Enclosure 2:
Responsiveness Summary
EPA Decision Concerning California's 2002 CWA Section 303(d) List

Introduction

EPA partially approved and partially disapproved California's Section 303(d) list on June 5, 2003. EPA published a public notice of availability of its listing decision in the Federal Register on June 5, 2003 (68 FR p. 33693). EPA invited public comment on its decisions to disapprove California's decisions not to list certain waters and pollutants and identify these waters and pollutants for inclusion on California's list. EPA did not invite comment on its decisions to approve the State's decision to list waters and pollutants identified in the State listing submittal. EPA also posted the notice of availability and decision documents on its Region 9 web site. Decision documents were also available upon request to staff at Region 9.

EPA received comments from 20 parties in response to the public notice. Written comments were received from the following parties concerning the issues identified in parentheses:

1. City of Santa Rosa (Laguna de Santa Rosa)
2. State Water Resources Control Board (Laguna de Santa Rosa)
3. Brenda Adelman (Laguna de Santa Rosa)
4. WaterKeepers Northern California (multiple issues)
5. Campbell Timberland Management (North Coast temperature)
6. Ann Hernday (Laguna de Santa Rosa)
7. Jenny Blaker (Laguna de Santa Rosa)
8. Wendy Krupnick (Laguna de Santa Rosa)
9. Western Sonoma County Rural Alliance (Laguna de Santa Rosa)
10. Diane McColley (Laguna de Santa Rosa)
11. Western States Petroleum Association (multiple issues)
12. Russian Riverkeeper (Laguna de Santa Rosa)
13. Lynn Newton (Laguna de Santa Rosa)
14. San Francisco Public Utilities Commission (Lake Merced)
15. California Association of Sanitation Agencies and Tri-TAC (multiple issues)
16. The Ocean Conservancy (multiple issues)
17. California Forestry Association (North Coast temperature)
18. Sanitation Districts of Los Angeles County (San Gabriel River basin)
19. Russian River Watershed Council- Environmental Caucus (Laguna de Santa Rosa)
20. Audubon California, Mayacamas Mountains Audubon Sanctuary (Laguna de Santa Rosa)

This responsiveness summary contains summaries of comments received and EPA's responses to these comments. Because similar comments were made by many commenters, the responsiveness summary groups the comments and provides summary responses. Cross-cutting, general comments are addressed first, followed by comments concerning specific water body listings.

EPA is making no changes in its listing decisions based on comments received during the comment period. The final list being transmitted to California contains each of the waters and pollutants identified for listing by EPA on June 5, 2003.

General Comments and Responses

1. **EPA should not approve California's list because:**
    - **the State failed to include invasive species as required,**
    - **the State illegally removed waters from prior 303(d) lists,**
    - **the State failed to list San Francisco Bay for copper,**
    - **the State improperly lowered the priority ranking for San Francisco Bay dioxin TMDL development,**
    - **the State failed to list several Central Valley waters for temperature,**
    - **the State failed to list Smith Canal for PCBs,**
    - **the State's placement of waters on alternative lists is contrary to Clean Water Act requirements,**
    - **the State delisted portions of waters by redefining their sizes without providing adequate opportunities for public review and comment**
    - **the State improperly listed several North Coast rivers due to temperature impairment.**

Response: The comments address EPA's June 5, 2003 decision to partially approve California's listing submissions. EPA's partial approval decision was final on June 5, 2003, 2002, and we were not inviting public comment concerning that decision because the State had already provided opportunities for public review and comment on its listing decisions. EPA was inviting comment only on its decisions to disapprove California's failure to list specific waters and pollutants, and to identify those additional waters and pollutants for inclusion on the final 2002 Section 303(d) list. No response to the comments concerning the specific State listing decisions of concern to the commenters is necessary because those listing decisions were previously made and are not currently under consideration by EPA.

- **The commenters support EPA's additions to the list (comments 4 and 16).**

Response: We appreciate the comment.

