.1, 34.1, 35.1, 45.1, 46.1, 52.1, 54.1, 62.1, 78.1	Support comments made by County of Orange Resources and Development Department.	Comment acknowledged.	No
36.5	All surface water bodies should be assessed, including waters that have no previous monitoring data, along with the development of extensive fact sheets,	The draft Policy does not mandate review of all surface waters, including water with no monitoring data. This issue is not within the scope of the Policy .	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	is impractical given staff and budget constraints.		
37.2	Support the February 2004 comments of the TMDL Roundtable on the draft policy, including the suggested changes in policy language.	Comment acknowledged.	No
37.4	The draft Policy, as proposed, will greatly increase demands on RWQCB staff resources for Section 303(d) assessment. The impacts will be greater for regions with more surface water bodies. If additional funding cannot be provided, fewer resources will be available for other important tasks, including TMDL development. SWRCB should consider revising the policy to minimize increased demands on RWQCB staff time. The revised policy and/or the SWRCB resolution for adoption of the Policy should recognize that, in the absence of additional resources, RWQCBs may not be able to perform section 303(d) assessments at the level of detail envisioned by the policy.	The draft Policy will place more demands on RWQCB resources. However, these new demands may be offset by better quality listings. Resources for TMDL development at SWRCB and RWQCBs should be focussed on the well characterized water quality standards attainment problems. The Boards' should make every effort to minimize spending TMDL resources on waters where problems do not exist. To the extent possible, the Policy requirements have been reduced to minimize the drain on RWQCB resources.	Yes
40.1	USEPA is responsible for acting upon the State's section 303(d) listing decisions that will be based on the assessment methodology contained in the Policy, we carefully evaluated the draft policy to determine whether it is consistent with applicable water quality standards, the CWA and associated federal regulatory requirements. USEPA does not take formal action on the assessment methodology itself.	Comment acknowledged.	No
40.3, 56.3, 73.1, 210.1	Although the policy needs to be revised, the draft policy represents a step in the right direction. Recognize that the SWRCB has devoted substantial effort in developing the draft listing policy and understand that it is difficult to define policies that account for the full range of water quality assessment challenges that face California.	Comment acknowledged.	No
40.38, 51.152, 109.16	USEPA would be compelled to disapprove any listing decision that conflicts with these requirements. EPA partially disapproved and added waters and pollutants to the California Section 303(d) lists submitted in 1992, 1996, 1998, and 2003 an outcome we want to avoid in future listing decisions.	USEPA makes an independent assessment of whether the section 303(d) list adequately describes those waters that do not meet water quality standards. During at least the last four listing cycles, USEPA has disagreed with some of the listing decisions of SWRCB. For example, in 2002, USEPA disagreed with approximately 1 percent of the water body listing recommendations and 1.5 percent of the water body-pollutant combination recommendations. Given the scope of the list and the types of data and information available it is inevitable that USEPA would disagree with some portion of the proposed listings. Given the results of the 2002 listing cycle, there is good correspondence between USEPA's evaluation and SWRCB's evaluation.	No
40.6	Appreciate your staff's effort to solicit input from USEPA during the initial phases of policy development.	Comment acknowledged.	No
43.52	The procedures outlined seem reasonable and technically valid as long as the data requirements are modified to reflect that listings require pollutant identification, and the process for evaluating readily available data and information includes the proposals for statistical evaluation based on the use of	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	the binomial model.		
48.13, 58.1, 62.2, 202.1	Appreciate that the SWRCB held the additional public hearing on this policy in Torrance on February 5, 2004. Holding the hearing locally in Southern California facilitated the participation of many local governments and stakeholders. Appreciate your efforts to include all stakeholders in this important issue.	Comment acknowledged.	No
48.3	Strongly support the elements of the Listing Policy that will ensure that the listing process is 'transparent,' including the requirements for fact sheets, public hearings by RWQCBs, and opportunities to comment on the list prior to review by the SWRCB.	Comment acknowledged.	No
51.151	USEPA raised examples of its numerous significant problems with the draft Policy in oral testimony before SWRCB on January 28, 2004. Unfortunately, many of these had been raised with staff eight months ago but remain unaddressed.	Comment acknowledged.	No
51.154, 51.153	USEPA's comments are entitled to significant deference, far more than they have received to date. See <i>Arkansas v. Oklahoma</i> , 503 U.S. 91, 105-06 (1992) (USEPA is entitled to discretion to interpret its own regulations and those regulations are entitled to considerable deference). Courts have consistently given deference to USEPA's construction of the CWA. Importantly, an agency's long-standing interpretation of law or its own power is due heightened deference. SWRCB should address fully USEPA's concerns with regard to consistency with water quality standards, data inclusion, the weight of evidence approach, nuisance/nutrient/sediment guidelines, priority setting and scheduling, and other concerns, through modifications to the draft Policy as described in our other comments.	USEPA's comments are being addressed as part of the process to develop the Listing Policy. SWRCB will fully comply with CWA section 303(d) and the associated federal regulations. USEPA has also offered several guidance document to be used by States in developing the section 305(b) report and section 303(d) list. These reports often provide a menu of approaches that should be considered by States in their listing processes. None of these guidance documents have the force of law or regulation. SWRCB has reviewed these guidance documents and used the approaches that can best be implemented in California. Many revisions are proposed in response to USEPA's comments.	Yes
51.155	In oral testimony before SWRCB on January 28, 2004 and elsewhere, including written comments projected to be submitted to SWRCB by February 18, 2004, the RWQCBs' representative listed a number of concerns with the draft Policy, many of which had been raised previously in numerous communications. These include the following concerns: - Primary reliance on the binomial method would lead to a redefinition of almost all state and federal water quality standards. As currently described, the draft Policy would allow those standards not to be attained, but would not require listing. - This deficiency of the binomial method necessitates the description of an effective 'weight of evidence' methodology. The current 'Alternative Data Evaluation' section does not provide an appropriately robust and comprehensive alternative to the binomial model. Along these lines, the number of samples for a 'weight of evidence' approach should not be restricted, as called for in the draft	RWQCB's comments are being addressed as part of the process to develop the Listing Policy. Many revisions are proposed in response to their comments.	Yes

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	<p>Policy, since multiple lines of evidence can be used to support a listing or delisting decision.</p> <ul style="list-style-type: none"> - The purpose of the Policy needs to be stated as the attainment of standards in surface waters. The Policy should not be limited to attainment of pollutant-based standards, since section 303(d)(1)(A) requires the state to identify waters not attaining any standard and to account for the severity of pollution (not just 'pollutants') in priority ranking. - The analysis in the FED does not provide apparent rationale for the choice of alternatives, and so does not appear to be consistent with CEQA requirements. <p>The RWQCBs are the entities that will have to implement this policy. Simply put, the concerns they raise indicate strongly that the draft Policy will be unworkable in practice. Significant revisions must be made if the Policy is to be credible and implementable.</p>		
51.4	<p>Given that we have found so many waters impaired with the limited information that we have, it seems to follow that we could expect a number of additional listings if an appropriate level of monitoring is performed in the state.</p>	Comment acknowledged.	No
51.6	<p>The section 303(d) programs are our last line of defense in the protection of our waterways, applied only after other CWA provisions have failed. As such, it is all the more important that these programs ensure that all impaired waterways are identified; the consequences of missing them include threats to human health and aquatic life, and if impaired water bodies are ignored by the 303(d) program, they are ignored altogether.</p>	Comment acknowledged.	No
57.1	<p>Appreciate that SWRCB recognized the significant level of local interest in these draft policy documents and chose to hold a hearing in Los Angeles County. The effort of the SWRCB to hold this hearing and then carefully consider local agency input is both laudable and welcomed.</p>	Comment acknowledged.	No
58.5	<p>The current 303(d) listings greatly exceed governmental resources and the emphasis should be on cost effective management efforts.</p>	Comment acknowledged.	No
63.1	<p>The Policy must provide pollutant-specific, detailed guidance.</p>	Comment acknowledged.	No
68.1	<p>Support comments made by the California Coalition for Clean Water and other industry representatives as expressed at the January 28 workshop and submitted in writing.</p>	Comment acknowledged.	No
69.1	<p>Supports comments submitted by the California Coalition for Clean Water.</p>	Comment acknowledged.	No
76.1	<p>The SWRCB staff has prepared a comprehensive, well-researched document to support the December Draft Water Control Policy. However, it must be updated and revised to address the alternative policy recommendations made in response to the Board's request for comments on the Draft Policy and the FED.</p>	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
80.1, 110.1, 111.1, 119.1, 204.1	Commend the effort to establish consistency to the 303(d) listing process.	Comment acknowledged.	No
102.11, 102.12, 111.3	The Policy will result in more work at the RWQCBs, more work at USEPA, and ultimately more work at the SWRCB, where staff and Board Members will have to review different applications and petitions for water bodies to be looked at again because the original policy was unclear.	The draft Policy's implementation may require more work to clearly document and consistently analyze readily available data and information. However, this additional work will likely produce listings that are more scientifically defensible.	No
102.2	The policy fails on three grounds: science, legal and actual practical application, the policy aspect of it.	Comment acknowledged.	No
104.1	<p>Development of the draft Policy is not a technically driven, bottom-up process. Instead, it is a top down, politically driven process that is biased in favor of not listing or delisting water bodies. SWRCB staff ignored opinions that don't conform to its preconceptions or pre-determinations.</p> <p>For example, the December '02 submittal by all nine RWQCBs that criticizes the proposed binomial method for its lack of flexibility and its inconsistencies with water quality objectives. Also, in June '03 USEPA detailed a multitude of concerns about the binomial approach, its inconsistency with regulatory requirements and water quality standards. Again in October of '03 the RWQCBs submitted a joint recommendations containing a strike-through of proposed policy. That submittal was ignored. SWAMP staff has even expressed serious concerns regarding the policy, but now they've been forbidden from commenting or even contacting SWRCB staff.</p>	Comments acknowledged.	No
106.3	The current (303(d)) system worked well. All the North Coast rivers are listed except for the Smith River, and 600 water bodies or more are listed statewide. The big problem is a lack of implementation plans.	Comment acknowledged.	No
108.1	Is this policy one that you, each of you as Board Members, want to approve?	Comment acknowledged.	No
108.14	The SWRCB's jurisdiction is protecting water. The proposed Policy is far more likely to result in the failure of water quality programs than in their success. The draft Policy should be rethought.	Comment acknowledged.	No
108.15	The SWRCB and staff should read the comments with an open mind. The 303(d) list and TMDL program are very important. Effort should not be put in solely to reduce the list.	Comment acknowledged.	No
108.16	The FED points out that implementation of the draft Policy will actually reduce the number of listed water bodies.	Comment acknowledged.	No
108.19	SWRCB Question: In 2002, 200 water bodies were added to the list. Hopefully, the really badly polluted waters have been identified. Now it is a	There does not exist any definitive information to show whether or not, all of the 'really badly polluted' water bodies have been identified and/or have been	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	<p>matter of fine tuning.</p> <p>Response: Disagree. All the badly impaired waters have not yet been identified. SWAMP shows that California monitors only a small portion of its water bodies. Furthermore, there may be pressure to reevaluate the existing list.</p>	<p>monitored. To be 100 percent sure one way or the other, we would need complete monitoring for the entire State of California, which to date we do not have.</p>	
108.2	<p>This policy almost always reaches a conclusion which reinforces either not listing an impaired water body or provides some kind of escape, some kind of exit from the TMDL approach.</p>	<p>Comment acknowledged.</p>	<p>No</p>
108.20	<p>SWRCB member question: There is a lot of significant concern about the ramifications of a water body being listed.</p> <p>Response: Disagree. The Policy should guide the identification of impaired water bodies, not try to reduce the list due to resource limitations. Stories that California business is hurt by 303(d) listing are apocryphal. Recent decisions by the SWRCB have minimized impacts of listing. Having a water body listing is in the public interest, and does not harm business to the level claimed.</p>	<p>The draft Policy is primarily focussed on waters that do not meet water quality standards.</p>	<p>No</p>
108.4	<p>The TMDL program is still there and should be used. Other speakers recommended this, including RWQCB staff. The program is being severely limited, if not overruled entirely in many circumstances.</p>	<p>Comment acknowledged.</p>	<p>No</p>
108.8	<p>As pertaining to ASBSs, section 303(d) lists are supposed to include both impaired water bodies and those that do not or may not meet standards. The Policy does not adequately address this requirement. It should, because these problems are easy to rectify sooner rather than later.</p>	<p>The draft policy is focussed on waters that do not meet water quality standards as described in CWA section 303(d)(1) and 40 CFR 130.7.</p>	<p>No</p>
109.12	<p>The methods of nuisance and nutrient assessment are vague. Recommend clarifying procedures for assessing nuisance and nutrient conditions.</p>	<p>The provisions have been clarified.</p>	<p>Yes</p>
109.2	<p>Lack of clarity in the Policy makes it hard to evaluate how USEPA would react to a resulting list.</p>	<p>USEPA has provided comments to SWRCB on their reaction to the draft Policy.</p>	<p>No</p>
109.4	<p>Good aspects of the Policy:</p> <p>(1) Interpreting unconventional data, biological information, sediment tissue, et cetera.</p> <p>(2) Translation of narrative objectives into numerical criteria or guidelines for assessments.</p> <p>(3) Attempts to provide some clear assessment criteria.</p> <p>The goal of the Policy should be to streamline assessments as well as to provide greater consistency.</p>	<p>Comments acknowledged.</p>	<p>No</p>
110.2	<p>Listing is expensive to public funds and results in significant reductions in land</p>	<p>Comment acknowledged.</p>	<p>No</p>

