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August 25, 2004
File No: 31-370.40.4A

Via Electronic and U.S. Mail

Mr. Arthur G. Baggett, Jr., Chair and Members
State Water Resources Control Board
P.O. Box 100
Sacramento, CA 95812

Dear Chairman Baggett and Members of the Board:

Comments Regarding the State Water Resources Control Board's "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List and Draft Functional Equivalent Document" (Dated July 22, 2004)

The County Sanitation Districts of Los Angeles County (Districts) are pleased to provide you with comments regarding the State Water Resources Control Board's (SWRCB) draft "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List and Draft Functional Equivalent Document" (Dated July 22, 2004) (Draft Listing Policy and Draft FED). In addition to the comments contained herein, the Districts also endorse and incorporate by reference the comments being submitted on the Draft Listing Policy by the California Association of Sanitation Agencies (CASA) and Tri-TAC and by the Regulated Caucus of the AB 982 Public Advisory Group.

The Districts are a consortium of independent special districts serving the wastewater and solid waste management needs of over 5 million people and 3,300 industries in Los Angeles County, California. The Districts serve 78 cities and unincorporated areas within the County. We currently operate and maintain over 1,300 miles of trunk sewers and 11 wastewater treatment plants that collectively treat over 500 million gallons per day of wastewater. Of the 11 wastewater treatment plants, 7 discharge to inland surface waters, and 1 discharges to the Pacific Ocean (on the Palos Verdes Shelf). A number of these waters are listed on the 303(d) list for various constituents. The Districts have worked with the Los Angeles Regional Water Quality Control Board (Regional Board) and U.S. EPA (EPA) on several TMDL's affecting these waters.

In the past, the Districts have observed listings made using a variety of assessment methodologies, applying varying degrees of data quality and quantity thresholds, and utilizing various types of data, ranging from visual observations, to one-time studies, to water quality data from discharger monitoring reports. The Districts have also witnessed the evolution of the current Draft Listing Policy, and provided comments on the December 2003 Draft.

The Districts continue to endorse a standardized statewide approach to listing waters that balances environmental protection with technical and scientific integrity. We believe that the July 2004 Draft

Listing Policy, in its current form, is a step backward from the previous version, in terms of achieving scientific rigor and transparency in the listing/de-listing process. Many of the proposed revisions in the current draft, most notably in the areas concerning the California Listing Factors (Section 3) and Policy Implementation (Section 6), remove much of the rigor of the previous version, such as sound requirements for data quality and quantity assessment processes, and requirements that would have established consistent and statistically valid data evaluations.

While the Districts appreciate the time and effort that the SWRCB has dedicated towards development of the Draft Listing Policy, we believe that 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 is listings made with minimal, and/or non-representative data.

The Districts continue to strongly support the Draft Policy's 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. However, as indicated below, the Districts have additional specific comments that address several aspects of the Draft Listing Policy that we believe must be addressed to improve the technical validity of the Draft Listing Policy prior to its adoption by the SWRCB.

Districts' Specific Comments on the Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (Dated July 22, 2004)

***Description of Weight-of-Evidence Approach*. (§§1, 3)**

Issue: The December 2003 draft Policy's description of the weight-of-evidence approach addressed only the information gathering and evaluation process. There was no real definition or mention of what a weight-of-evidence approach means. Typically, the weight-of-evidence infers the highest quality data with highest endpoints provide the strongest link and gets the most weight, where other endpoints play an ancillary or supporting role.[1]

The previous draft of the Policy established factors whereby any listing based on numeric data typically required only a single line of evidence. Further, the previous draft established that listings based on more subjective information, or for certain listing factors (for example, adverse biological response or degradation of biological populations and communities), required at least two lines of evidence. The State Board received significant comments from the environmental advocacy community that the previous draft did not employ a weight-of-evidence approach, as required by law. The July 2004 Draft now includes a brief discussion of the weight-of-evidence approach to the Introduction to the Policy. In addition, the July 2004 draft contains a definition section, although the term "weight-of-evidence" is not defined in that section. (A-1 to A-2, A-11, A-19 to A-20, A-29, A-32)

