UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

Mr. Tom Howard
Executive Director
State Water Resources Control Board
1001 I Street
Sacramento, CA 95814

Dear Mr. Howard:

Thank you for submitting California's 2010 Integrated Report and supporting documentation pursuant to Clean Water Act Sections 303(d) and 305(b). We received the submittal, including the State's list of water quality limited segments requiring Total Maximum Daily Loads (TMDLs), on October 15, 2010. I commend the State and Regional Board staff for their diligent efforts to improve the water body assessment process that supported the State's list. I am pleased that the State and EPA agreed on more than 99% of the State's assessment determinations identified in the Integrated Report. EPA is therefore acting today to approve the State's inclusion of all waters and pollutants that the State identified as requiring a TMDL and to disapprove the State's omission of several water bodies and associated pollutants that meet federal listing requirements.

We carefully reviewed the State's listing decisions, assessment methodology, and supporting data and information. Based on this review, we have determined that California's 2008-2010 list of water quality limited segments requiring TMDLs partially meets the requirements of Section 303(d) of the Clean Water and EPA's implementing regulations. We approve the inclusion of each of the water bodies and associated pollutants that California has identified as requiring a TMDL. Accordingly, pursuant to 40 CFR 130.7(d), EPA hereby approves each of the State's listings of water quality limited segments requiring a TMDL identified in the 2010 Integrated Report, Appendix A, Category 5 List, except for those listings that the State also describes as "being held in abeyance" in your letter dated October 11, 2010.

During our review, we also identified several water bodies and associated pollutants not included in the 2010 Integrated Report, Appendix A, Category 5 List that meet federal listing requirements. In addition, we conclude that several of the listings which the State determined to hold in abeyance meet federal listing requirements. The water bodies and associated pollutants that we are adding to the State's 2008-2010 list of water quality limited segments are identified in Table 3 in the enclosure. The statutory and regulatory requirements, a summary of our review of California's compliance with applicable requirements and our rationale for adding the water bodies and pollutants is described in the enclosure.

We appreciate your submittal of schedules for TMDL development. We understand these schedules serve the purpose of priority rankings required by federal regulations at 40 CFR 130.7(b). We are not taking action on these schedules as federal regulations do not require EPA to act upon TMDL schedules or priority rankings; however, we expect the schedules will guide the State's TMDL development efforts in the future.

The public participation process sponsored by the State Board included several public hearings and opportunities to submit written comments. The State prepared a responsiveness summary explaining how the State considered comments in the final listing decisions. The State's public participation activities were consistent with federal requirements.

We will now solicit public comments on the additions to the State's 303(d) list identified in Table 3 in the enclosure. We will provide a responsiveness summary for comments received on these additions and will advise if any revision to EPA's determination is found to be appropriate.

If you have questions concerning this decision, please call me at (415) 972-3572, Valentina Cabrera Stagno at (415) 972-3434 or Dave Guiliano at (415) 947-4133.

Sincerely yours,

Alexis Strauss 12 Novembr 2010

Alexis Strauss
Director, Water Division

Enclosure
cc: SWRCB members
Regional Board Executive Officers

Review of California's 2008-2010 Section 303(d) List

Enclosure to letter from Alexis Strauss, EPA Region IX to
Thomas Howard, State Water Resources Control Board

Date of Transmittal Letter from State: October 11, 2010
Date of Receipt by EPA: October 15, 2010

Purpose

The purpose of this document is to describe the rationale for EPA's partial approval and partial disapproval of California's 2008-2010 list of water quality limited segments requiring a Total Maximum Daily Load (TMDL) under Clean Water Act, Section 303(d)[1]. The following sections identify those key elements to be included in the list submittal based on the Clean Water Act and EPA regulations (see 40 CFR 130.7). EPA reviewed the methodology used by the State in developing its list and the description of the data and information it considered. EPA's review of California's list is based on EPA's analysis of whether the State reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed. This review describes the basis for EPA's decision to approve the State's listings of water quality limited segments requiring a TMDL identified in the State's 2010 Integrated Report, Appendix A, Category 5 List.