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	management productivity and land values.		
110.3	Compare the large number of listed water bodies scheduled for actions that result in an expense and impact on lands to budget shortages. Reasonable decisions are therefore needed. The Policy should assure that no water body is listed unnecessarily. Supports a Policy that elevates listing decisions to the top levels, subject to scrutiny by the voters. Only water bodies with credible scientific evidence of human-caused impairment should be listed, and only where implementation of control measures is feasible to achieve actual remedial results.	Comment acknowledged.	No
111.5	How many existing listings are problematic? Another Commenter may be able to answer.	The number of listings that are problems could be large. This has been acknowledged by RWQCB staff (Commenter 53).	No
114.1	Endorses comments by Craig Johns and Tess Dunham.	Comment acknowledged.	No
114.3	Need more rigor in the 303(d) process. Need to account for variability in water quality and capture real world complexities.	Comment acknowledged.	No
119.4	Offers participation support. Concerned about costs of the program.	Comments acknowledged.	No
120.1	Supports comments by Armand Ruby and Karen Ashby with CASQA. Supports standardized approach to 303(d) listing. Supports use of planning and monitoring list. Supports re-evaluation of listed water bodies.	Comments acknowledged.	No
206.1	Support the comments of the California Association of Sanitation Agencies.	Comment acknowledged.	No
207.2	The 303(d) Listing Policy is one of the most significant policy decisions that the SWRCB will make this year. Impairments that alter included on the 303(d) list will require TMDLs to be developed.	Comment acknowledged.	No
207.27	Support comments that others have made at the Torrance Public Hearing.	Comment acknowledged.	No
207.4	SWRCB should look carefully at 40 CFR 130.7, which provides the regulation for implementing CWA Section 303(d) as the environmental community continually refers to the general requirements of the CWA section 303(d).	Comment acknowledged.	No
207.5	The 1998 list became a general impaired water list rather than a 303(d) list consistent with 40 CFR 130.7.	Comment acknowledged.	No
207.8	Who makes policy: What are the roles of the SWRCB and RWQCBs?	SWRCB is ultimately responsible for submission of the section 303(d) list to USEPA. RWQCBs provide water body specific understanding and necessary local perspective on listing decisions. In this situation, SWRCB makes the policy to meet the goals stated in the Introduction to the FED.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
207.9, 208.10	Is California going to have a standardized, scientifically based 303(d) listing policy or are the RWQCBs and staff going to have the same level of flexibility and lack of SWRCB oversight in developing 303(d) lists that they had prior to development of the 2002 list?	At present, the recommendation is for the draft Policy to contain consistent and transparent approaches for the identification of water quality limited segments using a standardized set of tools and principles to be used by RWQCBs to evaluate data.	No
208.9, 213.9	Support comments of the Coalition of Practical Regulation given by Richard Watson.	Comment acknowledged.	No
209.1	Support of comments that have been made so far, and hope that the decisions taken by the SWRCB are something that can help the cities in these difficult times so that resources can be invested to create solutions that would provide the results that we are all looking for.	Comments acknowledged.	No
212.2	With this new policy, we look forward, when this policy is implemented, that we can get the delistings that we think are justified.	Comment acknowledged.	No
213.1	Thanks the SWRCB and staff for recent progress on the State's 303 (d) List. This was a good start at scrutinizing the technical and scientific support used by the RWQCBs and their staffs for listing and delisting. We strongly support establishing a standardized approach to listing.	Comment acknowledged.	No
216.3	As you go through this process of listing and delisting, think very, very carefully and remember that you are not here just to represent the cities or the industries that feel overburdened; you're here to represent people who really don't have the knowledge to speak for themselves, people who you'll never see, people who you'll never know. But you will know that they are there because they are just the faceless, nameless people of California.	Comment acknowledged.	No
217.14	This exact debate has occurred for the last 25 years on the whole 301(h) waiver issue, and that argument made by the dischargers has lost time and time again where if there is impairment, then you must indeed upgrade your facilities.	Comment acknowledged.	No
217.2	Support the bulk of USEPA's comments that were given last week as well. We were very happy to see that we see eye to eye with them on most of the issues and concerns that they had on the listing and delisting process as well.	Comment acknowledged.	No
217.3	Our goal at Heal The Bay is to see more certainty in the listing and delisting process, which could be obtained through a more rigorous and better document listing process. And we believe that the State's effort to date is definitely a start to move in that direction, but not even close to where we need to go to adequately protect water quality in the State of California.	Comment acknowledged.	No
218.1	The questions that I would ask are what types of waterways would never have been listed in the first place if this policy were to be adopted as it is today? The second question is what types of waterways will drop off the list if this current criteria is applied to waterways that are already on the 303(d) list? The answer is	Comments acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	that the impact will be that real waterways that are part of communities that are part of the fabric of this state that people fish in, swim in, and rely upon to escape the hustle and bustle of their daily lives will never be cleaned up.		
Unrelated Comment			
10.17	Timber and agricultural proponents implied that the 2002 listing process was not public. There was a public hearing process. The timber landowners were just not paying attention and want a second chance. A second chance is available which at the TMDL development level, Implementation Plan development level, and/or new (credible) evidence can be added to the file.	Specific comment on the 2002 section 303(d) listing process is beyond the scope of the Listing Policy-development process.	No
10.19	Timber and agricultural proponents feel that it is not the listing that is the problems, it is the implementation and it diminishes land values. Land values are not diminished by implementation planning by any measurable amount. Garcia land values seem stable as evidenced by recent land sale prices.	Specific comment on the 2002 section 303(d) listing process is beyond the scope of the Listing Policy-development process.	No
10.20	Timber and agricultural proponents feel that over fishing killed the fish; loss of habitat is not responsible for fishery losses and at the same time there are plenty of fish in our rivers. Fish populations do go in cycles and there has been over fishing. There has been a slight resurgence in the numbers of coho salmon returning to some rivers. The overall trends are still down (to a large extent) from historic levels. There has also been a precipitous decline in spawning and rearing habit values. This has been substantiated by supported scientific review and CDFG surveys, etc.. Large numbers of baby (2 year old or less) salmonids found in a stream do not indicate increases in populations. Survival of adult spawners returning to the rivers is indicative of population trends.	Specific comment on the 2002 section 303(d) listing process is beyond the scope of the Listing Policy-development process.	No
10.21	Implementation Planning (Basin Plan Amendment) was argued to the SWRCB to be part of the long term solution and basis of support of the NCRWQCB Conditional Waiver of Waste Discharge (Policy) for logging operations. Implementation Planning has fallen way behind schedule. It would be nice to see progress. If the Conditional Waiver Policy is to have merit and be supported by Implementation Action Plans, progress must be demonstrated by approval of TMDL related Implementation Plans.	Specific comment on the 2002 section 303(d) listing process is beyond the scope of the Listing Policy-development process.	No
38.2	SWRCB should also develop statewide policy on beneficial use determination guidelines and criteria.	This comment is beyond the scope of the Listing Policy development process.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
43.3	Look closely at 40 CFR 130.7, the [USEPA] regulations for implementing CWA section 303(d). The 1998 list was not consistent with the USEPA regulations.	Comment acknowledged.	No
63.3	The Santa Clara River provides an example wherein aerial deposition and sewage treatment, not storm drains, were found to be the primary sources of pollutants.	Comment acknowledged.	No
104.2	An illustration of how petty and paranoid this process has become is that there is a Regional Board Roundtable strategy session listing, SWRCB staff left the room and then anonymously eavesdropped on the conversation. While not illegal, it is certainly unprofessional and unethical. Rather than engaging in a transparent collaborative process to develop a workable, protective policy, SWRCB staff has essentially 'circled the wagons' to fend off criticism of a policy that was largely proposed by the regulated community.	Comment acknowledged.	No
119.2	Speaks highly of water quality conditions in North Coast rivers.	Comment acknowledged.	No
119.3	Listing is not a problem. Implementation plans for TMDLs will be the problem. Loss of the fisheries is not due to pollution but to over-fishing.	Comment acknowledged.	No
201.3	The portion of the San Gabriel River that flows along the eastern edge of Bellflower is a concrete-lined channel. The LARWQCB should review the beneficial uses that it has assigned to flood control channels such as the San Gabriel River above the estuary. These uses were defined several years ago, and some of them may not be applicable.	Specific comment on the 2002 section 303(d) listing process is beyond the scope of the Listing Policy-development process.	No
208.5	Concerned about the listing of the Dominguez Channel for high coliform count; it is a flood control area with no recreational use.	Specific comment on the 2002 section 303(d) listing process is beyond the scope of the Listing Policy-development process.	No

Table 3: Responses to Comments and Testimony Received After February 18, 2004

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
Draft FFED, Introduction			
316.34	The Tujunga Wash is incorrectly pictured as the Los Angeles River in Figure 4 of the Functional Equivalent Document. The Tujunga Wash is a tributary to the Los Angeles River. The upper portion of the Los Angeles River is located southwest of the Tujunga Wash and is not pictured.	This map is provided as a general overview of the water resources of the Los Angeles Region. The location of Tujunga Wash is acknowledged.	No
Draft FFED, Issue 6: Statistical Evaluation of Numeric Water Quality Data			
307.9, 307.6, 307.8, 307.25, 307.10, 307.14, 307.11	The FED misrepresents EPA guidance as supporting the proposed approach. In particular, the FED relies heavily on examples presented in the Consolidated Assessment and Listing Methodology document (USEPA, 2002a) and in particular, draft appendices to that guidance, that are inapplicable in California's situation. EPA's guidance indicates that application of the binomial approach as proposed in the draft Policy is clearly inconsistent with the applicable California water quality standards and sound statistical practice.	The FED relies on Chapter 4 of the CALM guidance (USEPA, 2002a) for the interpretation of chronic and acute criteria. It is true the appendices are 'draft' as is the entire CALM guidance. The CALM document is nonetheless widely quoted by USEPA in the 2004 listing guidance (USEPA, 2003b). As described in FED Issues 4A, 6, and 6C, the Policy outlines an approach that preserves the use of magnitude, frequency and duration portions of all water quality standards applicable to California waters.	No
Draft FFED, Issue 7A: Review of the Existing Section 303(d) List			
306.2	According to the Draft Functional Equivalent Document (FED) discussion of this issue (FED at p. 216-218), State Board recommends Alternative 3, which provides 'Reevaluate existing listings on the section 303(d) list as resources allow with no other requirement for new data and information. (FED at p. 217, emphasis added.) Supports Alternative 3 as presented in the FED.	Comment acknowledged.	No
Draft Final Policy, Section 1: Introduction			
303.1	Page A-2 of the document describes the weight-of-evidence approach to waterbody listing, including Data and Information Preprocessing, Data and Information Processing, and Data Assessment. In the final step, fact sheets will be presented describing the action taken. We recommend that the data in support of the decision as well as the fact sheets be made easily accessible to the public.	RWQCBs must document all data and information used in a listing decision in the water body fact sheet. Such documentation would be accessible to the public when the lists are considered for approval. Additionally, the RWQCBs must submit all data and information considered when the fact sheets are submitted to the SWRCB (Section 6.3). This provides an opportunity for additional review of the documentation used in a listing decision.	No
308.2, 312.5, 314.9, 314.8, 316.8, 316.7, 318.3	Having a clear definition of the term 'weight-of-evidence,' and an explanation of how the weight-of-evidence approach is to be applied would provide consistency and a greater understanding of the weight-of-evidence approach and how it is to be used in the listing/delisting process.	A definition for the weight of evidence approach is already contained in the Introduction of the Policy. Any definition developed for section 7 would be redundant of this language.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	<p>The following definition of 'weight-of-evidence approach' should be added to the Definitions section of the Policy:</p> <p>The weight-of-evidence approach is a process by which multiple lines of evidence are assembled and evaluated from one or more sets of data. The lines of evidence are evaluated based on the strength or persuasiveness of each measurement endpoint, and concurrence, or lack thereof, among various endpoints. Confidence in the measurement endpoints is assessed and factored into the evaluation of the available lines of evidence. Lines of evidence can be chemical measures, toxicity data, biological measurements, and concentrations of chemicals in aquatic life tissue.' (Note: this definition was developed based on the text contained in Issue 3 of the FED describing a weight-of evidence approach.)</p>		
308.4, 314.12, 316.9, 318.4	<p>Recommend that the following text be added to the end of Section 1 on page A-2 of the draft Policy to more fully reflect the discussion in Alternative 1 of the FED (Issue 3, Weight of Evidence for Listing and Delisting):</p> <p>'In addition to other information that must be provided in fact sheets in accordance with Section 6.1.2, the RWQCBs must document their application of the weight-of-evidence approach where multiple lines of evidence are utilized in listing decisions by:</p> <ol style="list-style-type: none"> 1) Providing any data or information supporting the listing; 2) Identifying the pollutant(s) being listed; 3) Describing how the data or information affords a substantial basis in fact from which listing can reasonably be inferred; 4) Demonstrating that the weight of evidence of the data and information indicate that the water quality standard is not attained; and 5) Demonstrating that the approach used is scientifically defensible and reproducible.' 	<p>The addition of the suggested text would be duplicative of requirements already in the Policy. Section 6.2 requires the RWQCBs to submit a copy of all data and information considered with submission of their section 303(d) list changes. Section 2 requires that the pollutant be listed or if the listing is for toxicity, that must be stated. The Policy also requires that the data used be subjected to quality assurance requirements.</p>	No
320.1	<p>While we share the general concern expressed by the IEA and others regarding the lack of specific information regarding the implementation of a weight of evidence approach in making 303d listing/delisting decisions as outlined in the current policy document we fully support the use of such an approach in principal.</p>	<p>Comment acknowledged.</p>	No
320.2	<p>A critical component of this weight of evidence is the consideration of toxicity and other biological data, although it has been suggested by some that the state should forgo consideration of toxicity data in favor of chemistry alone, we strongly disagree with such a position.</p>	<p>Comment acknowledged.</p>	No

Draft Final Policy, Section 2: Structure of the CWA Section 303(d) List

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
310.1, 312.14, 316.32, 316.33	Reconstruct the Enforceable Programs and Watch Lists. Recommend that the Policy continue to allow the use of alternate lists. The enforceable programs list resulted in a successful effort to separate and distinguish problems that could be addressed without the risk of extended controversy. Likewise the Watch list could be used to gather required data by any stakeholder before it becomes a conflict and each side becomes hardened in their views.	By focusing the Policy on the section 303(d) list, the list includes only those waters that do not meet water quality standards, as is required by law. The inclusion of the Water Quality Limited Segments Being Addressed Category is an acknowledgement that standards are exceeded but either a TMDL has been approved by USEPA or an enforceable program is in effect that addresses the water quality impact. The addition of these subcategories ensures that these standards exceedances will be addressed as required under the CWA.	No
318.7	<p>It is not clear in the draft Policy section 'Water Quality Segments Being Addressed' segments at various stages of the TMDL process will be handled, or if waters that have met WQS due to a TMDL or other program will have to go through the delisting process. Water segment-pollutant combinations should be listed in the appropriate category, regardless of the status of the other pollutants listed in that segment. The Draft Policy should be revised to clarify how a water segment/pollutant combination is removed once WQS are attained due to a TMDL, or it should be clarified that delisting can happen from either category of the list.</p> <p>In addition, the Draft Policy should include a methodology whereby a water segment can be removed from the 303(d) list during the TMDL process, if it is demonstrated during the course of the TMDL that water quality standards are being attained, in accordance with the delisting provisions of section 4 of the Policy.</p>	Water Quality Limited Segments can be removed from the water quality limited segment category list or the water quality limited segment being addressed category list in accordance with the requirements of section 4 of the Policy. Delisting will occur only when it is demonstrated that water quality standards are being attained, listing was originally based on faulty data or standards have been revised and the segment in question currently meets water quality standards.	No
319.28	The 'Water Quality Limited Segments Being Addressed' Section Should Be Eliminated. In response to our previous comments, staff revised the Draft Policy such that the 'Enforceable Programs' list is now the 'Water Quality Limited Segments Being Addressed' list. Staff says that '[a]ll waters in the Water Quality Limited Segments Being Addressed section of the list are on the section 303(d) list.' In response to our comment that the Enforceable Programs list would permit WQLS to specifically avoid a TMDL, staff states that: '[t]his section of the list is not an off-ramp because the waters will be addressed by the certified program in lieu of a TMDL, and within an adopted time frame.'	Comment acknowledged.	No

Draft Final Policy, Section 2.2: Water Quality Limited Segments Being Addressed

308.8, 318.8	Section 2.2.2 allows a Regional Board to place a water segment in the 'Water Quality Limited Segments Being Addressed' category if the Regional Board certifies that the provisions of the 'Water Quality Control Policy for Addressing Impaired Waters' (presumably) will address the impairing conditions of the water segment. (A-3). The second condition for allowing Regional Board certification is not provided. There is no language provided in Section 2.2.2 that specifies what the Regional Board must certify. In addition, the language should be modified to allow placement in this category if the State Board makes a	Placement on the Water Quality Limited Segment Category list occurs when there is a TMDL already approved and being implemented and the pollution control program is expected to result in full attainment of water quality standards. The second circumstance refers to the RWQCB certifying that an alternative regulatory program already in place will also result in full attainment of water quality standards as well. The reference has been removed from the Policy.	Yes
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	similar certification in those instances where the State Board is making the decision.		
319.32	The Clean Water Act provides a mechanism for doing precisely what is intended in the creation of additional lists or list sections: prioritizing segments for action. Specifically, Section 303(d) states that: '[t]he State shall establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters.' Instead of trying to exempt certain waters from TMDL development on the basis of existing programs, the Board should use the existing programs as a factor in its prioritization analysis, discussed in Section 5 of the Draft Policy.	The Policy requires the establishment of a schedule to reflect the state's priority ranking as suggested in the 2004 USEPA listing guidance (2003b). The incorporation of the Water Quality Limited Segments Being Addressed section into the section 303(d) list acknowledges that these water bodies are not meeting water quality standard but a mechanism is already in place to achieve compliance. If a program is already in place to address the identified water quality problem it is duplicate to require that a TMDL be completed.	No
319.33	If the Board decides to retain the Water Quality Limited Segments Being Addressed section, it should 'at a minimum' require that the existing programs provide for attainment of the water quality standard prior to the next listing cycle. This is the only scenario under which the Board can ensure that the existing programs are, in fact, addressing the water quality impairment and thereby justify not developing a TMDL.	Water segments can be placed in Section 2.2 if a TMDL has been developed and approved by USEPA or if the RWQCB determines that pollution control requirements are expected to result in attainment. Both circumstances require the actions to result in the attainment of the standard within a specified time frame. The time frame is not stated because it will vary with the circumstance and provides the RWQCBs the flexibility to develop a viable program. Additionally, the water segment can be reassessed at the next listing cycle if data and information show that the water segment is still not meeting standards.	No