Comments: Although the July 2004 Draft Policy includes a partial description of the weight of evidence approach, it is still not clear how it is to be applied when using qualitative assessments. Having a clear definition of the term "weight-of-evidence," and an explanation of how the weight-of-evidence approach is to be applied for each of the listing factors would provide better consistency and a greater understanding of the weight-of-evidence approach and how it is to be specifically used in the listing/delisting process. The Draft FED at page 53 contains the paragraph below. Language could be extracted from this paragraph and put into the definitions section or within the Section 4.11 on pages A-19 to A-20.

> "The expression "weight of evidence" describes whether the evidence in favor or against some hypothesis is more or less strong (Good, 1985). In general, components of the weight-of-evidence consist of the strength or persuasiveness of each measurement endpoint and the concurrence among various endpoints. Confidence in the measurement endpoints can vary depending on the type of quality of the data and information available or the manner in which the data and information is sued to determine impairment."

Further, the Policy needs to be clear that the "hypothesis" is that the waterbody is clean, if the waterbody is not currently listed, and that the waterbody is impaired, if currently listed.

Recommendations:

(1) The following definition of "weight-of-evidence approach" should be added to the Definitions section of the Policy:

> "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.

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[1] See, www.epa.gov/osp/features/EcoSedMtg/day%20two/frameworks/Holder%20EPA%20Presentation%206-4-

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.)

(2) The following text should 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):

"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:

i. Providing any data or information supporting the listing;
ii. Identifying the pollutant(s) being listed;
iii. Describing how the data or information affords a substantial basis in fact from which listing can reasonably be inferred;
iv. Demonstrating that the weight of evidence of the data and information indicate that the water quality standard is not attained; and
v. Demonstrating that the approach used is scientifically defensible and reproducible."

LISTING FACTORS

<u>Listings for Pollutants vs. Pollution.</u> **(§2.1; §§3.1.4, 3.1.7 – 3.1.9)**

Issue: The Draft Policy states that waters shall be placed on the "water quality limited segments" category of the section 303(d) list if is determined that the water quality standard is not attained; the standards nonattainment is due to toxicity, a pollutant, or pollutants; and remediation of the standards attainment problem requires one or more TMDLs. However, many of the listing factors included in Section 3 can be related to pollution. It is not clear whether the resulting listings would be for the <u>condition</u> of the water identified under those listing factors, or strictly for any pollutants identified as causing the condition. (A-3, A-6, A-7, A-8)

Comments: The Districts agree with the stated intent of the draft Policy in Section 2 to focus the 303(d) List on instances where standards non-attainment is due to a pollutant or pollutants[2]. However, the inclusion of listing factors in Section 3.1 of the draft Policy such as nuisance, health advisories, adverse biological response and degradation of biological populations and communities without clearly stating that those conditions will not themselves be listed is problematic. For example, adverse biological response may be due to physical habitat modification, over-fishing, or other factors not related to pollutants, and are therefore not appropriate for listing. The Draft Policy attempts to address this by requiring that impacts be "associated with" water, sediment, or tissue concentrations of pollutants. (*See, e.g.*, Sections 3.1.4, 3.1.8 and 3.1.9.) We believe that, in applying a weight-of-evidence approach, the Policy should clearly state that the water, tissue, or sediment concentrations of pollutants are the primary line of evidence, and factors such as health advisories, adverse biological response or degradation of biological populations and communities may be considered only as secondary or supporting lines of evidence, but that it is not appropriate to identify or rely primarily on these conditions for listing purposes.

Recommendations: The Draft Policy should clarify in Sections 3.1.4, 3.1.7, 3.1.8, and 3.1.9 that data

[2] We continue to disagree that waters should be listed for toxicity, which is an effect rather than a pollutant, as

and information that may be considered as ancillary lines of evidence under these listing factors will be considered through the weight of evidence approach, but that only the pollutants identified as being "associated with" such conditions or impacts will be included on the 303(d) list.