This document also describes the basis for EPA's decision to disapprove California's decision to not include certain waters and pollutants on its list of water quality limited segments requiring a TMDL. EPA's determination to add waters and/or pollutants is based on monitoring results and information in the State's administrative record, as well as additional material cited in the References section at the end of this document. We carefully reviewed the State's submittal including the listing decisions, assessment methodology, and supporting data and information and paid particular attention to the following portions of the State's submittal:

i. Staff Report, State Water Resources Control Board, 2010 Integrated Report, Clean Water Act Sections 303(d) and 305(b), dated April 19, 2010 (including decision fact sheets and associated lines of evidence in Staff Report, Appendix G);
ii. State Water Resources Control Board Resolution No. 2010-0040 (approving the Section 303(d) List portion of the State's Proposed 2010 Integrated Report, with five changes); and
iii. The State's Staff Responses to Comments on the Proposed 2010 Integrated Report.

As discussed further below, EPA will open a public comment period on these additions to California's Section 303(d) List, and will, if appropriate, revise the list of added waters and pollutants following consideration of any comments received. The general basis for adding individual waters and pollutants are discussed here and case-specific water body information is provided in Table 3 at the end of this document.

---

1 California's list of water quality limited segments requiring a TMDL was included as part of its 2010 Integrated Report submitted pursuant to Clean Water Act, section 303(d) and 305(b). Although the submittal refers to a 2010 list, California did not complete a 2008 list of water quality limited segments requiring a TMDL in 2008. EPA therefore considers that the list and supporting determinations included in the State's 2010 Integrated Report comprises the State's listing determinations for the 2008-2010 period.

Enclosure: Review of California's 2008-2010 Section 303(d) List

Statutory and Regulatory Background

Identification of Water Quality Limited Segments for Inclusion on a Section 303(d) List

Section 303(d)(1) of the Act directs States to identify those waters within its jurisdiction for which effluent limitations required by Section 301(b)(1)(A) and (B) are not stringent enough to implement any applicable water quality standard, and to establish a priority ranking for such waters, taking into account the severity of the pollution and the uses to be made of such waters. The Section 303(d) listing requirement applies to waters impaired by point and/or nonpoint sources, pursuant to EPA's long-standing interpretation of Section 303(d).

EPA regulations provide that States do not need to list waters where the following controls are adequate to implement applicable standards: (1) technology-based effluent limitations required by the Act, (2) more stringent effluent limitations required by federal, State or local authority, and (3) other pollution control requirements required by State, local, or federal authority. See 40 CFR 130.7(b)(1).

Consideration of Existing and Readily Available Water Quality-Related Data and Information

In developing its list of water quality limited segments requiring a TMDL, a State is required to assemble and evaluate all existing and readily available water quality-related data and information, including, at a minimum, consideration of existing and readily available data and information about the following categories of waters: (1) waters identified as partially meeting or not meeting designated uses, or as threatened, in the State's most recent Section 305(b) report; (2) waters for which dilution calculations or predictive modeling indicate nonattainment of applicable standards; (3) waters for which water quality problems have been reported by governmental agencies, members of the public, or academic institutions; and (4) waters identified as impaired or threatened in any Section 319 nonpoint assessment submitted to EPA. See 40 CFR 130.7(b)(5). In addition to these minimum categories, States are required to evaluate any other water quality-related data and information that is existing and readily available. EPA's 1991 Guidance for Water Quality-Based Decisions describes categories of water quality-related data and information that may be existing and readily available (see, EPA 1991, Appendix C). While States are required to evaluate all existing and readily available water quality-related data and information, States may decide to rely or not rely on particular data or information in determining whether to list particular waters.

In addition to requiring States to assemble and evaluate all existing and readily available water quality-related data and information, EPA regulations at 40 CFR 130.7(b)(6) require States to include as part of their submittal to EPA documentation to support decisions to use or not use particular data and information and decisions to list or not list waters. Such documentation needs to include, at a minimum, the following information: (1) a description of the methodology used to develop the list; (2) a description of the data and information used to identify waters; and (3) any other reasonable information requested by the Region.