Draft Final Policy, Section 3: California Listing Factors

307.16	Concerned the State may not fully consider all lines of available evidence and identify all impaired and threatened waters based on a preponderance of the evidence. The Policy could be revised to clarify and make mandatory the application of a weight of evidence evaluation approach for assessing all waters that are not identified for listing based on the other assessment procedures.	Section 1 of the Policy requires that all data and information be summarized in fact sheets even if it is not addressed in the listing factors, delisting factors, TMDL scheduling, or other provisions of the Policy. If data and information are available, it is required that it be assessed.	No
307.24	As discussed in detail in our prior comments, we remain concerned that the proposed Policy establishes a burden of proof to list a water body that is inconsistent with the evidentiary standards commonly used in California legal proceedings and in other water quality program decision making. We urge the State to adopt more balanced assessment criteria that more fully recognize the environmental and public health costs of failing to identify impaired and threatened waters on the Section 303(d) list.	Comment acknowledged.	No
311.2	The Policy permits listing of waters under Section 303(d) based on exceedance of any one line of evidence, including exceedance of a numerical or narrative water quality objective, without corresponding evidence of beneficial use impairment.	This statement is accurate. To do otherwise would not meet the requirements of the Clean Water Act and federal regulations. It is not necessary to demonstrate beneficial use impacts if numeric water quality objectives or criteria are not met.	No
319.30	As we have noted previously, Section 303(d) expressly requires each state to identify waters within its boundaries for which 'the effluent limitations required	USEPA guidance to the states does allow waters that do not meet water quality standards and the exceedance is being addressed by a program other than a	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	by section 301(b)(1)(A) and section 301(b)(1)(B) of this title are not stringent enough to implement any water quality standard applicable to such waters.' Thus, waters are to be listed, and TMDLs developed, whenever the effluent limits described in section 301(b)(1)(A) and (B) are insufficient to attain and maintain water quality standards.	TMDL to be removed or not placed on the section 303(d) list. The draft Policy requires all waters not meeting standards to be placed on the section 303(d) list.	
320.4	Years of research have been devoted to the topic of using chemistry to predict impacts in the environment and the resounding conclusion has been that chemistry in of itself is only marginally useful as a consequence of the many other factors that can control bioavailability (and therefore the effects of the contaminants). In addition, standard analyte lists include only a limited subset of chemicals (i.e., generally a few metals, PAHs, and some chlorinated organics); many of the pesticides included on standard analyte lists have not been in use for many years and newly emerging contaminants of concern (i.e., PBDEs) are generally not included. Consequently, a reliance on chemistry alone or even using chemistry as the primary indication of impairment will likely result in missing potentially impaired water bodies.	Adequate monitoring chemistry data indicating that a specific water quality objective or criterion is being exceeded is sufficient by itself to support placing an impacted water body segment on the 303(d) list. The Policy allows listing or delisting with a single line of evidence and establishes that any exceedances of numeric or water quality objectives can be used by themselves to assess whether water quality standards are being attained.	No

Draft Final Policy, Section 3.1: Water Quality Limited Segments Factors

306.5, 306.6, 306.4, 308.18, 314.19, 314.18	The July Draft Listing Policy continues to allow use of guidelines instead of adopted WQO as a basis for listing a water segment. Such listings can fall under health advisories, bioaccumulation in aquatic life tissue, water/sediment toxicity, nuisance, adverse biological response, degradation of biological communities, trends in water quality, and situation specific weight of evidence. The problem with this approach is that guidelines are not legally adopted WQO and therefore have not undergone the public review and comment and determination if they are appropriate based on Water Code section 13241 and 13242 factors which balance the proposed standards with other factors such as economics and the need for recycled water. In addition, guidelines can and have been used in lieu of legally adopted standards.	The use of the evaluation guidelines, and the justification of use which must be presented in the fact sheet, as well as the documentation of guidelines used, will all be subject to public scrutiny during the listing process. Evaluation guidelines use is limited to interpretation of narrative water quality objectives. Quantitative guidelines are used so narrative objectives interpretation can be more consistent and predictable among the RWQCBs. The Policy states in the Introduction that the guidelines are not to be used for any purpose other than the development of the section 303(d) list.	No
307.17	We are concerned that the draft Policy provisions concerning evaluation of possible clean sediment, temperature, toxicity and nutrient impairment remain too vague to provide meaningful guidance to staff who would conduct the assessments.	Comment acknowledged.	No
308.10, 314.15, 314.16, 316.18	The Draft Policy should be amended to add the following statement in Section 3.1: "If standards exceedances are associated with physical alteration of the water body that cannot be controlled or by natural background conditions, the water segment shall not be placed on the section 303(d) list. Instead, the Regional Board shall conduct an expedited use attainability investigation, and make any appropriate standards changes before the next listing cycle. If it is determined that the standards are appropriate and the water segment is not	The Policy is focused specifically on developing the section 303(d) list. Re-evaluation of existing standards is accomplished under CWA section 303(c)(1) and implementing regulation (40 CFR 131.20). A use attainability analysis is beyond the scope of this Policy.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	attaining standards according to the listing factors, then that segment shall be listed as expeditiously as possible.”		
308.11, 308.12, 316.13	Listings should be scientifically based on objective and verifiable information. Because some listing factors are based on comparison with a reference condition (rather than comparison to an adopted numeric standard), this infers that the assessments do not have to be quantitative in nature. For adverse biological response, qualitative visual assessments or other semi-qualitative assessments may be used as secondary lines of assessments. Degradation of biological populations and communities requires at least two lines of evidence. Therefore, our concerns with reliance on visual and semi-qualitative assessments in the listing context remain.	The Policy allows qualitative visual assessments or other semi-qualitative assessments to be used in support of evidence that a water body does not meet water quality standards. This is in keeping with the federal mandate to consider all readily available data and information when making a listing/delisting decision. However, the Policy does not allow the use of visual or semi-qualitative assessments as the only lines of evidence to support a listing.	No
308.14, 308.15, 308.16, 309.3, 310.2, 314.17, 316.19, 317.4, 318.10	<p>Prior drafts of the Policy excluded data collected during a known spill or violation. The current draft now allows data collected during a known spill or violation of an effluent limit in a permit or WDR to be used in conjunction with other data to demonstrate there is an exceedance of a water quality standard. The commenter objects to the use of data collected during a known spill or violation of an effluent limit to be used in the listing process, because these conditions are generally anomalous, episodic events that are not representative of typical conditions in the water segment. The commenter strongly advocates that language removed from the previous draft of the policy be re-instated, so that data and information collected from a known spill is not used in the assessment process.</p> <p>Recommended language as follows:</p> <p>1. 'Data and information collected during a known spill or violation of an effluent limit in a permit or waste discharge requirement (WDR) shall not be used in the assessment of objectives and beneficial use attainment as required by this Policy.'</p> <p>2. Alternatively, 'Data and information collected during a known spill or violation of an effluent limit in a permit or waste discharge requirement (WDR) may be used in conjunction with other data as ancillary lines of evidence to demonstrate there is an exceedance.'</p>	Data on spills, violation of permits or WDRs, and visual information can be used in conjunction with other data to demonstrate that there is an exceedance of water quality standards in the water body. However, this information cannot be used solely for the listing. The alternate language is similar in meaning to the proposed language.	No
308.5, 308.13, 308.6, 314.13, 316.11, 317.3, 318.6, 323.2	Previous drafts of the Listing Policy have allowed listings based on visual and semi-qualitative assessments. Object to the use of these types of listing factors. At minimum, visual and semi-qualitative assessments for listing factors such as nuisance, adverse biological response, and degradation of biological populations and communities should only be used as ancillary lines of evidence, consistent with the general statement outlined on A-5 of the draft policy (Section 3.1 states that 'Visual assessments or other semi-quantitative assessments shall also be considered as ancillary lines of evidence to support a section 303(d) listing'). (A-6 through A-11).	Policy Section 3.1 (page A-5) is consistent with the requirements set forth in policy section 3.17 (Nuisance), 3.1.8 (Adverse Biological Response) and 3.1.9 (Degradation of Biological Populations and Communities) of the policy. Water bodies proposed for listing under these factors can only be considered for listing when they are shown to be significantly different when compared to reference conditions or when nutrient pollutant concentrations or other factors are shown to cause or contribute to observed effects.	No

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312.1	Acknowledge the SWRCB and local RWQCBs for their effort to standardize the delisting and listing process by incorporating reproducible scientific methodologies in their approach. This is exemplified through the use of the binomial distribution and null hypothesis testing. These components of the 303(d) list preparation should have been a cornerstone of the entire program, however this more accessible and rigorous policy, will increase the public confidence in 303(d) listing and delisting process and thereby promote a less contentious and productive atmosphere.	Comment acknowledged.	No
313.2	The approach to listing and delisting decisions outlined in this latest draft is very sensible and statistically sound. The virtues of the 'Exact Binomial Method' are as I outlined in my February 18, 2004 letter to you: it provides a robust, distribution-free statistical framework for making listing decisions. That letter concerned the December 2, 2003 SCRCB draft policy. I think the current draft is considerably better, in that it provides an 'even-handed' treatment of the null and alternative hypotheses for the test.	Comment acknowledged.	No
314.22, 318.15	A minimum of 3 samples exceeding WQOs are needed to list toxics and 5 samples exceeding WQOs are needed to list conventional pollutants, with no required minimum sample size. For delisting, the minimum number of samples required is 21 for conventional pollutants and 26 for toxic pollutants. The issue of minimum number of samples becomes more acute with respect to so-called 'historical listing.' Historical listings based on little to no data should not be required to meet the higher delisting requirements. (A-5 to A-6, A-22 to A-23, A-34) This section should be revised to acknowledge that review of historical listings do not require the number of samples - - that waters should be assessed as if they had never been listed before to determine whether this historical listing was appropriate.	To make sure that waters are removed appropriately from the section 303(d) list, the delisting factors should be used so there is a reasonably high certainty that water quality standards are met. Simply using the listing factors as if the listing had not been done before ignores the fact that the water body and pollutant are already on the list.	No
315.3, 315.4	Federal regulations or water quality control plans may already provide specific provisions on the application of water quality standards (e.g., how narrative objectives will be interpreted). To the extent the Listing Policy suggests a different interpretation of the application of water quality standards, we understand that the specific provisions in federal regulations or water quality control plans take precedent.	The Policy complies with state and federal regulations and relies on the CALM guidance (USEPA 2000a). The Policy addresses section 303(d) listing issues; it does not change water quality standards in any way or inappropriately interpret standards. The Policy provides to approach required to be used to interpret standards as related to the section 303(d) list. Statistical analysis is applied to the population of samples after the determination has been made as to whether the standard has been exceeded. The Policy does not suggest a different interpretation of water quality standards and serves as California's methodology for developing the section 303(d) list. As such the Policy should be used for all listing and delisting decisions.	No
315.7	The draft Policy requires use of the null hypothesis that water quality standards are attained when evaluating data. This is counter intuitive, inconsistent with other water quality programs such as the Surface Water Ambient Monitoring Program, and our recently developed TMDL Guidance, and creates a	The form of the null hypothesis recommended in the Policy is appropriate because the intent of the Policy is to establish the section 303(d) list by using data and information that shows the water does not meet standards. Using the 'reversed' hypothesis would establish only which water meets standards. The	No

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	<p>disincentive to monitor. Hypothesis testing is fundamental to implementation of the scientific method wherein a hypothesis is formulated based on consideration of available knowledge and information. Then the hypothesis is tested resulting in its acceptance or rejection. The use of the hypothesis that water quality standards are not attained is clearly appropriate when there is information indicating there is or may be impairment. Then the complete readily available data set would be used to verify the hypothesis. Note that use of the hypothesis that water quality standards are not attained does not mean that all waters in California are assumed to be impaired a priori. Use of the hypothesis is restricted to situations where there is some information indicating impairment.</p>	<p>distinction between the different null hypotheses is further reduced if statistical errors are balanced (Smith et al., 2001).</p> <p>The conclusion that standards are not met can only be made if the standard null hypothesis is rejected. If prior data and information were used to place the water and pollutant on the list then it is appropriate to use the reverse hypothesis to test if current information supports removing waters from the list.</p>	
315.8	<p>Use of the null hypothesis that water quality standards are attained requires a high burden of proof and data requirements well beyond what will be generated by the Surface Water Ambient Monitoring Program. Furthermore, it creates a disincentive for the regulated community to monitor since a smaller data set is less likely to result in listing. On the other hand, use of the null hypothesis that water quality standards are not attained creates incentive to monitor since there is less chance that a water body will be found impaired incorrectly.</p>	<p>The use of either null hypothesis is statistically valid. Balancing of decision errors minimizes differences between these hypotheses and the differences in the number of exceedances needed. Incentives to increase monitoring are included in the listing and delisting process (please refer to Issues 6C and 6D).</p>	No
319.15	<p>As we demonstrated mathematically in our February 2004 comment letter, a strict application of the 10% rule actually results in 'balanced' error rates, which means that the likelihood of mistakenly listing an impaired water body as clean is the same as the likelihood of mistakenly identifying a clean water body as impaired. We would of course prefer to err on the side of clean water, which is the stated position of the Board as well; but at a minimum the error rates must be the same. The current draft continues to err on the side of dirty water, which we maintain is not the policy that this state should adopt.</p>	<p>The approach presented in the previous letter (Commenter 51) proposed an approach that balanced errors at 50 percent. A 50 percent error rate means the test is no better than random guessing. SWRCB has not previously established any policy on listing or delisting waters.</p>	No
319.19	<p>The choice of statistical test (acceptance sampling by attributes) actually institutionalizes the failure to list impaired waters. Acceptance sampling by attributes, which is the proposed statistical methodology in the current Draft Policy, may be a reasonable means to balance errors in certain statistical decision-making scenarios. However, in the context of water quality assessment, it requires the application of both a maximum acceptable exceedance rate and a minimum acceptable exceedance rate (corresponding to the 'rejectable quality level' and the 'acceptable quality level' in industrial quality control applications' the context in which this method is usually employed). There are obvious philosophical difficulties with the implication that any water body can have too few exceedances; the Board should never seek to 'balance error' at the expense of clean water.</p>	<p>Comment acknowledged.</p>	No
319.20	<p>Staff has arbitrarily chosen to set the parameter values for hypothetical clean and dirty populations at 0.1 (0.05) and 0.25 (0.2) respectively. This means that the former EPA listing criterion of 10%, rather than a maximum exceedance frequency, is now the 'acceptable quality level' - the minimum number of</p>	<p>The justification for the recommended exceedance frequencies is contained in the FED, Issue 6C.</p>	No

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	<p>exceedances below which the Draft Policy assumes it is not cost effective to go. There is absolutely no biological or statistical justification for this proposition, which shifts the threshold exceedance frequency far upward of the traditional 10%.</p>		
319.21	<p>The requirement for a minimum of three exceedances to list for low sample sizes has no scientific basis and is inconsistent with other listing criteria. Staff has proposed a uniform, nonscientific, and arbitrary rule for low sample sizes: the 'Rule of Three'. In other words, three exceedances are required to list any water body for which the total number of samples is 20 or fewer, regardless of what underlying exceedance frequency is implied. This position is inconsistent with staff's 'scientific rigor' argument for using statistical techniques in the first place, and creates a tremendous disincentive for monitoring.</p>	<p>The rationale for extending the number of exceedances is presented in the FED, Issue 6E.</p>	No
319.22	<p>The policy should instead require listing for any water body with a 10% exceedance frequency, including water bodies for which the total sample size is less than 21. This would create an immediate incentive to gather additional samples from waters that either the Board or the regulated community believes to be actually clean. Contrary to staff's assertions ('[t]he impact of listing a water body that actually meets water quality standards is that the costs of developing a TMDL will be expended unnecessarily'), such listing 'even if erroneous' would not trigger immediate TMDL development with concomitant costs to the agency and the regulated community. Common sense and experience tell us that confirmatory monitoring would come first. Furthermore, the SWRCB's own Draft Impaired Waters Guidance explicitly provides for monitoring as an initial step in TMDL development to confirm impairment.</p>	<p>The policy have been revised to create an incentive to monitor for toxicants by requiring at least 28 samples to delist.</p>	Yes
322.5	<p>We concur with the regulated community that the use of the binomial approach and other minimum data requirements is not an illegal revision of water quality standards. Arizona, Florida, Nebraska and Texas have all incorporated this approach in their listing guidelines and policies, and it was also an accepted approach in the National Academy of Sciences Report (Assessing the TMDL Approach to Water Quality Management).</p>	<p>Comment acknowledged.</p>	No

Draft Final Policy, Section 3.1.1: Numeric Water Quality Objectives and Criteria for Toxicants in Water