- **The State's decision to include Humboldt Bay, Lake Merced, Chumash Creek, Llagas Creek, Los Osos Creek, Orcutt Solomon Creek, San Antonio Creek, Anaheim Bay, and Huntington Harbor on a monitoring list instead of the 303(d) list was reasonable and should be approved by EPA because EPA recognized the need to conduct additional monitoring of these waters prior to developing TMDLs. (comment 11)**

Response: The commenter provided no specific analysis supporting a conclusion that these waters attain applicable water quality standards for the pollutants listed by EPA. EPA's recommendation that additional monitoring is warranted prior to TMDL development was not

intended to suggest that insufficient data were available to support EPA's decisions to add these waters and pollutants to the 303(d) list. To the contrary, EPA added these waters to the list because we determined that the existing and readily available data demonstrated exceedance of the applicable water quality standards. EPA notes that additional monitoring is often needed to better characterize water quality conditions prior to developing TMDLs for listed waters.

- **We support EPA's approval of the State's development of a monitoring list.**

Response: EPA took no action on the State's decision to identify waters on a monitoring list, and EPA did add to the Section 303(d) list several waters and pollutants that the State had instead included on a monitoring list.

- **EPA should not list under Section 303(d) any waters that do not clearly require TMDLs because (1) the list determines where TMDLs will be developed and resources expended over the next several years and (2) inclusion on the list affects NPDES permitting decisions during the interim period between listing and TMDL development.**

Response: EPA added only those waters and pollutants for which available data and information support a determination that applicable water quality standards are not implemented. This is consistent with Section 303(d) of the Clean Water Act and the implementing regulations, which generally require the listing of waters that exceed applicable water quality standards. As noted above, in some situations, additional data or information may be needed subsequent to listing to confirm with certainty that a TMDL is required and/or to establish the needed TMDL. We note that EPA added a very small number of waters and pollutants to the State's list (26 new listings by EPA in comparison with 1855 listings made by the State). We also note that almost all the new EPA listings are ranked as low priorities for TMDL development. We disagree that the new EPA listing decisions will have a substantial impact on the State's investments in TMDL development over the next several years.

Section 303(d) listing decisions do not directly affect any discharger's rights or responsibilities and do not directly create substantial financial or social impacts. Inclusion of a water body on the Section 303(d) list indicates that existing and readily available data and information demonstrate that the water does not meet applicable water quality standards and that a TMDL must be developed for the water body in the future (unless it is later determined that the water meets water quality standards and no longer needs to be listed, or that another required pollutant control will result in timely attainment of water quality standards (see 40 CFR 130.7(b)(1)). But the listing of a water in and of itself does not adversely impact a discharger to that water. See, *Missouri Soybean Association v. U.S. EPA*, 289 F.3d 509, 512-13 (8th Cir., 2002) (challenge to EPA's approval of State's 303(d) list dismissed as not ripe; "MSA's complaint focuses on potential harm to its members resulting from stricter controls of the use of the challenged waters. More stringent controls on water use, however, will not occur until after TMDLs are developed and implemented. Even then, it remains uncertain whether TMDL development or regulatory implementation will adversely impact MSA's members." "We agree with the district court that until objectionable TMDLs are developed and implemented, 'MSA's claims of harm are too remote to be anything other than speculative' and are not ripe for judicial resolution.")

To the extent NPDES permits are considered for issuance in situations where a discharge to an impaired water is involved, federal regulations governing the NPDES permitting process (e.g. 40 CFR 122.4(i) and 122.44(d) establish specific requirements with regard to discharges to impaired waters. These requirements operate independent of the Section 303(d) listing status of a particular receiving water and require the permitting authority to consider a receiving water's attainment or nonattainment of water quality standards as part of the permit proceeding. The fact that a water body is listed pursuant to Section 303(d) does not supplant these regulatory requirements of the NPDES permitting process.

- **EPA should not list Humboldt Bay, Laguna de Santa Rosa, Calleguas Creek, Anaheim Bay, or Huntington Harbor based on interpretations of narrative water quality standards and application of non regulatory advisory criteria.**