Placement and Removal of Segment/Pollutant Combinations. **(§2.2)**

Issue: The content of the "Water Quality Segments Being Addressed" category in the July 2004 Draft Policy is unclear. In the Draft Policy, a water segment with an approved TMDL implementation plan will still be listed in the Water Quality Limited Segments category until all TMDLs for the water segment are completed. (A-3)

Comments: It is not completely clear how water segments at various stages of the TMDL process are to be addressed under the Draft Listing Policy, or if waters that have been determined to meet water quality standards due to a TMDL or other program will have to go through a formal 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. In addition, the Districts believe the Draft Listing Policy should contain a specific provision whereby a water body that is shown to meet water quality standards may be removed from the 303(d) list at any point in the TMDL process. An example of the need for this provision in the Draft Listing Policy is where an adaptive TMDL is developed which is implemented over an extended period due to uncertainty with the success of iterative pollution reduction measures, but attainment is actually achieved early on in the schedule as a result of successful measures being implemented. Once the water body is in attainment, it does not make sense to carry out remaining portions of the TMDL. This could result in a waste of valuable resources for both dischargers and regulators. This situation exists in the Santa Clara River where a nitrogen TMDL became effective in March 2004, but because treatment modifications had already been implemented at the water reclamation plants which reduced nitrogen levels in treated effluent discharged to the river, the water body was in attainment with the applicable nitrogen standards shortly after the TMDL became effective. For this TMDL, there are still several years of special studies required to be conducted.

Recommendations: The Draft Policy should be revised to clarify how a water segment/pollutant combination is removed once water quality standards 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.

Natural Background Conditions and Physical Alterations. **(§3.1)**

Issue: Previous drafts of the Policy prohibited listing waters that were impaired solely due to natural background conditions, such as highly saline waters or high pathogen levels due to wildlife or sediment/soil contributions, or physical alterations, such as hydrologic modifications, that could not be controlled. The July 2004 Draft Policy specifically removed this prohibition and therefore would allow water segments to be listed regardless of natural background conditions or physical alterations that cannot be controlled.

Comments: The Draft Policy is silent on what mechanism would be used to address these types of "impairments". 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 the Districts' understanding 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 is a draft document that has not been approved. Moreover, neither the

to address these water quality standards situations in a comprehensive and expedited fashion. Furthermore, it is inappropriate to allow such listings to occur irrespective of the circumstances, since an effective TMDL cannot be developed to address these types of conditions. (A-5, A-35)

Recommendation: 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 attaining standards according to the listing factors, then that segment shall be listed as expeditiously as possible." This type of process will be much more efficient by allowing the efforts/resources to be dedicated where they are needed.

Use of Data Collected During Spill or Other Violation. **(§3.1)**

Issue: Prior drafts of the Policy excluded data collected during a known spill or violation. The Draft Policy 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.

Comments: The Districts object to the use of data collected during a known spill or violation of an effluent limit to be used in the listing process, because the purpose of the 303(d) list is to identify impaired waters that cannot be brought into compliance with water quality standards by other measures, such as permit provisions and enforcement orders. Furthermore, spills are generally anomalous, episodic events that are not representative of typical ambient conditions in the water segment. In addition, the language in Section 3.1 of the Draft Listing Policy is ambiguous as it relates to spills in that it does not define how much "non-spill" related data as compared to "spill" data is necessary for the listing determination.

Recommendations: The Districts strongly advocate 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 (i.e., the revised section 3.1 should read "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."). Alternatively, the Final Policy could be clarified to provide that, "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."