307.13	<p>The manner in which the draft Policy frames the binomial statistical tests for listing and delisting waters is inconsistent with the approaches discussed in EPA guidance and applied by other states (e.g., Florida and Arizona) that use this approach.</p>	<p>The approach being proposed is different from the approaches used in Florida and Arizona but the approach is proposed in the CALM guidance (USEPA, 2002a). The error balancing provisions are advocated in the 2004 listing guidance (USEPA, 2003b) and scientific literature (Smith et al., 2001).</p>	No
307.7, 319.16, 319.18, 319.17	<p>Applicable water quality standards for most toxic pollutants in California are based on the assumption that they will not be violated more than once every 3</p>	<p>The CTR water quality criteria for toxic pollutants in California are not to be exceeded more than once every three years on the average. If it is assumed that</p>	Yes

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	years on average (see California Toxics Rule (CTR) at 40 CFR 131.38 (c)(2)(iii)). This corresponds to an allowable exceedance frequency of roughly 0.1% of the time, in contrast to the 5% assumed in the draft Policy. We interpret the CTR to mean that a water must be listed if there are 2 or more independent excursions of acute or chronic water quality standards within any 3 consecutive year time frame during the assessment period, or 2 or more independent excursions on average over the entire assessment period (e.g., four excursions in 6 years).	two samples are available for a three year period on the average and the samples are representative of the period, then if two hits were observed in the two samples, it would be sufficient data to support a listing. The Policy has been revised to include this approach.	
308.17, 309.1, 314.7, 316.2, 317.5, 318.1, 318.11	Supports the binomial distribution using the null hypothesis approach. We believe this statistical approach is the best available method of providing much-needed objectivity to the listing (and delisting) process. Urges the State Board to adopt the proposed statistical approach as currently included in the July 2004 Draft Policy.	Comment acknowledged.	No
308.3, 314.11, 318.5	The Policy needs to be clear that the presumption of the null hypothesis is that the waterbody meets water quality standards.	The null hypothesis and alternate hypothesis are presented in Tables 3.1 and 3.2. For listing and Tables 4.1 and 4.2 for delisting.	No
319.1	Delete and replace the following language in quotes to section 3.1.1: Numeric water quality objectives for toxic pollutants, including maximum contaminant levels where applicable, or California/National Toxics Rule water quality criteria are exceeded 'in two or more samples within a three-year period.' 'Using the binomial distribution, waters shall be placed on the section 303(d) list if the number of measured exceedances supports rejection of the null hypothesis as presented in Table 3.1. ' - For sample populations less than 21, when 3 or more samples exceed standards, the segment shall be listed.'	The Policy has been modified to require a 3 percent exceedance frequency (plus 15 percent effect size) to be used for listing decisions regarding toxicants. At low sample sizes two or more exceedances will result in placement of a water body and pollutant on the section 303(d) list.	Yes

Draft Final Policy, Section 3.1.2: Numeric Water Quality Objectives for Conventional or Other Pollutants in Water

308.20, 312.7, 314.10, 316.14, 318.14	The Draft Policy identifies DO, pH and temperature as the conventional pollutants. All other pollutants are essentially treated as toxics in the Draft Policy. The current proposal for toxic and conventional pollutants is not consistent with programs, definitions or uses of standard terms used in the Code of Federal Regulations (CFR) and the Water Code. 40 CFR § 123.45 identifies Group 1 and Group 2 pollutants. The list of conventional pollutants should be revised. The list of conventional pollutants should be based on EPA's category of Group 1 pollutants and toxic pollutants be based on Group 2 pollutants, as identified in 40 CFR 123.45 Appendix A. Other pollutants that do not fall into these two categories (e.g., trash) should be dealt with explicitly. (A-5 through A-11 and A- 39 to A-40).	Pollutants identified under section 303(d), whether conventional or toxicants, are shown to impact the water quality of specific segments regardless of origin of the pollutant. Federal regulation, 40 CFR 123.45, applies specifically to reporting procedures for permit effluent discharges that are in violation of established permit requirements. These violations are reported depending upon the magnitude and/or frequency of the violation evaluated on a parameter-by-parameter and outfall-by-outfall basis. Violations reported using this regulation specifically pertain to NPDES permit point source violations for which specific permit holders are liable. The Group I and II list of pollutants simply describes two different levels of violations for two groups of pollutants.	No
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		It is inappropriate to use federal regulations intended for enforcement purposes in the context of placing waters on or removing waters from the section 303(d) list. Since the section 303(d) list is used as part of the State's process for compliance with section 305(b), we have opted to use USEPA's section 305(b) guidance (USEPA, 1997b) to categorize pollutants.	
313.3	In Table 3.2 concerning conventional pollutants, the hypothesis that the actual exceedance proportion is less than 10% and the competing hypothesis that it is greater than 25% are treated symmetrically in the sense that the probabilities of error in not choosing the correct hypothesis are equal, or at least as nearly equal as possible. This avoids interminable arguments about which hypothesis should be accorded the status of 'null hypothesis' and puts the emphasis on the 'operating characteristic curve', which is more fruitful. In teaching hypothesis testing to scientists and engineers over the last forty years, I have vigorously encouraged the same kind of 'even-handed' specifications as a means of choosing tests.	Comment acknowledged.	No
313.5	I independently verified that the numbers in Table 3.2 are correct, given the criterion of minimizing the absolute value of the difference between the two error probabilities.	Comment acknowledged.	No

Draft Final Policy, Section 3.1.3: Numerical Water Quality Objectives or Standards for Bacteria Where Recreational Uses

319.3	Add and replace the following language in quotes to section 3.1.3: For bacterial measurements from coastal beaches, if water quality monitoring was conducted April 1 through October 31 only, a four percent exceedance percentage shall be used 'only if a reference water segment or beach cannot be identified.' If the exceedance is due to a beach closure related to a sewage spill, the water segment shall not be placed on the section 303(d) list, 'though recurring beach closures due to sewage spills shall be considered for listing.' Beach postings that are not backed by water quality data shall not be used to support placement of a water segment on the section 303(d) list. 'Rain advisories shall be considered when evaluating beach waters for listing where routine wet weather monitoring is not conducted.'	These comments have been previously considered and are not consistent with the recommendations of the Beach Water Quality Workgroup. The reference beach approach can only be used if it is consistent with water quality standards.	No
319.35	The Draft Policy's Approach To Beach Water Quality Is Deficient. In our February 18, 2004 comments, we recommended the use of a reference system approach to evaluate recreational uses. As currently drafted, the Draft Policy does not strongly recommend using a reference system approach. Additionally, when the reference system approach is used, the site-specific exceedance frequency derived from the reference system is applied in conjunction with the binomial model' an approach that results in overcompensation for potential error	The Policy calls for the use of the reference beach approach if it is consistent with standards. The information needed to substantiate a reference approach is not widely available.	No

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	and an unreasonably high bar for listing. In its response to comments, staff indicated that the EPA recommends using 10%, referencing a 1997 document. As we pointed out in our February comments, this recommendation was made with regards to the outdated EPA standard for fecal coliform. The more recent implementation guidance document for the EPA enterococcus criteria does not recommend 10%.		
319.36	Staff apparently believes that the binomial model should be used with the site-specific frequency because there is much uncertainty associated with bacteria measurements. However, this position fails to acknowledge that error associated with laboratory measurement of bacteria can also result in underestimating bacteria densities. Importantly, it seems that staff failed to consider that the bacteria standards are based on epidemiological results that were developed giving consideration to this same laboratory error. Consequently, the application of a statistical approach in this context will result in overcompensation for potential error and a high risk of erroneously failing to list impaired waters.	Comment acknowledged.	No
319.37	Rain advisories should be considered in the evaluation process for beaches in which routine monitoring is suspended during wet weather. As currently drafted, the Policy rewards local agencies that use rain advisories in lieu of monitoring because this information need not be the basis of 303(d) listing. If rain advisories and wet weather water quality monitoring were equivalent for the purposes of 303(d) listing, the incentive to not monitor would be removed.	This comment conflicts with the recommendation of the BWQW. If rain advisories are backed by data the data must be used in listing decisions. If data do not back a rain advisory it is uncertain if water quality standards are actually not met.	No
325.1	The AB411 4% bacteria exceedance frequency for coastal beach waters should be applied to freshwater beaches as well.	The Policy has been revised to require a 4% exceedance value to be used for fecal bacterial measurements for freshwater as well as coastal waters. Although there is no study that could be used to develop an exceedance frequency for freshwaters, this change was made because application of the 4% exceedance frequency to freshwater bodies would be protective. Application of the 4 percent value should be limited to bacterial measurements that are indicative of human fecal matter and to locations with substantial human contact.	Yes

Draft Final Policy, Section 3.1.5: Bioaccumulation of Pollutants in Aquatic Life Tissue

303.2, 306.1	Section 3.1.5 of the document, Bioaccumulation of Pollutants in Aquatic Life Tissue, addresses the listing of a water segment for exceeding a pollutant-specific guideline using the binomial distribution. It is unclear whether the State intends to delist segments that did not have adequate data for the original listing. For instance, Toxic Substances Monitoring Program data may have four sets of analyses that caused the listing of a segment. The segment would not be listed under this section of the Policy, nor could it be delisted under the Policy due to the need for a much larger data set. We strongly recommend a review of the existing 303(d) list using the guidelines of the Policy. Many of the water	For waters to be removed from the section 303(d) list an adequate number of samples as described in the delisting factors must be available. Waters will not be removed from the list unless the data available shows with the specified certainty that standards are met.	No
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	bodies remain incorrectly listed when evaluated using the Policy.		
308.22, 314.23, 316.10, 318.16	The relationship between fish tissue levels and links to water or sediment concentrations of pollutants is often unclear with aquatic life tissue samples, because of factors such as the mobility of fish, bioavailability, partitioning, species-specific factors, etc. Listings based on aquatic life tissue should require an established relationship between tissue levels and water column concentrations in the water segment, and should be based on multiple lines of evidence, as is required for the evaluation of adverse biological response, degradation of biological populations and communities, and health advisories. Recommend that this listing factor be modified to require application of a weight-of-evidence approach.	A direct correlation does not always exist between concentrations of toxic substances in tissue and the water column or sediment. Concentrations in water bodies are either too low or transitory to be detected. The Policy recommends composite fish samples to increase accuracy and confidence. The recommended screening values, developed by OEHHA and NAS are well accepted and represent concentrations in water that are protective of human health and aquatic life. The Policy recognizes that some lines of evidence are sufficient by themselves to demonstrate standard attainment. Evaluation from a single line of evidence, i.e., tissue data based on screening values from USEPA, OEHHA, or NAS are sufficient to demonstrate standard attainment.	No
310.3	The last sentence of Section 3.1.5 should be clarified. The term 'transplanted' animals should be limited to species native to and currently inhabiting the water body. Currently, the term could be interpreted to mean that bioaccumulation could be evaluated from non-native or non-occurring species transplanted to the water body.	As written the section allows transplanted organism to be used in the listing assessments. This is appropriate because transplanted species, such as mussels, can be used to assess if pollutants are present at levels that affect beneficial uses.	No
319.4	Delete the following language in quotes in section 3.1.5: A water segment shall be placed on the section 303(d) list if the tissue pollutant levels in organisms exceed a pollutant-specific evaluation guideline (satisfying the requirements of section 6.1.3) 'using the binomial distribution' as described in section 3.1.1. Acceptable tissue concentrations may be 'based on composite samples' measured either as muscle tissue or whole body residues. Residues in liver tissue alone are not considered a suitable measure. Samples can be collected either from transplanted animals or from resident populations.	The Policy has been modified to require a 3 percent exceedance frequency (plus 15 percent effect size) to be used for listing decisions regarding toxicants. At low sample sizes two or more exceedances will result in placement of a water body and pollutant on the section 303(d) list. Composite samples are a useful way to reduce some of the variation in tissue sampling and to get a broader representation of concentrations of pollutants in tissue.	No

Draft Final Policy, Section 3.1.6: Water/Sediment Toxicity

301.1	From a practical standpoint, it does not seem feasible to allocate load limits to a water body based on toxicity. Such a listing would still require the identification of which constituents/contaminants were causing toxicity, using a TIE type approach, with the limits then set based on those results. This would circle you back to regulating source inputs for those constituents/contaminants that contribute toxicity. Therefore, there does not seem to be any logic in toxicity-based load limits that cannot be directly applied. While attempting to use a metric, such as toxicity, may seem to provide a single answer for regulation, the applicability of this shortcut lacks validity when faced with real world complexities of the studies and data that are needed to accurately set limits. In summary, we feel that there is no shortcut for good	It is difficult to allocate waste load and load allocations for toxicity but it is possible. The Policy acknowledges this difficulty but also acknowledges that once the pollutants causing or contributing to the toxicity are identified that the pollutants be added to the list. To give the full range of options to the RWQCBs for listing and TMDL development, it is necessary to allow TMDLs to be developed for toxicity. The definition of a TMDL (40 CFR 130.2(i)) allows for 'TMDLs to be expressed in terms of either mass per time, toxicity or other appropriate measure.'	No
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	science.		
308.19, 312.4, 314.20, 314.21, 318.13, 320.5	The Draft Policy allows waters to be placed on the section 303(d) list for toxicity alone, even if the pollutant causing or contributing to the toxicity is not identified. Studies identifying the pollutant associated with the toxic effect are no longer required prior to development of a TMDL. (A-7)	With the exception of toxicity, the draft Policy requires the identification of pollutants in order to place a water body segment on the section 303(d) list. Although toxicity is not a pollutant it is a manifestation of the effects caused by pollutant concentrations and yields a direct measurement of the health of a specific water body segment. Federal regulation does allow TMDLs to be developed based on load allocations and also based on toxicity, or other appropriate measures (40 CFR 130.2(i)). However, resulting TMDLs based on toxicity must be based on toxicological data, such as toxicity test methods and statistically valid assessment of endpoints as compared against ambient water or sediment reference conditions.	No

Draft Final Policy, Section 3.1.7: Nuisance

308.24, 308.23, 314.26, 314.24, 314.25, 316.17, 317.6, 318.17	The Draft Policy provides no guidance regarding the methodology that should be employed to determine appropriate reference conditions for a particular water segment. The delisting criteria for nuisance requires that The water segment no longer satisfies the conditions for a nuisance listing (Section 4.7), however since nuisance listings can be highly subjective, delisting based on these conditions will be problematic. How similar to a reference condition does the water segment need to be in order for it to be no longer considered impaired? Recommendations: Due to the highly subjective manner in which these types of listings are to be made under the July 2004 Draft of the Policy, the Regulated Caucus recommends that the SWRCB remove this listing factor from the Policy. As mentioned earlier, as the Policy is currently written, it is not clear whether water segments evaluated by this factor would then be listed for the factor itself (i.e., the water segment would be listed for “nuisance”), which would be considered “pollution” and not a “pollutant”, or whether the water segment could only be listed for the nutrient or other pollutant causing the nuisance.	Nuisance conditions are addressed in most of the RWQCBs Basin Plans; therefore, it is legitimate for the Policy to provide guidance for section 303(d) listings. The Policy recommends the use of qualitative assessments of nuisance conditions in association with numerical water quality data and acceptable nutrient-related evaluation guidelines; qualitative assessments alone would not meet the criteria for listing a water body. The Policy also allows the RWQCBs to compare the affected water segment to a reference condition, if one exists. Guidance to determination of appropriate reference conditions are provided in the FED (Issue 5G). However, in recognition of the site-specificity involved in determining an appropriate reference site, the Policy is worded to provide the RWQCBs needed flexibility in making their determinations. Hence, the degree of similarity to a reference site to either list or delist a water body is a determination best left to the RWQCBs.	No
319.5	Delete and replace with the following language in quotes to section 3.1.7. A water segment shall be placed on the section 303(d) list if qualitative assessments of the water segment for nuisance water odor, taste, excessive algae growth, foam, turbidity, oil, trash, and color, 'particularly but not necessarily where' 'are' associated with numerical water quality data, 'that' meets any one of the following.	Acceptable evaluation guidelines are needed to assess nuisance conditions because without them impact to beneficial uses cannot be quantified.	No