Response: EPA disagrees. Federal regulations require that "For the purposes of listing waters under Section 130.7(b), the terms "water quality standard applicable to such waters" and "applicable water quality standards" refer to those water quality standards established under section 303 of the Act, including numeric criteria, narrative criteria, waterbody uses, and antidegradation requirements." (40 CFR 130.7(b)(3), emphasis added). The federal regulations clearly require States to identify waters on the Section 303(d) list if any component of the applicable water quality standards, including narrative criteria are not being implemented. The Supreme Court has recognized that a water quality standard includes the water's uses that are to be protected, and not only the criteria necessary to protect the uses. See: CWA, sec. 302(c)(2)(A); *PUD No. 1 of Jefferson County v. Washington Dept. of Ecology*, 511 U.S. 700 (1994) ("Section 303 of the Clean Water Act requires ... that such standards 'consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses.'" (emphasis added)); 40 CFR 130.7(c)(1) ("TMDLs must be established at levels necessary to attain and maintain the applicable narrative and numerical water quality standards ...." (emphasis added); and EPA, Notice of Final Rule, 54 Fed. Reg. 23868, 23875, 23876, 23882 (June 2, 1989) ("State narrative water quality criteria must be attained and maintained in the same way as all water quality criteria. Narrative water quality criteria have the same force of law as other water quality criteria ...."; "Narrative water quality criteria apply to all designated uses at all flows unless specified otherwise in a state's water quality standards."; and, with respect to narrative criteria's continuing force after numeric criteria are adopted, "EPA reiterates that section 301(b)(1)(C) requires that NPDES permits contain effluent limits that achieve narrative water quality criteria. This obligation applies regardless of whether or not a state has adopted a numeric water quality criterion for a pollutant of concern." (emphasis added)).

Numeric water quality standards supplement but do not replace narrative water quality standards, particularly in cases in which designated use impairments are associated with the presence of pollutants in other water body media (e.g. aquatic sediments and fish tissue) in addition to the water column. In these cases, limiting the assessment of water quality standards attainment to the analysis of water column pollutant concentrations could result in failure to identify waters that do not attain their uses due to pollutant accumulation in sediments or fish tissue. PCBs and

chlorinated pesticides, the pollutants that are the subject of several of the listings of concern to the commenter, tend to accumulate in sediments and fish tissue and are often not detected at levels that exceed numeric water quality standards for water column concentrations despite their presence in sediment and tissue at levels which cause use impairment to the aquatic life or fish consumption beneficial uses.

EPA's approval of numeric water quality standards for these pollutants does not mean that the narrative water quality standards no longer apply to them. When EPA approved these numeric standards, EPA was concluding that the combination of beneficial use designations, numeric criteria, narrative criteria, and antidegradation provisions represented in the State's water quality standards were sufficient to protect the uses of the State's waters. See, 40 CFR 131.5 and 131.6.

EPA regulations and guidance encourage States to adopt numeric water quality standards but do not state that these numeric standards would replace or supercede other aspects of a State's standards.

- **EPA's decision to list waters due to toxic pollutants in the absence of formally adopted translator mechanisms violates federal regulations at 40 CFR 131.11(a)(2), as acknowledged by EPA in other contexts.**

EPA disagrees. EPA regulations and guidance encourage States to adopt translator mechanisms to assist in implementing narrative standards but do not require the adoption of such translator mechanisms as a precondition to applying narrative standards in the Section 303(d) listing process as suggested by the commenter. EPA's decision documents explain the basis for EPA's interpretation of narrative water quality standards and EPA provided opportunities for public review of the methods used to apply the narrative standards for Section 303(d) assessments. As discussed above, federal regulations require that "For the purposes of listing waters under Section 130.7(b), the terms "water quality standard applicable to such waters"and "applicable water quality standards" refer to those water quality standards established under section 303 of the Act, <u>including</u> numeric criteria, <u>narrative criteria</u>, <u>waterbody uses</u>, and antidegradation requirements." (40 CFR 130.7(b)(3) (emphasis added)). The federal regulations do not authorize States to decline to apply narrative standards in the Section 303(d) assessment process until translator mechanisms are adopted. Section 303(d) listing decisions do not regulate point source discharges; they simply identify waters that do not meet any applicable water quality standard and require development of TMDLs in the future.

The commenter cites a letter from EPA to the State Water Resources Control Board (February 15, 2002) as support for the assertion that EPA has acknowledged that it is invalid to list waters based on narrative criteria in the absence of adopted translators. The February 15, 2002 letter specifically states that:

> "Because the requirements of 40 CFR 131.11(a)(2) are only triggered for the regulation of point sources discharges of priority toxic pollutants on water quality limited segments, the narrative criterion would be applicable for any other purpose." (p. 4)

Because Section 303(d) listing is not an action that regulates point source discharges, EPA's application of narrative standards for this purpose is clearly consistent with EPA's February 15, 2002 letter and the requirements of 40 CFR 131.11(a)(2).