Use of Guidelines v. Legally Adopted WQOs. **(§§3.1.3 – 3.1.10)**

Issue: As with the previous draft of the Listing Policy, the current Draft Policy continues to allow the use of evaluation guidelines instead of adopted water quality standards as a basis for listing a water segment, as a means to interpret narrative objectives. Listing factors that may utilize these guidelines in the Policy include 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, as well as others. (A-6 through A-10)

Comments: The Districts continue to disagree with the SWRCB's reliance upon listing using guidelines that are not legally adopted water quality objectives, and therefore have not undergone the process for public review and comment, 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 State Board has attempted to address this concern by including a statement that, "The guidelines are not water quality objectives and shall only be used for the

However, any numeric values which are used as the basis for 303(d) listing are being used in exactly the same manner that adopted numeric water quality objectives would be used. In addition, there is no assurance that the same informal guidelines will not be used during the TMDL development process to set targets based on interpretation of narrative objectives, establish wasteload and load allocations, and subsequently, permit requirements.

Recommendations: The Districts recommend that the Draft Policy state that evaluation guidelines cannot be used to interpret narrative objectives in the listing process or in the development and implementation of TMDLs, unless they have been properly considered by the Regional Board through the adoption of a Basin Plan amendment (i.e., in accordance with the legally-required process described in the Water Code). If, however, the SWRCB chooses to allow these non-regulatory guidelines to be used for listing, the Regional Board should be required to articulate and disclose its rationale for use of the particular guideline, subject to public comment. We recommend the following revisions to 6.1.3, Evaluation Guideline Selection Process:

(1) Restore the deleted bullet that requires demonstration that the evaluation guideline is "previously used or specifically developed to assess water quality conditions of similar hydrographic units." (Page A-31).

(2) The final sentence of the section should be revised as follows: "justification for the alternate evaluation guidelines shall be ~~referenced~~ explained in the water body fact sheet and made available for public review and comment. (Page A-31).

Listing for Toxicity Alone. **(§3.1.6)**

Issue: The current 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)

Comments: The Districts have consistently objected to listings based on "toxicity" alone, without identification of the specific pollutant causing the toxicity, because until the cause of the toxicity is known, it will be impossible to develop an effective TMDL and implementation plan. The current Draft Listing Policy now states that if the cause of the toxicity is identified, the water segment should be listed for the cause during the next listing cycle; however specific language requiring the completion of studies identifying the pollutant prior to development of the TMDL has been removed from section 3.1.6 (A-7).

Recommendations: The SWRCB should restore language in the Policy that requires studies to identify the pollutant causing or contributing to the toxicity, prior to the development of the TMDL. The Districts strongly believe that the Draft Policy should focus on the identification of the pollutant or pollutants causing persistent toxicity, for which a TMDL can be developed and implemented. In addition, the language in the July 2004 Draft Policy seems to indicate that the segment would remain listed for both toxicity and the pollutant, once the pollutant is identified. The Draft Policy should be modified to clearly state that the listing shall be for the actual pollutant. In addition, the SWRCB should consider allowing an "administrative" modification to the initial toxicity listing once the specific pollutant is identified, instead of maintaining the listing for both toxicity and the pollutant until the next listing cycle. (A-7)

Conventional versus Toxic Pollutants. **(§§3.1.1 – 3.1.10)**

Issue: 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 label, "toxic pollutants" in the Draft Policy appears to encompass priority pollutants, metals, chlorine, nutrients, odor, trash, etc. "Toxicants" are defined in the policy as including "priority pollutants, metals, chlorine and nutrients" (A-10), whereas "Conventional Pollutants" are confined to include "dissolved oxygen, pH, and temperature." (A-5 through A-11; A-39 through A-40)

Comments: 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. (http://ecfr.gpoaccess.gov/cgi/t/text/textidx?c=ecfr&sid=0b620b61b8ce492aa672b698fc3cc753&rgn=div8&view=text&node=40:20.0.1.1.13.3.6.5&idno=40). EPA uses Group 1 and Group 2 pollutants to monitor the seriousness of violations. Reference to these groupings is also found in Water Code §13385(h) regarding minimum mandatory penalties. Group 1 violations are considered less toxic and typically include more conventional type pollutants such as BOD and suspended solids, whereas Group 2 are considered more toxic and includes constituents such as pesticides, organic chemicals and the more toxic metals. Based on the current draft, trash, sediment, and other constituents are considered toxic, which we believe is inappropriate based on the relative threat to the environment they pose.