Draft Final Policy, Section 3.1.8: Adverse Biological Response

308.25	All listings in Section 3.1.8 should be evaluated using the exceedance threshold using the binomial approach, notwithstanding the comment that, as with Nuisance and Degradation of Biological Populations and Communities listings,	Pollutants are evaluated using the exceedance threshold from the binomial approach as described in section 3.1.6. Endpoints for adverse biological response (i.e., reduction in growth, reduction in reproductive capacity, etc.) do	No
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	<p>it is not clear what degree of difference from reference conditions is required to place a water segment on the 303(d) list.</p> <p>Recommendations: This section of the Draft Policy should be revised so that it is clear that all listings of this type will be evaluated using the binomial distribution.</p>	not lend themselves to analysis using the binomial approach because these endpoints are in response to a toxic condition.	
310.7	The following comment was not addressed in Appendix B: Within section 3.1.8, Adverse Biological Response, the proposed metrics to assess biological degradation should be conducted over a number of years (2-3) to accurately assess the impairment of the community. Using short term measurements may not be indicative of the long term effects of the community.	Due to the complexity of interpreting measurements of adverse biological response in an organism, the Policy provides the RWQCBs significant flexibility in interpreting the data and information used to recommend a listing. Therefore, the timeline in which these type of assessments will be made is a RWQCB decision.	No

Draft Final Policy, Section 3.1.9: Degradation of Biological Populations and Communities

308.26, 314.27, 314.28, 316.20, 318.18	It is unclear from the language contained in Section 3.1.9 regarding bioassessment would allow multiple segments, or an entire water body, to be listed based on measurements taken from a single stream reach. This provision in Section 3.1.9 should be clarified. Measurements from one section of stream should not be used to list an entire water segment, since the reach in question may not be representative of conditions present along the entire length of the segment. A single reach may spatially represent a very small water segment, however most segments will probably contain some variation in physical habitat which could account for differences in the biological community.	A water body segment would only be placed on the section 303(d) list due to bioassessment data when the data used for listing first complies with the requirements in section 6.1.5.8 and the documented bioassessment impacts are associated with pollutant(s) as described in section 3.1.9 of the Policy. Section 3.1.9 states, 'A water segment shall be placed on the section 303(d) list if the water segment...as compared to reference sites.' Staff believes this adequately reflects the conditions that may warrant a listing or delisting are to reflect the segment from which the samples were obtained. Additionally, interpretations of representativeness of measurements is best left to the RWQCBs when faced with data and information for specific water bodies.	No
311.1, 320.3	It is our understanding that the 303(d) listing process is to identify water bodies that are impaired for a designated beneficial use. Many of the current designated beneficial uses relate to the ability of a water body to support healthy aquatic communities. Whether or not a particular contaminant or pollutant can be measured in a water body is not in of itself an indication of impairment.	CWA section 303(d) requires the identification of water body segments within the state that do not meet or are not expected to meet applicable water quality standards after application of certain technology-based-controls. Water quality impacts can only demonstrated when water quality objectives, criteria, applicable water quality guidelines or other scientifically valid measurement indicate that the designated beneficial uses are not being met. Those waters exceeding water quality objectives or criteria are required to be placed on the section 303(d) list for TMDL development.	No
314.29	It should be specified in this section that observed differences from reference conditions which are determined to be due to physical habitat or other factors that cannot be controlled, should not be used as a basis for listing. Bioassessment data should be required to be collected over a minimum 3-year period, in order to distinguish 'significant degradation' from natural variability in the biological community within a site. In addition, the Draft Listing Policy should specify that measurements from one section of stream should not be used to list an entire water segment, since the reach in question may not be representative of conditions present along the entire length of the segment. A	The Policy provides guidance in Section 6.1.5.8 on the evaluation of bioassessment data. In the fact sheets, the RWQCBs should document the index period that sampling will occur; comparison of reference sites include results from similar index periods. Additionally, because of the site-specificity inherent in bioassessment data, the Policy provides the RWQCBs the flexibility to review the data on a case-by-case basis.	No

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	single reach may spatially represent a very small water segment, however most segments will probably contain some variation in physical habitat that could account for observed differences in the biological community.		
319.6	Delete the following language from last paragraph in section 3.1.9. Bioassessment data used for listing decisions shall be consistent with section 6.1.5.8. For bioassessment, measurements at one stream reach may be sufficient to warrant listing 'provided that the impairment is associated with a pollutant(s) as described in this section.'	Linkage to section 6.1.5.8 is necessary. Section 6.1.5.8 provides guidance to the RWQCBs on the evaluation of bioassessment data. Without this guidance, consistent interpretation of bioassessment data would be lost.	No

Draft Final Policy, Section 3.1.10: Trends in Water Quality

307.18	We appreciate the inclusion of provisions authorizing the inclusion of threatened waters on the Section 303(d) list (Section 3.1.10). However, the provision requiring the demonstration of current adverse effects to beneficial uses as a condition for projecting that a water is expected to violate standards in the future appears inconsistent with federal listing requirements. We thus recommend this provision be deleted.	The Policy is in compliance with federal listing requirements contained in CWA section 303(d) and 40 CFR 130.7. Section 3.1.10 of the Policy also complies with 40 CFR 131.12. This provision requires that water quality must be maintained at levels that result in no mortality or significant growth or reproductive impact of resident species (Attwater, 1987).	No
308.27, 314.30, 318.19	This section remains ambiguous and subjective. The Regional Boards are now directed to assess whether the decline is expected to result in not meeting WQS before the next listing cycle, however, this step is not included in the decision factors in Section 3.1.10. Recommendations: The last sentence in Section 3.1.10 on Page A-10 should be amended to state: Waters shall be placed on the section 303(d) list if the declining trend in water quality is substantiated (steps 1 through 4 above), and the impacts are observed (step 5), and the trend is expected not to meet water quality standards by the next listing cycle (step 6).” The sentence in Section 4.10 on page A-19 should be similarly edited.	The factors listed should not be modified because step 6 is simply part of the assessment. Waters should be placed on the section 303(d) list if the first five steps are satisfied without regard to step 6. It does not make sense to list only if short-term exceedances are projected. If the exceedance is projected to be longer beyond the next listing cycle, the beneficial use is impacted and the pollutant trend is declining. The information in step 6 is needed to help determine when the exceedance should be addressed.	No
313.6	It is quite reasonable to include the 'exception process' to address multiple lines of evidence, to be analyzed separately and then synthesized. It is also a good idea, I think, to be careful about making listing decisions based on negative trends in water quality, with safeguards of the sort listed in section 3.1.10.	Comment acknowledged.	No
317.8	We disagree that 'trends in water quality' should be used as a criterion to list water segments that would not otherwise meet the conditions in the Draft Listing Policy. This criterion allows inclusion of water segments on the 303(d) list in absence of information that water quality standards are exceeded or that beneficial uses are impaired. That is not the purpose of the 303(d) list, which is to set forth those waters that do not meet water quality standards and for which TMDLs are to be completed.	40 CFR 130.2 (j) defines water quality limited segment, as any segment where it is known that water quality does not meet applicable water quality standards, and/or is not expected to meet applicable water quality standards, even after the application of the technology-based effluent limitations required by sections 301(b) and 306 of the Act. The Policy should be consistent with this definition and requires that the assessment include a description of whether the declining trend in water quality is expected to not meet water quality standards by the next listing cycle. Numeric, pollutant-specific water quality objectives do not need to be exceeded to list under this listing factor. However, the policy requires a substantiation of a decline in water quality plus further	No

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		documentation that water quality impacts are observed.	
Draft Final Policy, Section 3.1.11: Situation-Specific Weight of Evidence Listing Factor			
306.3, 308.29, 314.31, 316.12, 318.20	Section 3.1.11 should be revised to include further description of the weight of evidence approach, and should include careful definition of terms used in the section, such as 'substantial basis in fact' and 'reasonably inferred' to provide more transparency to this factor. Otherwise, this section of the Draft Policy will become a loophole for listings (or delistings), when more objective criteria may indicate that water quality standards are attained or not attained. Without further development, this section should be removed entirely from the Policy as it undermines the scientific rigor the Policy otherwise achieves.	The Policy provides guidance on the weight of evidence approach in section 1 (Introduction). This section is consistent with weight of evidence approaches used or suggested for section 303(d) purposes. The terms 'reasonably inferred' and 'substantial basis in fact' requires the RWQCBs, when using this listing factor, to describe in the fact sheet the factual basis for the data and how this relates to the decision at hand. This evidence must be documented in the fact sheets which will be available for public scrutiny during the public comment period. Defining these terms in advance may limit the applicability to some data sets.	No
307.15	The draft Policy includes some provisions authorizing the inclusion of waters and pollutants on the Section 303(d) list based on a weight of evidence approach (Sections 3.1.11 and 4.11). These provisions appear vague and their application discretionary on the part of the State and Regional Boards. We refer to our prior comments on this issue, which have not been addressed in the draft final Policy.	The provisions provide significant discretion in placing or removing waters from the section 303(d) list. With this discretion the Board's are required to explain the rationale for the decisions made under these provisions of the Policy.	No
314.33	Section 3.1.11 should be removed entirely from the Policy as it undermines the scientific rigor the Policy otherwise achieves. Recommend that this section be deleted, and be replaced with the Alternative Data Evaluation provision from the December 2003 draft of the Policy. If, however, the current section 3.1.11 is to be retained, the Policy should make clear that a Regional Board may not use this factor in the first instance; rather, the Regional board must first evaluate the water body segment using the other listing factors. This is critical to ensure that the exception provided by this listing factor does not become the rule. To accomplish this, the following bullet should be added to the required justification that must be provided to support listing based on this factor: 'Demonstrating that the Regional Board has considered the other listing factors and determined that they have not been satisfied.'	The Policy states in Section 3.1.11, 'When all other Listing Factors do not result in the listing of a water segment..' This provides ample direction to the RWQCBs to only apply this section to those listing decisions where the weight of evidence demonstrates that a water quality standard is not attained but a listing decision cannot be made using all other Listing Factors. In these circumstances, RWQCBs must justify their decision in the water body fact sheet, provide data and information that support the listing, and demonstrate that the approach is scientifically defensible and reproducible. The statement at the end of the comment is assumed if the required approaches are used.	No
315.2	The site-specific weight of evidence approach should allow the Region Boards to make a reasoned argument for listing or delisting, even if the binomial method would lead to contrary conclusion. The binomial method does not effectively address critical water quality considerations such as magnitude of exceedance; timing or seasonality of exceedances; land use or other activities in the watershed that influence pollution patterns; water quality trends; monitoring design; or preventive or corrective actions. In many cases, such factors must be considered in order to ensure the completeness and accuracy of the 303(d) List.	In those situations, where the Listing Factors do not result in the listing of a water body but information indicates non-attainment of standards, the Policy does allow placement on the section 303(d) list if the weight of evidence demonstrates non-attainment. The Policy provides some guidance by which the RWQCBs may justify their recommendation. For many of the factors listed in the comment, the Policy provides guidance (such as trends, temporal and spatial representation, segmentation, and other site-specific considerations).	No
321.1	Encouraged the State Water Resources Control Board to preserve flexibility in	Comment acknowledged.	No

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	the policy to assure that regional water quality control boards (regional boards) have discretion to consider all data and interpretations that they and stakeholders deem appropriate as part of a comprehensive, weight of evidence approach for determining water quality impairments. We are satisfied that our comments were appropriately addressed in the most recent version of the policy.		
321.2	As described in DPR's Process for Responding to the Presence of Pesticides in Surface Water, we will be relying on regional boards to determine when water quality objectives are exceeded for reasons related to pesticide use. Then, DPR and the regional boards can work collaboratively to identify the best responses that will attain and maintain water quality objectives. Your proposed policy will provide common criteria regional boards will use to make such determinations.	Comment acknowledged.	No

Draft Final Policy, Section 3.2: Water Quality Limited Segments Being Addressed

308.30, 312.11, 314.34, 316.22, 318.21	Refer to Existing Policy - It is difficult to identify areas of scientific subjectivity when the Listing Policy refers to documents that are not official policy yet, such as 'The Water Quality Control Policy for Addressing Impaired Waters'. It is recommended that the Listing Policy only refer to existing policy. (Section 3.2).	The reference to the 'The Water Quality Control Policy for Addressing Impaired Waters' has been removed from the Policy. The Policy has been revised to include a brief statement that waters will be placed in the category if a regulatory program or program can reasonably be expected to result in the attainment of standards within a reasonable, specified time frame. The rationale for the language is included in FED Issue 2.	Yes
319.29	Clearly, then, the change from the 'Enforceable Programs' list to the 'Water Quality Limited Segments' section is purely cosmetic. At least under the previous version of the Draft Policy, the intent to avoid a TMDL by providing for a separate list was explicit; under the current version, it is disguised as a separate 'section' of a 303(d) list for which 'mysteriously and without any legal authority whatsoever' a TMDL will apparently not be required. Consequently, the Water Quality Limited Segments Being Addressed list remains in effect an 'off ramp' a means of providing a ticket out of doing something (developing a TMDL) that the law explicitly requires.	USEPA guidance (2003a) allows waters to be listed if a program is addressing the water quality problem. The Policy goes beyond this by requiring the waters to be placed in the section 303(d) list. This section of the list is not an off-ramp because the waters will be addressed by a program determined by the RWQCBs to meet water quality standards and within a specified time frame.	No
319.31	The language of Section 303(d), when read in the overall context of the Clean Water Act as well as Section 301, clearly indicates that Congress intended the TMDL program to coexist with other enforcement and clean up programs under the Act. There is no indication that Congress intended the operation of the Clean Water Act as a whole to disable any specific element of the Act. Yet, this would be the effect of the Water Quality Limited Segments Being Addressed section. Such an impact cannot be allowed.	Comment acknowledged.	No

Draft Final Policy, Section 4: California Delisting Factors

308.7, 312.13,	It is not completely clear how segments at various stages of the TMDL process	A review of past listings can occur but only when the listed changes are being	No
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314.14, 317.1	will be handled, or if waters that have met WQS due to a TMDL or other program will have to go through the delisting process. Water segment-pollutant combinations should be listed in the appropriate category, regardless of the status of the other pollutants listed in that segment. The Draft Policy should be revised to clarify how a water segment/pollutant combination is removed once WQS are attained due to a TMDL, or it should be clarified that delisting can happen from either category of the list. In addition, the Draft Policy should include a methodology whereby a water segment can be removed from the 303(d) list during the TMDL process, if it is demonstrated during the course of the TMDL that water quality standards are in fact being attained, in accordance with the delisting provisions of section 4 of the Policy.	considered. More frequent changes to the list would require a significant commitment of resources. As stated in the Policy, for the re-evaluation of a particular listing to occur, the interested party may request an existing listing be reassessed by the RWQCB under the delisting factors of the Policy. The request must include the information required by the Policy.	
310.4	The modifications to Tables 4.4 and 4.2 are a significant improvement from the previous draft and appropriately ensure consistency between evaluations for listing and de-listing water bodies.	Comment acknowledged.	No
312.2, 312.3, 316.5	Leaving the regulated communities to self prioritize impairments separates objectivity from science and 'possible' from 'existing' impairments, does a disservice to the public and wastes valuable resources. Recommend reconsideration of the following issues to restore scientific rigor and encourages the Board to undertake a thorough review of past listings to ensure that the policy has been uniformly implemented and integrated into the current list.	A review of past listings can occur. As stated in the Draft Final Policy, for the re-evaluation of a particular listing to occur, the interested party may request an existing listing be reassessed by the RWQCB under the delisting factors of the Policy.	No
313.4	Another virtue of the statistical approach outlined in the July 2004 document is the elegant symmetry of the listing and delisting criteria. For example, comparison of Tables 3.2 and 4.2 illustrates that a given number of exceedances out of a given sample size will always yield the same result-'should be on the list' or 'should not be on the list' -regardless of whether the water body is currently on the list or not.	Comment acknowledged.	No
316.28, 316.31	Concerned as to whether older impairment listings would be re-evaluated within a reasonable timeframe. Often, the older listings were not transparent and were based on subjective information, without support from numerical, statistically significant amounts of data. Old listings often did not have a written rationale, and essential reports have been found to be missing, with only photocopies of spreadsheets and no quality assurance documentation on file.	The Policy provides the methodology for re-evaluating existing listings in Section 4. 'Any interested party may request an existing listing be reassessed under the delisting factors of this Policy.' The section goes on to list the appropriate steps to take to request a reevaluation.	No
319.2, 319.8, 319.14, 319.25	Accordingly, we recommend that more rigorous and meaningful decision rules be applied to listing and delisting. As noted above, we believe that the 'raw score' 10% rule is adequate to make listing decisions, as it does not make implausible assumptions about the condition of the water body, provides insurance against uncertainty, and is easy to apply. For delisting, however, we recommend the application of the binomial statistical method to test the hypothesis that the water body has an underlying exceedance rate of 10% with 95% confidence, against the alternative hypothesis that the actual exceedance	The recommended raw score approach does not manage error rates and it has been suggested that the approach be replaced with other statistical approaches (Smith et al., 2001). The reason to use the binomial test only for delisting is not stated. The use of the binomial test without balanced errors biases the result in favor of the null hypothesis. Statistical errors should be balanced in order to fairly address the costs and consequences of either type of error. As presented by the commenter, the approach is not scientifically defensible.	No