- **The commenter questions the validity of EPA's decisions to list Humboldt Bay, San Antonio Creek, Bolsa Chica, Anaheim Bay, and Huntington Harbor because it was inappropriate for EPA to "second-guess" the State's finding that insufficient data were available to support the listing assessments. Consistent with EPA's 1997 guidance, EPA should have considered the magnitude of exceedances and variability of the contaminant.**

Response: EPA concludes that it is inconsistent with federal listing requirements for the State to dismiss a water from further consideration in the Section 303(d) listing process simply because a minimum sample size threshold was not met for a particular water body. This is particularly true here, where the impairments are caused by toxic pollutants. As discussed in EPA's June 5, 2003 decision, the State did not provide specific or clear analysis to support its general assertion that insufficient data were available to support listing assessments for these waters.

The key consideration in EPA's decision to list several California waters and pollutants was the fact that for each of these waters, a very high percentage of available samples (from 67-100% of available samples depending upon the water and pollutant in question) did not meet the State's preferred screening criteria for application of its narrative water quality standards. EPA's decision to list these waters is consistent with EPA's 1997 and 2002 technical guidance documents, which recommend listing of toxic pollutants in cases where standards are exceeded more than once in any three year period. EPA concluded that the very high exceedence rates provided sufficient evidence to support the listing decisions.

EPA guidance recommends that states develop monitoring and assessment programs that enable states to base assessment determinations on larger sample sizes in order to improve the analytical rigor of listing decisions. However, EPA guidance does not recommend that states decline to assess waters for which smaller sample sizes are available. EPA guidance recognizes that it is possible to determine with reasonable certainty that water quality standards are exceeded even in cases where sample sizes are relatively small (see, e.g., EPA, 2002). The high frequency of exceedances observed for the waters added to California's Section 303(d) list clearly supports a conclusion that the exceedences are pervasive and that water quality standards are exceeded.

EPA's 1997 guidance cited by the commenter states that:

> "If fewer than 10 samples are available, the State should use discretion and consider other factors such as the number of pollutants having a single violation and the magnitude of the exceedances." (p. 3-18)

The commenter implies that this guidance recommends against identifying waters as impaired based on small sample sizes unless these other factors are considered. We believe the guidance actually recommends the opposite approach—that States should consider identifying impaired

waters even if samples sizes are very small—if the limited data indicate probable exceedances. For example, the guidance contemplates that it might be appropriate in some circumstances to identify an impaired water based on a single, high magnitude exceedance. EPA judged that the number of exceedances and frequency of exceedances observed for the waters and pollutants added to California's list provided sufficient evidence that the applicable standards are not attained and that it was unnecessary to further examine magnitude of exceedances or the characteristics of these toxic pollutants.

9. Fairness requires that EPA reevaluate all existing State listings to determine if sufficient valid data were available to support the original listings. EPA's approach appears to be to add water/pollutants to the State's list but never to remove any listings, regardless of their validity.

Response: See response to comment 1.

10. Several waters should not be listed because EPA has not demonstrated that beneficial uses are impaired as required to determine that the applicable water quality standards are exceeded.

Response: Federal regulations do not require EPA to demonstrate beneficial use impairment in order to determine that a water exceeds applicable water quality standards. EPA disagrees with the inference that it would be necessary to determine both that beneficial uses are actually impaired and that narrative or numeric water quality objectives are exceeded in order to conclude that a water quality standard is not being implemented.

We would like to clarify the statements in EPA's June 5, 2003 decision document that there was no current evidence of beneficial use impairment for some waters and pollutants being listed by EPA. We meant to indicate, in the context of a priority ranking discussion, that there was no direct evidence of beneficial use impairment (e.g., information concerning fish kills, adverse ecosystem impacts, or reports of human health impacts specific to the individual waters and pollutants under discussion), and that lower priority ranking factors were warranted as a result. However, the fact that these waters exceeded numeric or narrative water quality objectives for the listed pollutants provides strong indirect evidence of potential beneficial use impacts.