Recommendations: 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, rather than handled as though they were toxic pollutants. (A-5 through A-11 and A-39 to A-40)

Minimum Number of Samples. **(§§3.1.1 – 3.1.3.1.6, 6.1.5)**

Issue: Section 6.2.5.5 of the December 2003 Draft Listing Policy, which contained minimum data requirements, has been removed from the July 2004 Draft. In the December 2003 Draft, a minimum of 10 to 20 temporally independent samples were required to place a waterbody on the 303(d) list. Fewer samples could be used on a case-by-case basis if standards were exceeded frequently. In the current Draft Listing Policy, a minimum of 3 samples exceeding water quality objectives are needed to list for toxicants in water, and 5 samples exceeding numeric water quality objectives are needed to list conventional pollutants. There is no minimum sample size required for either of these listing factors. In order to delist however, the minimum number of samples required is 21 for conventional pollutants and 26 for toxic pollutants.

Comments: The Districts believe that the removal of minimum data requirements from the Draft Listing Policy seriously undermines the scientific rigor that the Policy is otherwise attempting to establish. Elimination of the minimum sample size requirement, which could potentially lead to a water segment being listed using as few as 3 data points, allows for listings based on a data set that is unlikely to be representative of temporal and/or spatial conditions.

Recommendations: The Districts strongly recommend that the SWRCB reinstate section 6.2.5.5 of the previous version of the listing Policy, to require a minimum of 10 or 20 temporally independent samples for assessment purposes. Requirements for a larger body of data will more likely ensure that the temporal variability of the water segment is adequately characterized in the application of the weight of evidence approach advocated by the Draft Listing Policy.

Bioaccumulation. **(§3.1.5)**

Issue: In the December 2003 Draft of the Policy, the listing criteria for bioaccumulation in Aquatic Life Tissue were lower than those for numeric water quality criteria. Although the bar for listing in the current Draft of the Listing Policy is now equivalent to other constituents, listing can still occur based on a single line of evidence. (A-7)

Comments: 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.

Recommendations: The Districts recommend that this listing factor be modified to require application of a weight-of-evidence approach.

Nuisance Listings and Delisting. **(§3.1.7)**

Issue: In the December 2003 Draft of the Policy, a water segment could be listed for nuisances such as odor, taste, excessive algae growth, foam, turbidity, oil, trash and color after a qualitative visual assessment or other semi-quantitative assessment showed that an evaluation guideline associated with numeric data was exceeded. The exceedance rate was subject to the binomial distribution; however for non-nutrient related guidelines, a segment could be placed on the list if "there is a significant nuisance compared to reference conditions." The current draft removes the "visual" requirement and the semi-quantitative language. Waters can be placed on the Section 303(d) list for both nutrient related and other types of nuisances when a "significant nuisance condition exists as compared to reference conditions, or when nutrient concentrations cause or contribute to excessive algae growth." (Section 3.1.7.1).

Comments: There is no guidance contained in the July 2004 Draft Policy to assess what "significant" nuisance conditions are, or how it should be determined if nutrients are causing or contributing to the observed effect. The comparison of "significant" nuisance conditions and reference conditions may be highly subjective, especially absent numeric data and measurable requirements (*i.e.*, the binomial distribution) to show there is a real problem. All nuisance-related impairments should be tested against the binomial distribution method, including those where the nuisance is compared to background conditions. Absent this requirement, a water segment can be listed based upon a one-time event, if the water segment conditions differ from the chosen reference condition.

In addition, the Draft Policy provides no guidance regarding the methodology that should be employed to determine appropriate reference conditions to assess nuisance 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? This approach may also be problematic due to the fact that appropriate, comparable reference conditions may not exist for water segments that are highly modified. Comparison of a highly modified water body (for example, a fully concrete-lined channel) to a reference condition established for an un-lined channel may improperly lead to a determination that the water body is "impaired", when in fact the impairment may be solely due the limitation of the physical habitat, rather than the effect of a pollutant for which a TMDL can then be developed.