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	rate is lower than 10%. This method provides the additional statistical rigor that is necessary to overcome the data-based position that the water body is impaired (i.e., has an underlying exceedance rate of greater than 10%).	The same statistical approach should be applied to both listing and delisting processes.	
319.23, 319.26	The Statistical Approach To Delisting Will Miss Numerous Impaired Waters and May Result In Inefficient and Problematic Listing Delisting Loops. The Board has stated that it should be easier to list than to delist a common-sense position for which we commend the Board. However, staff's proposed statistical approach simply does not reflect the Board's stated position in this regard, and in fact moves us further away from that goal. Specifically, the proposed rule explicitly makes delisting at least as easy as listing. Furthermore, the method could result in absurd cycles of listing and delisting, with water bodies bouncing off and on the list. We urge the Board to adopt a more rigorous approach to delisting waters.	The Policy has been modified to require for toxicants that there be more certainty when delisting. In this way more data would be required before a water body or pollutant is removed from the list. If new data become available it should always be used even if it changes the listing status from listing period to listing period. The 'cycles' discussed in the comment could not occur, at present, more than one time every two years.	Yes
319.24	Staff's responses to comments explicitly acknowledge that the delisting requirements are not more rigorous than the listing requirements, 'so the burden of proof is equivalent.' This makes little sense. In contrast to listing decisions, where water body health is an open question to be evaluated, in delisting decisions we can hypothesize that the water being evaluated is impaired, since it is already on the list. Consequently, the degree of proof required to reject this hypothesis should be greater than the degree of proof required to list a water body when nothing is known about the water quality to begin with.	This is true. Using the balanced error approach, the delisting requirements are not more rigorous by design so the burden of proof is equivalent. The Policy uses a statistical procedure to judge with a prescribed level of confidence and power when observed exceedances in water quality samples trigger the need to delist a water body. 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.	Yes
319.7	Add the following language in quotes to Section 4: If objectives or standards have been revised and 'it is demonstrated that' the site or water meets 'the new' water quality standards or 'objectives', the water segment shall be removed from the section 303(d) list. The listing of a segment shall be reevaluated if the water quality standard has been changed 'and data and information are provided to demonstrate that the new standard or objective is not exceeded. Such data and information shall be independent of the data and information used to make the original listing decision, and shall be spatially representative of the water body, and temporally representative over a period of at least three years; and shall otherwise meet or exceed the data and related standards set forth in this Policy for listing of waters.'	This change is unnecessary. The Policy adheres to federal regulation by requiring that all data and information to be used in the listing assessment. Data and information will be measured against the existing water quality standard unless the data are deemed not valid, all data and information should be used in the assessment. Additionally, requirements as to the quality of the data already exist in the Policy.	No
Draft Final Policy, Section 4.11: Situation-Specific Weight of Evidence Delisting Factor			
308.28, 314.32	The situation-specific weight of evidence procedure is a delisting concern as well. The concern is that it is harder to prove a positive under this scenario, rather than a negative. For example, a water can be listed using the situation-specific weight of evidence factor even when multiple lines of evidence show	Comment acknowledged.	No

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	that the water is not impaired (i.e. When all other Listing Factors do not result in the listing of a water segment) It is simple to say that one line of evidence may point to impairment, and therefore the water should be listed in this instance. However, the corollary, when all other delisting factors do not result in the delisting of a water segment, is much more difficult to prove. In such a situation, the burden of proof is to show that the listing data are faulty, rather than determining that the water body may be clean.		
319.27	The alternative data analysis process for delisting should be modified to ensure that greater care is taken in delisting what has been already characterized as an impaired water body.	As it does for listing, the Situation-Specific Weight of Evidence Delisting Factor provides the RWQCBs an alternative methodology to delist water bodies when data and information demonstrate that a water quality standard is attained but the Delisting Factors do not result in the delisting of the water body. This section provides flexibility to the RWQCBs but, at the same time, requires that the documentation used to make a listing decision via this factor be documented in the fact sheets and the data and information used become a part of the record. In this manner, transparency in decision-making is preserved.	No

Draft Final Policy, Section 5: TMDL Scheduling

307.20, 308.31, 311.3, 323.3	The Policy does not provide for a means of establishing a priority ranking for listed water bodies as required under CWA Section 303(d)(1)(A). The proposed alternative approach produces a numerical 'Pollutant Severity Score' that can be used to produce a priority ranking for Section 303(d)-listed water bodies.	The Policy adheres to the priority ranking requirements of CWA section 303(d)(1)(A) by following USEPA listing guidance (USEPA, 2003b) to require the establishment of a schedule for TMDL development and let the schedule reflect the States priority ranking.	No
318.22	Section 5 of the Draft Policy states that a schedule shall be established by the RWQCBs and SWRCB for waters on the section 303(d) list that identifies the TMDLs that will be established within the current listing cycle and the number of TMDLs scheduled to be developed thereafter. The last sentence of Section 5 however contradicts this by specifying that all water body pollutant combinations on the section 303(d) list shall be assigned a TMDL schedule date. It is unclear in the policy whether or not all listings require a TMDL completion date. Recommendations: Section 5 of the Draft Policy should be revised to be consistent with the SWRCB's intent regarding establishment of the TMDL schedule. CASA and Tri-TAC recommends that the schedule include only the TMDLs that will be established within the current listing cycle, due to the need for administrative flexibility to make adjustments in the schedule as circumstances and resources change.	Currently federal regulation requires a schedule for developing TMDLs in the next two-years. The Policy includes requirements to schedule for TMDLs that will be developed within the current listing cycle plus the TMDLs scheduled to be developed thereafter. USEPA guidance (2003b) recommended schedules no longer than 8 to 13 years. However, since resource allotments cannot be predicted more than one or two years into the future, schedule dates beyond two years should be considered estimates.	No

Draft Final Policy, Section 6: Policy Implementation

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
318.26	<p>The Draft Listing Policy is inconsistent regarding the approval of listing/delisting decisions. (A-38). New language has been added to Section 1 of the Listing Policy regarding approval of decisions to list or delist a water segment. (Step No. 3 on p. A-2). The Draft Policy provides that 'RWQCBs shall approve all decisions to list or delist a water segment (section 6.2).' However Sections 6.2 and 6.3 (p. A-38) indicate that the Regional Board's listing decisions are recommendations only, and that all final listing decisions are subject to SWRCB approval, prior to submission to USEPA for final approval. The sentence on page A-2 regarding Regional Board approval should be removed or altered to reflect that approval of the 303(d) list is to be performed by the SWRCB. (A-2, A-38)</p>	<p>The RWQCBs approval process refers to approval of all decisions to list or delist water body segments within their own regions. These approved regional lists form the basis for the consolidated statewide section 303(d) list. The SWRCB approval process pertains to a final evaluation of the regional approved lists for completeness, consistency with the Policy and consistency with applicable law. After this evaluation, the SWRCB assembles all regional lists into one statewide section 303(d) list, holds a public workshop to provided further opportunities for public comment and makes additional changes to the statewide list as deemed necessary. The final completed statewide list is then approved by the SWRCB for submittal to USEPA for approval.</p>	No
<h3>Draft Final Policy, Section 6.1: Process for Evaluation of Readily Available Data and Information</h3>			
303.3	<p>Section 6.1 describes the Process for Evaluation of Readily Available Data and Information. The draft final document has added Municipal Separate Storm Sewer System (MS4) reports under Definition of Readily Available Data and Information. We strongly recommend additional clarifying language regarding types of MS4 data that are acceptable in the 305(b) and 303(d) processes. Currently, municipal stormwater programs are required to compare their monitoring data to water quality objectives. These data include land use, mass emission, wet and dry weather receiving water, and BMP effectiveness monitoring. As a relative comparison exercise, this is not too objectionable; however, as a potential basis for future TMDLs, the use of these data is inappropriate and unacceptable.</p>	<p>The SWRCB is compelled by federal regulation to consider all readily available data and information when making listing and delistings decisions. The Municipal Separate Storm Sewer System reports provide an important and relatively new source of data and information that should be used. Some the information in these reports may not be useful for section 303(d) purposes but much of the data will be applicable, especially ambient water quality measurements.</p>	No
308.21	<p>This section should be revised to acknowledge that review of 'historical listings' do not require the number of samples - - that waters should be assessed as if they had never been listed before to determine whether this historical listing was appropriate.</p>	Comment acknowledged.	No
308.9, 310.6, 312.9, 317.2, 318.9	<p>The 303(d) list is designed to identify waters that require a TMDL. TMDLs are not the appropriate mechanism for addressing waters that are impaired due to natural background conditions or physical alterations that cannot be controlled. Although it is possible that the State Board will propose, in its draft 'Water Quality Control Policy for Addressing Impaired Waters: Regulatory Structure and Options' (see www.swrcb.ca.gov/tmdl/docs/impaired_waters_policy.pdf), that the solution for these types of waters is to change the applicable water quality standard, that document has not been approved. Moreover, neither the State nor Regional Boards have committed to address these water quality standards situations in a comprehensive and expedited fashion, and it is inappropriate to allow such listings to occur irrespective of the circumstances, since an effective TMDL cannot be developed.</p>	<p>For the most part, Basin Plans address pollutants that exceed water quality objectives due to conditions that are naturally occurring but there are exceptions. Since the Listing Policy is focused specifically on the methodology for completion of the section 303(d) list, it is beyond the scope of the policy to exclude waters from listing that are due exclusively to natural sources.</p>	No

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315.5	The current Listing Policy suggests a significant increase in the level of scrutiny provided to data and the amount of documentation that must be provided by the Regions. Also, the data requirements for application of the binomial method based listing factors are not consistent those achieved with current funding of the Surface Water Ambient Monitoring Program. Since the Regions use TMDL resources to conduct listing efforts, any significant increase in the 303(d) assessment process could undermine or delay TMDL development and implementation efforts. Consequently, we expect the State Board will grant some latitude and consider resource limitations in its direction for and review of Regional Board implementation of the Listing Policy.	Comment acknowledged.	No
316.29, 316.30	In the associated July 2004 response to comment, the SWRCB indicated that applications for re-evaluation of an existing impairment listing is possible during each listing cycle, whether new data is available or not (page B-103). It is assumed that this re-evaluation, therefore, could include re-evaluation of older listings. Upon closer examination of the Final Draft document, however, the exact process and timeframe for re-evaluation of older listings becomes unclear. As written, unless a case for faulty data, or improper quality assurance/quality control, or limitations related to analytical methods could be made, or if associated standards have changed, one might have to perform the reassessment using delisting factors of the Listing Policy and the burden of the analysis would be placed on the applicant.	In order to remove a water from the section 303(d) list, the delisting factors must be used.	No

Draft Final Policy, Section 6.1.2: Administration of the Listing Process

319.38	Add the following language in quotes to section 6.1.2: Though the SWRCB and RWQCBs must specifically solicit all readily available data and assessment information, SWRCB and RWQCB may place emphasis in the solicitation on the data and information generated since the last listing cycle. For the purposes of this solicitation, information means any documentation, 'or citation to such documentation,' describing the water quality condition of a surface water body. Data are considered a subset of information that consists of reports detailing measurements of specific environmental characteristics. The data and information may pertain to physical, chemical, and/or biological conditions of the State's waters or watersheds. 'Each RWQCB and the SWRCB shall document its methods and sources for soliciting existing and readily available data and information.'	The SWRCB and RWQCBs are required to solicit all readily available data and assessment information. Once assembled, the Policy provides guidance on assessing the adequacy of the data and information. A 'citation' to a document would not be considered adequate as staff would have no means to assess the adequacy of the documentation. This would create additional burden on staff to track down references to data. The propose of the solicitation process is to form the record for listing decisions. Just requiring a reference would not further this purpose. Documenting process is an additional work load without substantial benefit.	No
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Draft Final Policy, Section 6.1.2.1: Solicitation of All Readily Available Data and Information

307.22	Concerned that the proposed Policy creates public participation expectations that may discourage public input to the process and conflict with federal requirements. Members of the public may be less willing to submit data and	Absolutely all readily available data and information will be considered in developing the section 303(d) list.	No
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COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
<p>information for consideration in the assessment process if they must also provide detailed quality assurance information and assessment recommendations. In many cases useful data and information are contained in reliable information sources such as journals and agency reports that should be considered even if QA/QC information is not fully available to the submitter. The State is required to consider any data and information submitted, even if quality assurance information and assessment recommendations are not provided (40 CFR 130.7(b)(5)).</p>			
<p>Draft Final Policy, Section 6.1.2.2: RWQCB Fact Sheet Preparation</p>			
307.21	<p>Documentation Needed For All Assessed Waters: We support the proposal to require development of water body-specific fact sheets to support assessment determinations. As drafted, the Proposal appears to require fact sheet preparation only for waters that are being newly listed or delisted (Section 6.1.2.2). The State must prepare documentation demonstrating how data and information for all waters was considered in the assessment process, even in cases where the waters in question are not proposed for listing or delisting (40 CFR 130.7(b)(6)).</p>	Comment acknowledged.	No
312.12	<p>A consistent complaint with early 303(d) listing episodes is inability of the regulated community to identify the source of impairment data, which therefore impedes the source control and delisting process. The justification or rationale referenced in the Fact Sheet or staff report should be included for stakeholder review and made a part of the record. This would also facilitate data collection for future reviews by all of the involved groups.</p>	All data and information will be a part of the record.	No
<p>Draft Final Policy, Section 6.1.3: Evaluation Guideline Selection Process</p>			
316.24, 316.27, 318.12	<p>Another key part of the problem with this approach is that guidelines are not legally adopted water quality objectives and therefore have not undergone the public review and comment to determine if they are appropriate based on Water Code §13241 and 13242, factors which balance the proposed standards with other factors such as economics and the need for recycled water. The City is often blindsided by new studies referenced at each listing cycle, disrupting approved work plans and projects. Therefore, recommend increased stakeholder review and comment of those guidelines when applied locally, including promulgation and documentation of numeric guidelines in Basin Plans. This will ensure transparency in the listing process, resulting in the fair and cost-effective application of numeric guidelines and references.</p>	<p>The Policy provides guidance on the use of evaluation guidelines that represent standards attainment or beneficial use attainment. Promulgation and documentation of evaluation guidelines within the Basin Plans are beyond the scope of the Policy. Justification for the evaluation guideline must be presented in the fact sheet.</p>	No
316.25	<p>Past experience indicates that guidelines sometimes are applied inappropriately to local conditions, with justification rationale such as, 'this is the most</p>	<p>The Policy provides criteria to follow in the selection of evaluation guidelines (Section 6.1.3). Additionally, the RWQCBs must reference the evaluation</p>	No