Priority Ranking

EPA regulations also address the requirement in Section 303(d)(1)(A) of the Act that States establish a priority ranking for listed waters. The regulations at 40 CFR 130.7(b)(4) require States to prioritize waters on their Section 303(d) lists for TMDL development, and also to identify those WQLSs targeted for TMDL development in the next two years. In prioritizing and targeting waters, States must, at a minimum, take into account the severity of the pollution and the uses to be made of such waters. See Section 303(d)(1)(A). As long as these factors are taken into account, the Act provides that States establish priorities. States may consider other factors relevant to prioritizing waters for TMDL development, including immediate programmatic needs, vulnerability of particular waters as aquatic habitats, recreational, economic, and aesthetic importance of particular waters, degree of public interest and support, and State or national policies and priorities. See 57 FR 33040, 33045 (July 24, 1992), and EPA 1991.

Analysis of California's Submittal

Identification of Waters and Consideration of Existing and Readily Available Water Quality-Related Data and Information

EPA has reviewed the State's submittal, and has concluded that the State developed its list of water quality limited segments requiring a TMDL in partial compliance with Section 303(d) of the Act and 40 CFR 130.7. EPA's review is based on its analysis of whether the State reasonably considered existing and readily available water quality-related data and information and reasonably identified waters required to be listed.

California used its 2004-2006 Section 303(d) List as its starting point for its 2008-2010 list revision. The State based its 2008-2010 Section 303(d) submittal on its analysis of readily available data and information to determine whether additions to or deletions from the 2004-2006 list were necessary. See Staff Report, pp. 5-6. The State determined that waters listed in 2004-2006 should be retained on the Section 303(d) List unless: (1) new data and information supported a finding that listing requirements are no longer met or (2) errors in the analysis supporting the 2002 or earlier listing were identified. As a result, many waters were retained on the 2008-2010 Section 303(d) List without extensive analysis. EPA concludes that this incremental listing approach is consistent with federal requirements because the State is making the environmentally conservative assumption that previously listed waters are water quality limited segments (WQLSs) absent more recent data or information supporting a different finding. We note, however, that the State conducted assessments of a higher percentage of its waters than in prior listing decisions.

Assembly of Data and Information

The State devoted considerable effort to assemble new data and information for the 2008-2010 list (Staff Report, pp. 1-2). Regional Board staff compiled data and information from multiple sources, including each of the data and information categories identified at 40 CFR 130.7(b)(5). The State solicited data and information from the public on December 4,

2006 and accepted data submittals until February 28, 2007. The solicitation was mailed to an extensive mailing list, and posted on State and Regional Board websites. The State also assessed several other sources of data including: the extensive monitoring data record compiled in the Surface Water Ambient Monitoring Program (SWAMP) data base for the period 2000-2007; Irrigated Lands Regulatory Program monitoring results; Municipal Separate Storm Sewer System monitoring report data; fish and shellfish advisories, beach advisories or other water quality based restrictions; reports of fish kills, cancers, lesions, or tumors; USEPA databases; Southern California Coastal Water Research Project Data and the San Francisco Estuary Institute's Regional Monitoring Program data; existing Water Board data and reports; existing and readily available water quality data and information reported by local, State and federal agencies, citizen groups, academic institutions and the public; and other sources of data and information that were readily available to Regional Water Board staff. The State considered data and information submitted during the nine Regional Board comment periods and the State Board comment period, the June 2010 workshop and the August 2010 hearing. Data and information sources assembled and considered by the State are specifically identified in the Staff Report and in more than 22,400 individual water body fact sheets included in the list submittal. EPA finds the State's approach assembling readily available information to be generally reasonable.

The State generally focused on data that became available after 2001. In some cases, the State considered older data as part of its 2008-2010 listing assessments, depending upon the pollutants at issue, the types of data (e.g., sediment vs. water column data), and the availability of more recent data and information. EPA finds it reasonable for the State to base its assessments on water quality data generally collected during the 2001-2006 timeframe because the more recent ambient water quality data are more likely to be representative and indicative of current water quality conditions. EPA also finds it is reasonable for the State to consider sediment and tissue data that are older than five years in age because these media usually are longer-term indicators of chemical contamination than ambient water column data, and provide reliable information for assessing water quality conditions for a longer period of time.

The State developed water body fact sheets to summarize listing assessments. The fact sheets include the following elements.