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 Districts recommend 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. The Districts concur with the stated intent of the Draft Policy in Section 2 to focus the 303(d) List on instances where standard non-attainment is due to a pollutant or pollutants, and in order to maintain that focus, we recommend that this listing factor be eliminated.

Degradation of Biological Populations and Communities. **(§3.1.9)**

Issue: Section 3.1.9 of the July 2004 Draft Policy requires listing "if the water segment exhibits significant degradation in biological populations and/or communities as compared to reference site(s) and is associated with water or sediment concentrations of pollutants including but not limited to chemical concentrations, temperature, dissolved oxygen and trash. This condition requires diminished numbers of species or individuals of a single species or other metrics when compared to reference site(s)." (A-9) In addition, section 3.1.9 provides that bioassessment analysis "should rely on measurements from at least two stations," but also that "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." (A-10)

Comments: As with the listing factors for nuisance and adverse biological response, it is unclear what degree of degradation, or difference from reference conditions is considered significant. In addition, several years of bioassessment data may be required to determine the amount of natural variability of a biological community within any particular site. Observed differences from reference conditions may also be due to physical habitat factors (and not concentrations of pollutants) or other factors such as the presence of an invasive species, that may not be adequately accounted for in an Index of Biotic Integrity, particularly for highly modified water segments. Comparison of a highly modified water body (for example, a fully concrete-lined channel) to a reference condition established for un-lined channels may improperly lead to a determination that the water body is "impaired", when in fact the impairment may be solely due the limitation of the physical habitat, rather than the effect of a pollutant for which a TMDL can then be developed.

Also, it is unclear if 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.

Recommendation: This provision in Section 3.1.9 should be clarified. 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 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.

Trends in Water Quality. **(§3.1.10)**

Issue: In previous drafts of the Policy, there was no timeframe as to when a WQO needed to be exceeded in order to list the water segment. A water segment could be listed regardless if it would be 2 years or 200 years before a WQO was exceeded. EPA guidance requires listing of waters that will exceed standards before the next listing cycle. (A-10)

Comment: Although the Regional Boards are now directed to assess whether the decline is expected to result in not meeting WQS before the next listing cycle, this step is not included in the decision factors. This section remains ambiguous and subjective.

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

water quality standards by the next listing cycle (step 6)." The sentence in Section 4.10 on page A-19 should be similarly edited. (A-10)

***Situation-Specific Weight of Evidence*. (§3.1.11)**

Issue: Section 3.1.11 of the Draft Policy states that "When all other Listing Factors do not result in the listing of a water segment but information indicates non-attainment of standards, a water segment shall be placed on the section 303(d) list if the weight of evidence demonstrates that a water quality standard is not attained." (pg. A-11) This approach is extremely subjective, and without additional definition, provides a listing methodology that circumvents other, more defined provisions of the Draft Policy and potentially undermines the scientific rigor and statewide consistency goals underlying development of this Listing Policy.

Comments: The Districts believe that this section is too subjective to result in valid listing decisions, without further definition of terms used. Without further description of the weight of evidence approach, and how it is to be implemented, and definition of the meaning of terms such as "substantial basis in fact", and "reasonably inferred," it is difficult to evaluate the validity of this listing factor. In addition, if all other listing factors do not result in the listing of a water segment, it is unclear how other information would indicate non-attainment of standards.

Further, the situation–specific weight of evidence procedure is a delisting concern as well. The concern is that it is harder to prove a positive (no impairment) under this scenario, rather than a negative (impairment). For example, a water can be listed using the situation-specific weight of evidence factor even when multiple lines of evidence show 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…," it 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 unimpaired.

Recommendations: Section 3.1.11should be removed entirely from the Policy as it undermines the scientific rigor the Policy otherwise achieves. The Districts 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." (Page A-11).