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	protective or stringent guideline' or 'this is the best available reference water body.' Comments have been provided on the variation of circulation patterns, as well as tidal activity, water body structure, water use, climate, etc., but the guidelines or references are applied locally with no adjustment. Therefore, recommend that not only the justification rationale be referenced in the Fact Sheet, but also that it be included for stakeholder review along with the Fact Sheet. In addition, 'best available' or 'most stringent' should not be considered an acceptable justification rationale for local application.	guideline in the water body fact sheet and include the documentation in the listings submitted to the SWRCB. All documentation included in a listing decision is subject to public review during the public comment period.	
319.39	Add the following language in quotes to the first paragraph in section 6.1.3: Narrative water quality objectives shall be evaluated using 'interpretive' evaluation guidelines. When evaluating narrative water quality objectives or beneficial use protection, RWQCBs and SWRCB shall identify evaluation guidelines that represent standards attainment or beneficial use protection. The guidelines are not water quality objectives and shall only be used for the purpose of developing the section 303(d) list. 'If appropriate evaluation guidelines cannot be identified or if evaluation guidelines do not result in listing in waters where some data indicate impairment, other data or information may be used per section 3.1.11.'	The suggested revisions are unnecessary. The third bullet in the section provides guidance on the use of 'interpretive' evaluation guidelines. Additionally, it is already stated in section 3.1.11 that the purpose of this section is to provide another means to evaluate data and information.	No
Draft Final Policy, Section 6.1.4: Data Quality Assessment Process			
307.19	The Policy should be revised to authorize the listing of waters based solely on ancillary data and information sources that may not meet all of the proposed quality assurance expectations in Section 6.14, but which together satisfy a reasonable weight of evidence test demonstrating probable water quality threat or impairment. For example, available water quality data indicating high frequencies and magnitudes of water quality standards exceedances would likely provide a reliable basis for listing even if supporting quality assurance information is not perfect. It appears the Policy does not authorize listing in this type of situation case because no data are available that meet all of the proposed quality assurance tests.	As drafted, the Policy allows for the use of all data and information under the provisions of the site-specific weight of evidence listing and delisting factors.	No
308.32	Recommend that the Listing Policy establish that all data and information be evaluated and screened to ensure that only high quality data that are accurate and verifiable be used to make listing/de-listing determinations. Data of sub-standard quality should not be used to develop the 303(d) list. Quality assurance should be an overriding principle in the Policy, as it ensures a level of scientific rigor necessary for the listing process. Therefore, a data quality assessment should accompany all listing decisions, and should be presented in the fact sheets for the water segment.	While the Policy says that all data and information shall be used in the section 303(d) listing process, the data and information must still meet the data quality requirements as defined in the Policy unless it is determined that the data should be considered under the situation specific weight of evidence listing factor. If poor quality data are used then the rationale for its use will be described in fact sheets. A data quality assessment is required to be included in fact sheets.	No
312.6	If visual and semi-qualitative assessments for listing factors such as nuisance, adverse biological response, degradation of biological populations and	The Policy contains language that the data and information used to make decisions for certain listing factors (such as nuisance, adverse biological	No

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	communities, and bioaccumulation are accepted as ancillary lines of evidence' then steps should be taken to insure that they refer to quantifiable conditions in the reference condition.	response, and degradation of biological populations and communities), are compared to reference conditions (Sections 3.1.8, 3.1.9, 3.1.7).	
312.8, 314.37, 314.36, 314.35, 316.15, 318.23	In previous drafts of the Policy, the Regional and State Boards were able to exclude data that was older, or did not meet the quality assurance requirements established by the Listing Policy. The July 2004 Draft Policy provides in section 6.1.4 that, 'Even though all data and information must be used'.... (A-31). Use of the word 'used' implies that Regional Boards must include all information in their listing/delisting decisions. In addition, Section 6.1.4 of the current draft Policy specifies that '[a]ll' data of whatever quality can be used as part of a weight of evidence determination (sections 3.1.11 or 4.11).' The commenter recommends that the Listing Policy establish that all data and information be evaluated and screened to ensure that only high quality data that are accurate and verifiable be used to make listing/delisting determinations. Data of sub-standard quality should not be used to develop the 303(d) list. Quality assurance should be an overriding principle in the Policy, as it ensures a level of scientific rigor necessary for the listing process. Therefore, a data quality assessment should accompany all listing decisions, and should be presented in the fact sheets for the water segment.	During the data and information solicitation phase, the SWRCB and RWQCBs would simultaneously actively solicit all readily available data and assessment information on the quality of the surface waters of the state. The solicitation would focus on absolutely all data and information that might be available. Readily available data and information would include information from any interested party, including but not limited to: private citizens; public agencies; State and federal governmental agencies; nonprofit organizations; and businesses possessing data and information regarding the quality of a region's waters. All data and information received by the SWRCB and the RWQCBs during the solicitation period will be subjected to a data quality assessment process to determine its quality. Data supported by a Quality Assurance Project Plan or equivalent programs or generated by well-established major monitoring programs would be considered credible and relevant for listing purposes. Data considered of less rigorous quality can also be used but only when in combination with high quality data and information. Less rigorous data and information would not be used by itself to support a listing.	No
322.7	Data must be demonstrably credible and the listing of waters as impaired based upon less than credible science wastes scarce resources and results in the public perception that our environment is in much worse condition than it actually is. The 303(d) listing process has been loosely interpreted over the past decades, resulting in far too many listings with very little data on file to substantiate why the listing occurred. In a state in such dire financial straits, credible data quality requirements is not only good public policy, it is good fiscal policy.	Comment acknowledged.	No
Draft Final Policy, Section 6.1.5: Data Quantity Assessment Process			
314.5	Many of the changes that have been made actually result in an approach that will not necessarily be technically sound. In fact, the Draft Listing Policy now specifically states that 'Before determining if water quality standards are exceeded, RWQCB's have wide discretion establishing how data and information are to be evaluated, including the flexibility to establish water segmentation, as well as the scale of spatial and temporal data and information that are to be reviewed.' (Draft Listing Policy, pg. A-33) We believe that this 'wide discretion' is exactly what the policy was being designed to avoid -- water segments listed in an inconsistent and subjective manner, employing a wide variety of assessment methodologies, sometimes resulting in listings made with minimal, and/or non-representative data.	The Policy does provide the RWQCBs with discretion in the Data Quantity Assessment Process (section 6.1.5). However, in subsections 6.1.5.1 - 6.1.5.9 the Policy provides guidance on the factors to be considered in this determination. Furthermore, the Policy requires that these considerations are documented in the water body fact sheet. In this way, the basis for a decision is subject to public and agency review.	No

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Draft Final Policy, Section 6.1.5.2: Spatial Representation

312.10	The listing Policy seems to infer that measurements from one reach section can be used to list an entire segment. In some cases, this is unnecessarily broad and could be due to habitat or specific discharge issues. In these cases it would be more appropriate to address the specific problem rather than an entire reach consisting of many stream miles.	Samples should be representative of the water body segment or portion of the segment. Samples should be collected in a manner that characterizes the water being considered for listing. Guidance is provided to require that spatial independence of samples is maintained.	No
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Draft Final Policy, Section 6.1.5.3: Temporal Representation

308.33, 314.4, 314.6, 316.23, 318.24	The Policy should require that older data must be supplemented with newer data for listing purposes. With the removal of requirements regarding the age of data, the Policy potentially allows listings to be made based on data that is likely not reflective of current conditions. Although the current draft allows older data (no age specified) to be discarded from the evaluation if new facilities and management practices have been implemented that resulted in a change in the water segment (See, Section 6.1.5.3), absent specific information regarding facilities and management actions, it is assumed that water body conditions have not changed. In addition, some older data may be of lower quality as compared to more recent data, due to improvements in field and analytical methods, such as clean sampling procedures.	The data age requirements were deleted from the Policy to encourage the RWQCBs to consider all data and information. The important aspect of data is its relevance to describing current conditions of the water quality segment. For some water bodies only older data are available. However, even older data must meet the data quality requirements as defined in the Policy.	No
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308.34, 314.1, 314.38, 316.16, 318.25	Originally, the draft Policy provided that, 'Samples shall be collected to be representative of temporal characteristics of the water body.' In the July 2004 Draft of the Policy, the language of this section was changed. To say that 'Samples should be representative of the critical timing that the pollutant is expected to impact the water body'. It is unclear what the SWRCB means by this statement. (A-34). The commenter strongly recommend that this section be modified. The first sentence of section 6.1.5.3 should revert back to wording contained in the December 2003 Draft. This section already included language that requires that critical conditions be appropriately represented in the data set with the statement, 'Timing of the sampling should include the critical season for the pollutant and applicable water quality standard.' (A-34) Also strongly recommend that the policy include specific language in this section regarding the application of water quality objectives as appropriate for seasonal conditions. Chronic water quality criteria should not be used to determine water quality standards attainment during conditions where chronic exposure is not experienced (i.e., during storms and floods).	The goal is to determine whether water quality standards are being attained in a specific water segment. In some cases, exceedances of water quality standards will only occur during specific critical times during the year. Data and information to determine water quality impacts should be as representative as possible of true conditions. If historical data and information shows that water quality standards are exceeded during particular events or seasons, then the assessment should be limited to that critical period.	No
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310.5	It is recommended that when data used to list a water body indicates that the impairment occurs only during specific wet or dry seasonal weather conditions, the listing on the 303(d) list should specify season or condition (such as wet/dry season, storm flow/dry flow conditions) for which the listing applies.	The Policy outlines the information that will appear in the water body fact sheet (section 6.1.2.2). Included in the summary of data and information is information on temporal representation including seasonal conditions.	No
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316.21	Incorporate EPA Trend Guidance - EPA Guidance requires listing of waters that will exceed the associated standard before the next listing cycle. This statement should be included in the Listing Policy. (Section 6.1.5.3).	Assessment of declining trends in water quality is addressed in Section 3.1.10 (Trends in Water Quality) and the statement is included in that section.	No

Draft Final Policy, Section 6.1.5.5: Quantitation of Chemical Concentrations

314.39, 314.40	NPDES monitoring conducted using QLs that are higher than water quality objectives are conducted in accordance with permit provisions using EPA-approved methods and in accordance with the QLs in the State Implementation Policy or Ocean Plan, and as such should not be simply ignored and discarded from the data set. The QLs identified in these documents are based on the best available technology, and the discharger conducting monitoring under these conditions is determined not to be out of compliance. During the evaluation of these data in reasonable potential analyses, this condition results in the determination that there is not sufficient information to determine that effluent limitations are necessary. Under this scenario, dischargers are required to conduct additional monitoring and are required to describe actions undertaken to achieve lower QLs during the permit period.	QLs are not ignored in the Policy but rather are addressed simply by consideration of magnitude of the water quality criterion or objective and the usefulness using the binomial test. The reasonable potential analysis is used for another purpose other than the section 303(d) list. Likewise, permit compliance is governed by different rules than the development of the section 303(d) list.	No
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Draft Final Policy, Section 6.1.5.7: Binomial Model Statistical Evaluation

307.12	For a binomial statistical test to yield valid inferences in support of a water quality assessment, the evaluated data sets need to be closely examined to ensure that samples are independent and do not exhibit autocorrelation or serial correlation characteristics. Data collected through many monitoring programs does not meet these tests. The draft Policy does not recognize these limitations to the valid application of the binomial approach. As a result of these deficiencies, the draft Policy would likely result in inaccurate assessments and the failure to include on the Section 303(d) list large numbers of waters and pollutants that are reasonably likely to exceed applicable water quality standards.	The Policy recognizes that data autocorrelation may influence the size of the actual alpha value used. This is why where samples are collected close together in time or space it is necessary to average the values. This averaging will likely reduce the impacts of data that are not independent. If data remain highly autocorrelated this issue should be addressed during data analysis and fact sheet preparation (perhaps by using the approaches suggested in USEPA (2002a)).	No
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Draft Final Policy, Section 6.2: RWQCB Approval

315.6	The Listing Policy calls for Regional Boards to provide written responses to all comments. This will be problematic if written responses are required for oral comments received at the Regional Board meeting, or for written comments received at the last minute. This would require two meetings before a Regional Board can act on its listing recommendations, one to receive testimony and one to take action with no further testimony. This is contrary to normal Regional Board meeting procedures, and due to Regional Board meeting frequencies and constraints, two meetings would add an additional month to the process. This would not be necessary if written responses will only be required for written	The response to comments is needed for the SWRCB approval process. RWQCBs should follow the existing meeting practices when the list recommendations are approved and forwarded to SWRCB. Response to comments can be completed after RWQCB action. This is allowed because RWQCBs are only required to approve listing decisions not the supporting information.	No
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	comments received in a timely matter in accordance with a public notice for a hearing, the Regional Board need not consider last minute written comments, and oral comments require only oral responses.		

Draft Final Policy, Section 6.3: SWRCB Approval

307.23, 308.36, 314.41, 314.42, 317.7, 318.27	<p>The July 2004 Draft Policy restricts input at the State Board level to issues brought up to the Regional Boards. However, the State Board, on its own notion, can change a listing decision. There currently is no avenue for comment on these changes unless they have been addressed the Regional Board level. (A-38). Public comment should be allowed at the State Board level when the State Board decides, on its own motion, to change a listing decision.</p> <p>The Draft Policy should be revised to allow public comments (both written and at any public hearing before the State Board) on proposed listing or delisting decisions where the State Board takes up its own motion in either case. Further the Draft Policy should be revised to allow comments that might not have been provided at the Regional Board hearing on a proposed listing or delisting decision where such comments raise issues or provide information that was not reasonably available at the time the Regional Board considered the listing or delisting decision.</p>	The SWRCB approval process is the last stage of review, and final consolidation of a statewide section 303(d) list before the list is submitted to USEPA for approval. At this point, the SWRCB holds a public workshop that not only considers all issues raised before the RWQCB but also additional listings, delisting or changes that have been made by the SWRCB on its own motion. Prior to public workshop, the SWRCB will make available the consolidated section 303(d) statewide list with all addition, deletions or changes proposed by either the SWRCB or the RWQCBs for public review and comment. The public and interested parties will also have further opportunity to discuss the consolidated statewide list and any other issues related to the section 303(d) list at the SWRCB workshop. The Policy has been revised to more clearly reflect the public's right to comment.	Yes
308.35	The sentence on page A-2 regarding Regional Board approval should be removed or altered to reflect that approval of the 303(d) list is to be performed by the SWRCB.	During the data assessment step of the weight of evidence approach, decisions to list or delist a water segment are approved by the RWQCBs and a resolution is approved in support of their recommendations for the section 303(d) list. After approval, the RWQCBs submit their list changes to the SWRCB. The SWRCB approves the section 303(d) list and submits it and the supporting fact sheets to USEPA as required by the CWA. As discussed in section 6.3 of the Policy, SWRCB will approve the section 303(d) list before it is submitted to USEPA.	No
319.40	Add the following language in quotes to the last paragraph in section 6.3: Before the adoption of the section 303(d) list, the SWRCB shall hold a public workshop. Advance notice and opportunity for public comment shall be provided. Comments shall be limited to the issues raised before the RWQCBs. Requests for review of specific listing decisions must be submitted to the SWRCB within 30 days of the RWQCB's decision. The SWRCB shall consider changes only to waters that are requested for review unless the SWRCB, on its own motion, decides to consider recommendations on other waters. 'The SWRCB shall give substantial deference to the RWQCB on decisions made under the Weight of Evidence approach described in Section 3.1.11.' Subsequent to the workshop, the SWRCB shall approve the section 303(d) list at a Board Meeting. The approved section 303(d) list and the supporting fact sheets shall be submitted to USEPA for approval as required by the Clean Water	The Policy provides that SWRCB staff will evaluate RWQCB fact sheets for completeness, consistency with the Policy, and consistency with applicable law. Evaluation of RWQCB listing decisions will be performed as described in the Policy; 'substantial deference' to the RWQCBs would undermined the SWRCB's review role.	No

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	Act.		
Comment related to Policy Adoption Process Received After February 18, 2004			
319.12	In addition, the Draft Policy, FED and Response to Comments fail to comply with CEQA. In our February 18, 2004 comments we provided extensive detail on these failures. These have not been adequately addressed. The Draft Policy, FED and Response to Comments do not adequately identify, analyze or mitigate the numerous significant impacts of the Policy, as more specifically described in our first letter.	Comment acknowledged.	No
319.13	To the extent that comments made in our February 18, 2004 letter have not been addressed in this version of the Draft Policy, we incorporate by reference those comments.	Comment acknowledged.	No

Appendix B, Response to Comments, Table 2

304.2, 304.1, 305.2, 305.1	<p>Extensive concerns regarding application of the precautionary principle. Following are some of those concerns:</p> <ul style="list-style-type: none"> * The application of the principle encourages prohibitions or limitations on activity based on mere allegations of harm. * The principle does not allow consideration of benefits. * Evidentiary standards are not available for what type, quantity and quality of information would be required to assert a threat of harm or to prove that there is not a risk of harm (setting aside the impossibility of proving a negative in the first place). * Its application would create complete regulatory uncertainty for businesses. <p>Urge the State Board to direct Staff to delete the current response in Appendix B related to the precautionary principle. A response that explains why the Policy protects the environment and notes that the Legislature and the state Board have not set forth the precautionary principle as applicable policy in California would be appropriate.</p>	<p>The Precautionary Principle (PP) as described in the Rio Declaration is not the basis for the Listing Policy or the FED. The justifications for the various provisions of the Policy are contained in the issue papers presented in the FED.</p> <p>The CEC document provides one definition of PP and it is incidental that the provisions of the Policy coincide with the CEC document. The intent was to show that the Policy describes a process for listing that is taken in advance to protect against possible failure of making wrong decisions.</p> <p>The response to this comment is not implicitly or explicitly SWRCB policy. Any reference or interpretation to the contrary is not appropriate. Further, the response does not conflict or undermine any other CalEPA policy or guideline.</p>	No
316.26	The response to comment on Page B-111 of the FED indicates that Basin Plan review of guidelines used for the listing process is outside the scope of the Listing Policy. However, guidelines used in the Listing Policy have been transferred to associated TMDLs. The regulated community must then comply with these guidelines and, only at specified re-consideration dates, sometimes 4 to 5 years down the road, may they be reconsidered again. It seems as if these guidelines are being used as standards and should be formally addressed as such. Ideally, guidance and references applied to our local water bodies for a number of years should be subject to a full public review and	Evaluation guidelines used to interpret narrative water quality objectives must be referenced in the water body fact sheet. Additionally, this documentation must accompany the RWQCBs list submission to the SWRCB. Fact sheets and accompanying documentation are available for public review and comment during the public comment period for RWQCB approval of list changes and at the SWRCB hearing for approval of the list.	No