11. The proposed listing decisions are inconsistent with EPA's draft 2004 Assessment Guidance. All the waters proposed for listing would fit into categories 2-4 and not into Category 5.

Response: EPA reviewed California's 2002 list based on the Clean Water Act, EPA's implementing regulations, and final applicable EPA guidance. The 2004 listing guidance was not complete when EPA reviewed the California list and is not applicable to establishment and review of the 2002 list. In any case, none of the EPA decisions to add waters and pollutants to California's 2002 Section 303(d) list are inconsistent with any provisions of the proposed (and now final) 2004 EPA Assessment Guidance cited by the commenter.

Water Body-Specific Comments

Laguna de Santa Rosa

12. The Laguna de Santa Rosa should not be listed for total phosphorus because:

- **phosphorus is not the "limiting nutrient" in the Laguna affecting dissolved oxygen levels (based on analysis of bioavailable N:P ratios),**
- **listing phosphorous would divert limited resources away from real water quality issues and would not enhance efforts to protect beneficial uses,**
- **the cause of low dissolved oxygen levels in the Laguna is not certain,**
- **more study is needed to determine whether elevated phosphorous in the Laguna is the cause of low dissolved oxygen,**
- **not listing phosphorus will not delay the development of phosphorous TMDLs if necessary,**
- **there is no evidence of excess aquatic growths in the Laguna,**
- **EPA's screening level applied to evaluate total phosphorus data should not be applied to the Laguna because it is unreliable.**
- **it would be more appropriate to derive phosphorus assessment criteria based on region-specific information.**

Response: EPA concludes that the extraordinarily high phosphorus levels in the Laguna de Santa Rosa likely contribute to dissolved oxygen and algae problems in the Laguna. EPA does not agree that the available data supports the commenters' contrary assertion. The commenters provide no analysis or supporting references or documentation to support their assertion that the nitrogen-to-phosphorus ratios measured in the Laguna prove that phosphorus does not cause or contribute to excess algae growth. The actual data analysis supporting the summary chart in the City of Santa Rosa's comments was not provided to EPA or the State in the City's comments. The commenters concede that the causes of low dissolved oxygen levels in the Laguna are poorly understood. The N:P ratio argument offered by the commenters does not appear to be based on any local studies of the actual nutrient dynamics or of limiting factors influencing dissolved oxygen levels and algae growth in the Laguna. If local studies served as the basis for the conclusions, they were not provided to support the comment conclusions. Instead, the commenters appear to be relying upon generalized results from academic studies (that are not clearly referenced in the comments) that suggest that at low concentrations, either nitrogen or phosphorous may be the nutrient limiting the level of algal productivity in certain water body types.

EPA questions whether a nutrient ratio argument even makes conceptual sense in the case of the Laguna for several reasons. First, nutrient ratios are most useful for indicating whether blue-green algae blooms are a potential problem-- if the ratio (by weight) is below 10, then dominance by blue-green algae is increasingly likely (Gerritsen, 2003 citing Smith, 1998 and Smith et al., 1999). Blue green algae, which have cause frequent algae blooms in Laguna de Santa Rosa, are able to fix needed nitrogen from atmosphere; therefore it is unlikely that nitrogen control will be effective in eliminating such algae blooms and associated adverse impacts on dissolved oxygen levels. Second, it is not clear why a nutrient ratio argument makes

sense in situations where both nitrogen and phosphorus are present at very high levels. In the Laguna, the observed nitrogen and phosphorus levels are approximately an order of magnitude higher than both the simple screening values used by EPA in its June 5, 2003 report analysis and EPA's specific nitrogen and phosphorus criteria values recommended for the nutrient ecoregion III in which the Laguna is located (see EPA, 2000). EPA notes that no commenters appear to disagree with EPA's finding that the levels of both nitrogen and phosphorus in the Laguna are extraordinarily high. Third, the nutrient ratio argument depends upon measurements of nitrogen in the water column. Because aquatic plants quickly consume available nitrogen in the water column, dissolved nitrogen levels (and nutrient ratios based on dissolved nitrogen measurements) may not provide discriminating indicators of nutrient-algae growth dynamics or the potential for algal growth (see EPA, 2003). Finally, EPA's contractor reviewed studies of nutrient effects in freshwater lakes and streams and found that all studies reviewed indicated that algal biomass in freshwater streams is controlled by either phosphorus or both nitrogen and phosphorus. No studies were found that claimed algae control by nitrogen alone (Gerritsen, 2003).