***Water Quality Standards Being Addressed.* (§3.2)**

Issue: In prior drafts of the Listing Policy, this section was called the "TMDLs Completed Category" and "Enforceable Programs Category." In the July 2004 Draft Policy, one of the conditions to be listed in this category refers to a draft document, "*Water Quality Control Policy for Addressing Impaired Waters*." (A-15) This draft document contains several basic statements on how to handle impaired waters, including:

- If the water body is neither impaired nor threatened, the appropriate regulatory response is to delist the water body.

- If the failure to attain standards is due to the fact that the applicable …

appropriate to natural conditions, an appropriate regulatory response is to correct the standards.

- The State Board and Regional Boards are responsible for the quality of all waters of the state, irrespective of the cause of the impairment. In addition, a TMDL must be calculated for impairments caused by certain EPA designated pollutants.

- Whether or not a TMDL calculation is required as described above, impaired waters will be corrected (and implementation plans crafted) using existing regulatory tools.

This document was out for public review in early 2004. Comments of the first draft have been received. A copy of that draft policy can be found at: www.swrcb.ca.gov/tmdl/docs/impaired_waters_policy.pdf. It is unknown when this document will be finalized. The final version of this document could have a significant impact on what waters are included in this category.

Comment: The Districts cannot provide more detailed comments about this issue until we know what will be recommended (and ultimately adopted) in that draft policy.

POLICY IMPLEMENTATION

Requirement That All Data Be Used and Modification of Quality Assurance Requirements. **(§6.1.4)**

Issue: 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)."

Comments: The Districts object to the requirement that all data and information be used to make determinations of water quality standards attainment. The Districts agree that any existing and readily available data and information should be evaluated and screened by the Regional and State Boards; however only high quality data should be retained for the purposes of the listing/de-listing process. At a minimum, the Listing Policy must include criteria to ensure that the data and information used are accurate and verifiable, as required by the 2001 Budget Act Supplemental Report. (*See,* FED at p. 53.) In addition, it should be made clear in this section, and not restricted to the Policy's discussion of temporal representation (Section 6.1.5.3), that historic data must not be used when there has been a change in water quality standards and/or a change in the water body segment, as a result of the implementation of a management measure.

The December 2003 Draft Policy provided that, "If the data collection and analysis is not supported by a QAPP (or equivalent) or if it is not possible to tell if the data collection and analysis was supported by a QAPP (or equivalent), then the data and information *cannot* be used by itself to support listing or delisting of a water segment." (*See,* p. A-32.) The current version, however, provides, "the data and information *should not* be used by itself to support listing or delisting...". This change appears to indicate that under certain circumstances, data of questionable quality has the potential to be used for listing/delisting purposes. In addition, the current Draft Policy notes that quality assurance assessments are only required for numeric data (*See,* Section 6.1.2.2 at p. A-29.) There are no requirements for non-numeric data to meet any quality assurance minimums. Data and information without accompanying quality assurance information should not be used for listing purposes.

Recommendations: The Districts recommend that the Listing Policy establish that all data and information be evaluated and screened to ensure that only relevant, high quality data that are accurate and verifiable be used to make listing/de-listing determinations. Historic data must not be used when there has been a change in water quality standards and/or a change in the water body segment, as a result of the implementation of a management measure. Data of sub-standard quality should not be used to develop the 303(d) list. The Districts also believe that 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.

Removal of Data Age Restriction. **(§6.1.5)**

Issue: Previous drafts of the Policy limited assessments to data collected within the previous 10 years, except on a case-by-case basis. In the current Draft Listing Policy, this section has been completely removed. The current Draft would allow older data to be used in a listing decision without necessarily having any more recent data available to confirm the recent status of the water segment. (A-33 and A-34)

Comments: 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.

Recommendations: The Districts strongly encourage the SWRCB to include the age of data requirement that was removed from the December 2003 Draft Policy (former Section 6.2.5.2). Data and information less than 10 years old should be more heavily weighted in determining water quality standards attainment. In addition, we recommend the following sentence be inserted as the second-to-last sentence in Section 6.1.5.3: "If the result of the management practice is not known, more recent data must augment the data collected prior to establishing the management practice."