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	comment process at some point, ensuring that they are applicable to those water bodies. This type of review does take time, but it also allows the regulated community adequate time to plan for studies that may take several years to budget and complete, as well as time to plan and budget for future water body cleanup. In addition, this type of review allows the City's wastewater treatment plants and industrial dischargers enough time to comply with the guidelines, or unofficial standards, if they are transferred to an associated TMDL, as some have been.		
319.34	The State Must List Waters Impaired By Pollution. As staff stated in its Response to Comments, '[i]f a water body does not meet water quality standards it should be placed on the 303(d) list.' Despite this lucid and accurate articulation of the law, the Draft Policy continues to limit listing of impaired water segments only where the impairment is due to toxicity, a pollutant or pollutants. Water bodies that are impaired by any source of pollution must be listed. This position is supported both by the plain language of Section 303(d)(1)(A) and by legal opinions interpreting it, and has been supported by the Regional Boards as well in testimony and elsewhere. This position is also supported by the National Research Council, which found that the TMDL program 'should encompass all stressors, both pollutants and pollution, that determine the condition of the waterbody.' The NRC found this step to be important because 'activities that can overcome the effects of 'pollution' and bring about water body restoration such as habitat restoration and channel modification should not be excluded from consideration during TMDL plan implementation.'	Federal regulation limits the section 303(d) list to pollutants for which TMDLs can be developed.	No
Miscellaneous Comment Received After February 18, 2004			
302.1	Concerned the listing Policy proposed by the SWRCB will roll back critical protections for California's waterways and cause irreparable harm to human health and the environment.	Comment acknowledged.	No
307.1	The commenter has reviewed the draft final Water Quality Control Policy for developing the Clean Water Act Section 303(d) list, dated July 22, 2004. Although EPA is responsible for reviewing and acting upon State 303(d) listing decisions which will be based on an assessment methodology, we do not take formal action on the methodology itself.	Comment acknowledged.	No
307.2, 307.3, 307.4, 307.26	We share the State's goal to develop clear listing guidelines that will strengthen the water quality assessment process and promote statewide consistency in listing decisions. It is very important for the State to adopt assessment guidelines that will also result in listing decisions that EPA can fully approve. We are concerned that the draft final Policy is inconsistent with federal listing requirements and applicable California water quality standards, and would	The Policy is in compliance with federal listing requirements contained in CWA section 303(d) and 40 CFR 130.7. It is anticipated that there will be broad agreement between the State and USEPA on the vast majority of listing and delisting decisions.	No

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	therefore yield listing decisions that EPA cannot approve.		
307.5	We recognize and appreciate that the draft final Policy incorporates modifications that fully address several of our prior comments, including: -acknowledgement of the requirement that State staff must directly assemble available data and information, and not rely solely upon public data submissions, -deletion of minimum sample size requirements, -inclusion of provisions for listing based on ambient toxicity testing results regardless of whether the pollutants at issue have been identified, -deletion of natural source exclusion language, and -clarification of provisions concerning reliance on enforceable programs as a basis for not including impaired waters on the Section 303(d) list.	Comment acknowledged.	No
308.1	Urge the State to approve and adopt the Final Policy - - with the suggested changes below - - as soon as reasonably possible. As you know, the 2004 Section 303(d) List Update process is underway, and it is imperative that any future TMDL listing decisions be made using a consistent and objective set of guidelines.	Comment acknowledged.	No
309.2	The development of the draft 303(d) List Policy is by far one of the most important documents developed by the SWRCB in the past few years and it will be the first time the SWRCB has specific Policy guidance for local Regional Boards to follow and hopefully will ensure water body listings are done on a more consistent and technically sound basis.	Comment acknowledged.	No
309.3	Support and endorse the comments of the Regulatory Caucus of the AB982 PAG in full.	Comment acknowledged.	No
309.5	Urge the SWRCB to consider and incorporate our suggestions and urge the Board to formally adopt the final 303(d) list Policy as soon as reasonably possible, so that Regional Boards and the regulated community can immediately take advantage of the 303(d) Policy's criteria, guidance and objectives on water quality bodies and segments of concern.	Comment acknowledged.	No
312.15	Appreciate the opportunity to provide input on the 303(d) listing-delisting Policy.	Comment acknowledged.	No
313.7	The current draft of the policy represents solid progress in your effort to create a statistically sound framework for Section 303(d) listing and delisting decisions.	Comment acknowledged.	No
314.2, 322.4	Agrees with the detailed comments and recommendations provided by CASA and Tri-TAC. These recommendations restore some measure of consistency, predictability and technical merit and without them we see no improvement to the current process. This draft Policy is very discouraging after so much effort and hard work went into improving this process.	Comment acknowledged.	No

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314.3, 316.4, 318.2, 322.2	After reviewing the current draft of the listing Policy, many changes have occurred in the Policy. If considered separately these changes could be considered minor; however, when considered in total they tend to substantially reduce the scientific rigor of the listing policy. Unfortunately this reduction increases the potential for inconsistent application of the Listing Policy between regions and lowers confidence in the Listing Policy and impairment listings that might be generated by it. The responsible parties must rely on the correctness and importance of these listings in committing funds to remediate them.	Comment acknowledged.	No
314.43	We would like to thank the SWRCB for their hard work thus far in developing the Listing Policy. We continue to support the SWRCB in their goal to have the Policy in place before the next update of the 303(d) list is completed. The SWRCB needs to modify the current Draft Listing Policy, according to the recommendations outlined above, in order to re-instill the elements of consistency, transparency and scientific rigor that are necessary for a technically sound approach to development of the State's 303(d) list. Without these proposed changes, we are concerned that the end result will be similar to the subjective and variable approach that occurred in previous listing cycles.	Comment acknowledged.	No
315.1	Thank you for the opportunity to comment on the subject draft final Listing Policy. My comments reflect the views of the scientists and engineers who will be responsible for carrying the load of implementing the Listing Policy. We have provided specific recommendations and submitted comments over the more than two years that this policy has been in development. We appreciate that a number of our recommendations have been incorporated, however we still have concerns that reflect interpretation of listing policy provisions or our previous recommendations and comments that have not been accommodated.	Comment acknowledged.	No
316.1	Acknowledges the SWRCB and local RWQCBs for their joint effort to standardize the delisting and listing process by incorporating commonly accepted and reproducible scientific methodology in their process approach.	Comment acknowledged.	No
316.3	The Listing Policy is a cornerstone of the TMDL Program and an integral component. With a more transparent, accessible, and scientifically rigorous Listing Policy, public confidence in 303(d) Listings will improve, helping point local TMDL programs in a less contentious and productive direction.	Comment acknowledged.	No
316.35	Appreciates and thanks the SWRCB and its staff for the effort they have put forth in drafting the 303(d) Listing Policy and addressing previous issues that have been raised. Thank you for the opportunity to submit comments.	Comment acknowledged.	No
316.6	Agreed with and supported scientific provisions included in the December 2003 Draft Listing Policy. The provisions ensured pollutants would be identified prior to TMDL development. Supported the fact TMDLs cannot be completed without load or wasteload allocations, unless a pollutant is identified. Also	Comment acknowledged.	No

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	agreed that listings should be based on reasonable scientific measures, and subjective measures should not be the sole line of evidence. Therefore would like to see the science-based approach to impairment determinations restored to the Policy.		
319.10	We appreciate staff's responsiveness to many of the comments we submitted on prior iterations of the Policy. We particularly appreciate the changes that strengthen the 'weight of evidence' alternative data analysis and that add language emphasizing that all data can and must be considered in evaluating whether a water body is impaired.	Comment acknowledged.	No
319.11	<p>On February 18, 2004 we submitted extensive comments outlining serious problems with the initial version of the Draft Policy. While a number of those issues have been addressed in the current version, the document has significant remaining problems. In an effort to comment on this version as efficiently and effectively as possible, we have chosen to provide our comments in the form of line-edits to the Draft Policy itself. The major remaining concerns with the Draft Policy are specifically:</p> <ul style="list-style-type: none"> -The statistical technique used for listing waters is inappropriate. In particular, its application to toxicants is illegal; -The statistical technique used for delisting waters is not sufficiently rigorous and will result in numerous delistings of impaired waters and listing-delisting loops; -The 'Water Quality Limited Segments Being Addressed' section should be eliminated; -The state must list waters impaired by pollution; and -The Draft Policy's approach to beach water quality is deficient. 	The line-edits to the Draft Policy have been responded to individually.	No
322.1	Appreciates the opportunity to provide comments regarding the July 22, 2004 draft of the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Draft Listing Policy).	Comment acknowledged.	No
322.3	The purpose of the Listing Policy is to provide clear direction to the Regional Boards and the public with regard to how listing decisions are to be made throughout California. The July 2004 Draft Listing Policy falls well short of that goal.	Comment acknowledged.	No
322.6	Federal law and the Consolidated Assessment and Listing Methodology Guidance encourages states to develop reasonable data requirements that are rationally and technically sound.	Comment acknowledged.	No
323.1	Supports the State Water Board's goal to establish a standardized approach for developing California's Section 303(d) list. The process employed in developing the 2002 list was a vast improvement over the processes used in	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	<p>previous years. The commenter continues to provide general support for the development of the 303(d) Listing Policy, as represented by the July 2004 draft. In particular, the strengthened binomial distribution statistical approach is very good. However, in several important ways the July 2004 draft represents a weakening of the policy over that presented in previous versions. We are concerned that the cumulative effect of the revisions since the July 2004 draft has been to jeopardize the prior emphasis on establishing clear, objective, technically sound criteria for listing and delisting decisions. In particular, the loosening of the policy direction to the Regional Water Boards has weakened the policy.</p>		
323.4	<p>The scope of the July 2004 draft policy is overly ambitious and attempts to be too many things to too many stakeholders, resulting in a draft that unduly complicates the definition of a 303(d) list. The section 303(d) list is supposed to include: 1) water quality-limited segments, 2) associated pollutants, and 3) a priority ranking of the waters, including waters targeted for TMDL development in the next two year period. The current draft does not provide a methodology that meets even these basic criteria and yet the policy attempts to go beyond them by creating more than one category and subcategories of lists within the 303(d) list. These categories and subcategories belong in the State's Clean Water Act section 305(b) report. In fact, they are statutorily required under section 305(b). To avoid these regulatory mistakes and the impending confusion they will cause, the commenter recommends the following deletions and additions:</p> <ol style="list-style-type: none"> 1) Remove Toxicity from the Water Quality Limited Segments section (2.1). 2) Delete the 'Water Quality Limited Segments Being Addressed' section (2.2). 3) Make all necessary revisions to the rest of the draft policy so that all sections are consistent with this definition of the 303(d) list 4) Develop a 305(b) reporting policy that dovetails with the 'front-end' of the 303(d) listing policy and provides an appropriate regulatory home for many of the categories and subcategories of water segments that, under the current draft 303(d) listing policy, would be inappropriately lumped in the 303(d) lists. <p>4. Adopt a version of the draft Water Quality Control Policy for Addressing Impaired Waters that dovetails with the 'back-end' of the 303(d) listing policy. Again, this policy would provide a home for some of the categories and subcategories of water segments.</p> <p>Steps 3 and 4 have the added benefit of providing places for retaining the base of information on water segments established during the 2002 listing process.</p>	Comments acknowledged.	No
324.1	<p>When you are considering the listing/de-listing Policy, you should consider the Ag Waiver Program as well as Best Management Practices and the funding available. The Policy provides an opportunity to delist waters from the 303(d)</p>	Comment acknowledged.	No

COMMENT NUMBER	SUMMARY OF COMMENT	RESPONSE	REVISION
	List. The ability to delist waters may give people an incentive to voluntarily participate in the AG Waiver program in Region 3.		

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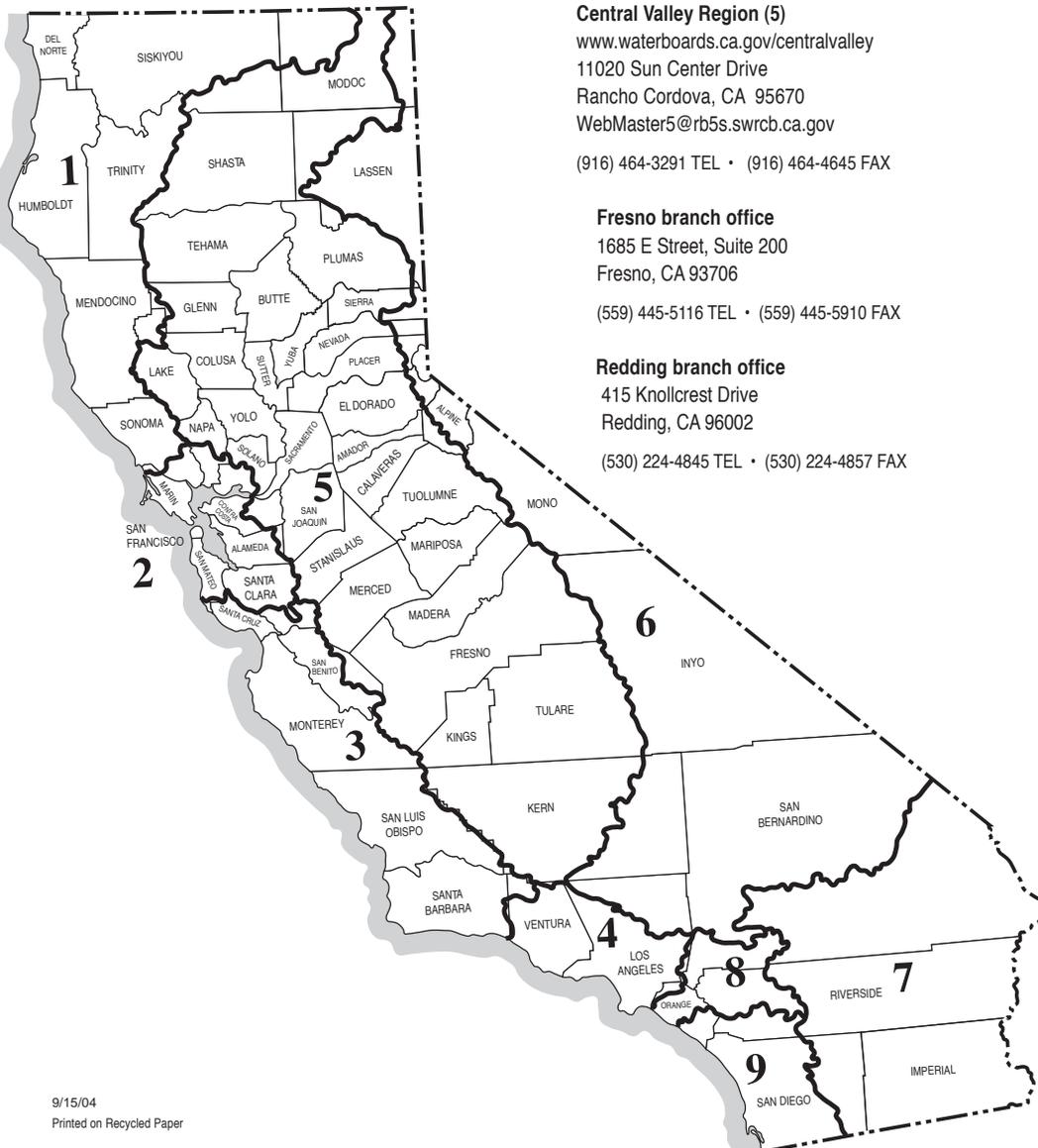
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