Even if the nutrient ratio argument was reliable in this case, it would not compel a finding that phosphorus does not cause or contribute to a water quality standards exceedance. Rather, the nutrient ratio argument appears to suggest that it would be more cost effective to address nutrient-related problems through nitrogen control than through phosphorous control. As discussed above, the actual levels of nitrogen and phosphorus measured in the Laguna are high enough to be associated with excessive algal growth and associated dissolved oxygen problems. It would be inappropriate to refuse to list one pollutant for which there are data and information showing it contributes to a water quality standards exceedance (dissolved oxygen in this case) based on an assertion that it is more cost effective to address that exceedance through control of a different pollutant. It may be appropriate to address the issue of the most cost effective way to address dissolved oxygen exceedances at the time the TMDL analysis is conducted.

Commenters questioned EPA's reliance on the 0.1 mg/L screening level for total phosphorus and 1.0 mg/L for total nitrogen, recommending that it would be more appropriate to base phosphorus analysis on more locally-derived data. EPA has published recommended nitrogen and phosphorus criteria based on local reference stream data for different nutrient ecoregions around the country (EPA, 2000). Laguna de Santa Rosa is located within the "Southern and Central California Chaparral and Oak Woodlands" sub-ecoregion within the "Xeric West" aggregate ecoregion. The recommended criteria values for this sub-ecoregion are 0.03 mg/L for total phosphorus and 0.5 mg/L for total nitrogen. In addition, EPA's contractor found that several stream studies from different parts of the world have arrived at similar ranges of targets for nutrient reduction in streams to control algal biomass: total N in the range of 0.75-1.5 mg/L and total P in the range of 0.01-0.04 mg/L (Gerritsen, 2003). These values are approximately an order of magnitude lower than the values measured in the Laguna de Santa Rosa, and virtually every sample collected between 1997-2000 exceeds each of these recommended criteria values and the range of target values discussed in other stream studies. Although EPA acknowledges that there is some uncertainty as to whether these recommended criteria values would accurately discriminate between streams that are nutrient limited and those which are not, the fact that Laguna nitrogen and phosphorous levels are far above any recommended screening values

strongly supports EPA's conclusion that total nitrogen and total phosphorus must be included on the Section 303(d) list for the Laguna.

EPA's experience supports the conclusion that, with respect to freshwater streams, nitrogen control alone is unlikely to result in attainment of all applicable water quality standards associated with dissolved oxygen and algae growth, especially during the periods in which algae growth is most likely to be a problem (see, for example, TMDLs for Malibu Creek, CA (EPA, 1993), Clark Fork, MT (Ingman, 1992), EPA, 1999, EPA, 2000). Excessive algae growth (especially of nitrogen-fixing algae) and associated dissolved oxygen problems will likely occur in the system even if nitrogen levels were substantially reduced. EPA notes that adoption and implementation of TMDLs for nitrogen compounds in the Laguna de Santa Rosa in 1995 was designed to address excessive algae growth and depressed dissolved oxygen levels, but has not eliminated the frequent dissolved oxygen exceedances based on review of data summarized in the comments submitted to EPA. EPA also notes that the administrative record before the State contains evidence that algae levels in the Laguna are high enough to cause or contribute to low dissolved oxygen levels, and that algae levels are more closely correlated with phosphorus levels than with nitrogen levels (Wickham and Rawson, 2000, in State Board administrative record reference # 19).

EPA disagrees that phosphorous listings would necessarily divert attention or resources from other assessment and control priorities in the Laguna basin. On the one hand, the commenters appear to assert that future planned studies designed to address the dissolved oxygen listings will necessarily address phosphorus as well as nitrogen and other potential limiting factors. On the other hand, the commenters assert with great confidence that phosphorus is not a limiting factor for algal growth or for dissolved oxygen. Therefore, it is uncertain whether future studies will actually address the role of phosphorus in Laguna algal and dissolved oxygen dynamics. EPA believes the individual nitrogen and phosphorus listings will help ensure that future studies address both nutrients.