Temporal Representation. **(§6.1.5.3)**

Issue: The December 2003 Draft Listing Policy specified 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. The Draft Policy now reads, "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)

Comments: Changes made to the draft Policy regarding temporal representation (Section 6.1.5.3) are unclear and need clarification. It appears by the language changes that the Draft Policy seeks to emphasize timing of sample collection during critical conditions. This would, however, seemingly contradict the subsequent statement that, "Samples used in the assessment must be temporally independent." If samples are taken to be representative of the water segment for conditions throughout the year, collecting samples to be representative of the critical condition would bias the data set towards an extreme condition that, by definition, represents a worst-case scenario of pollutant impact. However, if samples are collected in a manner that is truly temporally representative, it is reasonable to expect that critical conditions would be adequately captured.

Recommendations: The Districts strongly recommend that this section be modified.

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) The Districts also strongly recommend that the policy include specific language in this section regarding the application of water quality objectives as appropriate for seasonal/temporal conditions. For example, chronic water quality criteria should not be used to determine water quality standards attainment during conditions where chronic exposure may not be experienced (*i.e.*, during storms and floods). Samples taken during a storm event may initially show elevated levels of contaminants (i.e., a "first flush") which then rapidly decrease with time. However, these storm-induced exceedances of the chronic criteria by default are assumed to persist over the entire exposure interval (e.g., consistently over a 4-day period, which is the exposure period the chronic criteria is based on).

Quantitation of Chemical Concentrations **(§6.1.5.5)**

Issue: Section 6.1.5.5 of the Draft Listing Policy states that "When the sample value is less than the quantitation limit and the quantitation limit is greater than the water quality standard, objective, criterion, or evaluation guideline, the result shall not be used in the analysis." (A-35) The exclusion of data when the sample value is less than the quantitation limit (QL), and the QL is greater than the water quality objective, may in some cases significantly reduce the size of the data set available for evaluation, and could potentially result in the listing of water bodies when there would otherwise be sufficient data to show a listing is not warranted (i.e., in the same manner that the actual concentration may be higher than the QL, the actual concentration could also be lower).

Comments: 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.

Recommendations: The Districts recommend that the SWRCB require a minimum sample size, under which it may not be feasible or appropriate to determine either listing or delisting conditions. Listings based on small sample sets where data has been omitted due to QLs being higher than water quality objectives would not be based on accurate, representative and verifiable information, but rather these listings would be based on limited information, as there is not sufficient information to assess whether exceedances above the water quality objective exist. The Districts recommend that in situations where a water segment may be listed as a result of the loss of non-detect data where the QL is higher than the water quality objective, that the SWRCB invoke the weight of evidence approach to further evaluate these potential listings. As part of this weight of evidence approach, we recommend that statistical analysis be used to assign a concentration value to the non-detect data, to better approximate the value of the data based on the characteristics of the actual data set. This type of approach is consistent with what is being recommended by the SWRCB in the California Ocean Plan.

Public Input on State Board Initiated Changes to the Proposed List **(§6.3)**

Issue: 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 motion, can change a listing decision. There currently is no avenue for comment on these changes unless they have been addressed at the Regional Board level. (A-38)

Comment: Public comment should be allowed at the State Board level when the State Board decides, on its own motion, to change a listing decision. By the terms of such a procedure, if the State Board takes up such a listing decision on its own motion, the public will not have had an opportunity to provide comments. Additionally, commenters should be able to raise issues or provide information that was not available at the time the Regional Board considered the listing decision, if the issue or information is germane to the listing decision and could not have been made or provided to the Regional Board.

Recommendations: The Districts recommend that the Draft Policy 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.

Conclusions

In closing, 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 Districts believe that 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.

The Districts appreciate the opportunity to provide comments to the SWRCB regarding the Draft Listing Policy. If you have any questions regarding our comments, please contact Sharon Green or Heather Lamberson at (562) 699-7411.

Very truly yours,

James F. Stahl

Victoria O. Conway
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Technical Services Department

VOC:HL:drs

cc: Celeste Cantu, Executive Director
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