13. Commenters support listing the Laguna de Santa Rosa for total nitrogen and phosphorus.

Response: We appreciate the comments.

San Francisco Bay Nickel

14. San Francisco Bay should not be listed for nickel because the State is in the process of revising the applicable water quality standards for nickel and the Bay will meet the revised standards.

Response: As the commenter acknowledges, the San Francisco Bay Basin Plan has a total nickel water quality objective that is the numeric water quality standard currently in effect for San Francisco Bay. No State or Federal action to revise this standard has been completed. Federal regulations require the States or EPA to apply the currently applicable water quality standards

for purposes of developing the Section 303(d) list (see 40 CFR 130.7(b)(3)). The commenter does not appear to claim that the Bay currently meets the currently applicable standard and has therefore provided no valid basis for EPA to change its decision to list the specified Bay segments for nickel.

Lake Merced

15. Lake Merced should not be listed for dissolved oxygen and pH because low DO and pH excursions are characteristics of many lakes, and there are no documented impairments of beneficial uses. The listing would likely prevent management options that would improve lake water quality.

Response: As discussed in the listing decision, the State water quality standards provide no exemption from applying the DO and pH standards at all lake depths and at all times. The commenter has provided no analysis demonstrating attainment of the DO and pH standards. Regarding the comment concerning impacts of listing on management options, see the response to comment 5.

San Gabriel River Basin

16. San Gabriel River and Coyote Creek should not be listed for toxicity because toxicity is not a pollutant suitable for TMDL calculation.

Response: EPA interprets the Section 303(d) regulations to require States to list waters that are impaired due to pollutant characteristics including toxicity as well as waters impaired due to pollutants. EPA recently clarified its position by explaining that "When existing and readily available data and information (biological, chemical or physical) are sufficient to determine that a pollutant has caused, is suspected of causing, or is projected to cause the impairment, the AU should be listed [on the Section 303(d) list]" (Memorandum from Robert Wayland III to EPA Regions and State Directors, March 26, 2002). The information in the administrative record for San Gabriel River and Coyote Creek suggests that several pollutants cause or contribute to the toxicity observed in these segments.

EPA has consistent interpreted Section 303(d) listing regulations as requiring listing of waters impaired by pollutants or characteristics of pollutants. For example, in 1978 EPA stated that "the determination of TMDLs for parameters which indicate the presence of pollutants... can be useful in certain situations and should not be excluded from consideration." (43 FR 60662, December 28, 1978). When EPA amended and clarified the existing regulation in 1992, we restated the regulatory requirement of 40CFR 130.7(b)(4) and explained that:

> "To identify water quality-limited waters that still require TMDLs, the particular pollutant causing the problem will usually be known. However, pollutants include both individual chemicals and characteristics such as nutrients, BOD, or toxicity. Moreover, many waters do not meet standards due to non-chemical problems such as siltation." (57 FR 33045 (July 24, 1992)).

Finally, the currently applicable federal regulatory definition of TMDL provides that "TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure." (40 CFR 130.2(i) (emphasis added). In recognizing that TMDLs themselves can be expressed in terms of toxicity, EPA was clearly assuming that waters can be listed under Section 303(d) for toxicity.

17. EPA did not comply with the Basin Plan implementation procedures to implement the toxicity objective.

Response: The Basin Plan implementation provisions discuss procedures for interpreting toxicity testing results to identify chronic or acute toxicity. EPA relied upon toxicity testing results conducted by the commenter and provided to the State in support of the State's listing decisions. EPA carefully reviewed these toxicity testing results and has concluded that they are consistent with Basin Plan toxicity testing protocols. Therefore, EPA disagrees that the toxicity listing decisions are inconsistent with the Basin Plan toxicity implementation provisions.

18. We agree that it is important to re-evaluate the toxicity listings in the future.

Response: We appreciate the comment.

19. The commenter disagrees with EPA's statement that it is uncertain whether enforceable toxicity controls will be in place in the future for the water reclamation plants.

Response: Until final NPDES permits for these facilities are in place that contain clearly enforceable toxicity limitations, EPA will continue to conclude that it is uncertain whether enforceable toxicity controls are in place.