- water body identification information,
- applicable water quality standards/beneficial use information,
- monitoring results by matrix (e.g., water, sediment, tissue),
- data quality information,
- linkage between monitoring results and applicable standards or other guidelines,
- availability of data and information,
- considerations in analyzing data and information (e.g. sample size),
- temporal and spatial representation of available data,
- use of standard analytical methods for data analysis,
- pollutant source(s),
- listing recommendation

The State generated fact sheets for waters and pollutants to be added to the list, to be

removed from the list, and in cases where new data and information were available but did not support a change in the listing decision. The fact sheets provide good summaries of the listing assessment decisions. The State also incorporated fact sheets previously generated during the 2004-2006 list development as part of the 2008-2010 decision record. EPA reviewed the fact sheets to ensure the basis for each water body assessment was sufficiently clear and consistent with federal listing requirements. We also reviewed the responses to public comments.

Listing Methodology

The list submittal summarizes the listing methodology used by California to develop the 2008-2010 list. In September 2004, the State adopted the *Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) list* (the State Listing Policy) in accordance with California Water Code section 13191.3(a). The State Listing Policy contains a generally standardized approach for developing the State's Section 303(d) list. The State Listing Policy provides two assessment methodologies. First, the State Listing Policy specifies explicit factors for making listing and delisting decisions for different pollutant types based on different kinds of data. These quantitative assessment factors in the State Listing Policy specify statistical methods for evaluating potential standards exceedances, minimum data set requirements, and data quality requirements. These decision factors are applied to various types of data, including water chemistry, bacteria, health advisories, fish tissue, nutrients, nuisance factors, adverse biological response, water and sediment toxicity, and degradation of aquatic life populations and communities. The second assessment methodology describes a weight of evidence approach to be used when other listing factors do not result in the listing of a water body but information indicates non-attainment of standards.

California's 2010 Integrated Report includes a list of water segments where a water quality standard is not met or expected to be met, but an impairment is being addressed by a USEPA approved TMDL. See, 2010 Integrated Report, Appendix B, Category 4A List. The Integrated Report also includes a list of water segments where a standard is not met or expected to be met, but where the impairment is being addressed by actions other that TMDLs. See, 2010 Integrated Report, Appendix C, Category 4B List. EPA understands these lists to include water segments and pollutant pairs which the State has identified as impaired but not requiring a new or revised TMDL at this time.

The State used the assessment decision factors identified in the State Listing Policy as the basis for the majority of its 2008-2010 listing decisions and in some cases applied the weight-of-evidence assessment provisions to support decisions to list waters and pollutants. EPA reviewed the various assessments and concludes the State's assessments are consistent with federal listing requirements and applicable water quality standards in almost all cases. EPA, relying on federal listing regulations and guidance, has determined that some waters and/or pollutants that meet the Federal listing requirements under 40 CFR 130.7 were omitted from the State's list of water quality limited segments requiring a TMDL. The basis for EPA's decisions to add several waters/pollutants is discussed in greater detail in the following section.

Enclosure: Review of California's 2008-2010 Section 303(d) List

Clarifications to the State's Submittal

This section describes a couple of clarifications to the State's submittal.

A. Segment extent clarifications in the North Coast Region

By memorandum dated November 5, 2010, the State Board clarified the geographic extent of certain listings in the North Coast Region. EPA understands that several water body pollutant combinations were inadvertently included in the State's listings of water quality limited segments requiring a TMDL, Category 5 List for a broader extent than intended. Limitations on the areal extent of the listings for these water bodies are described in the fact sheets and supporting documentation in the State's Integrated Report however; those areal limitations were inadvertently left out of the Category 5 List submitted to EPA. EPA hereby clarifies that our approval action on California's 303(d) List includes the areal extents as identified in Table 1 below.

Table 1: Clarification of Areal Extent of Impairment for Specified Water Bodies

Water Body Name	Pollutant	Clarification to Areal Extent of Impairment
Eel River HU, Lower Eel River HA (includes the Eel River delta)	Aluminum	This listing applies to the mainstem Eel River in the Lower Eel River HA (includes the Eel River Delta).
Eel River HU, Middle Fork HA, Eden and Round Valley HSAs	Aluminum	This listing applies to the mainstem of the Middle Fork Eel River in the Middle Fork HA, Eden Valley and Round Valley HSAs.
Eel River HU, Middle Main HA	Aluminum	This listing applies to the mainstem of the Eel River in the Middle Main HA.
Eel River HU, South Fork HA	Aluminum	This listing applies to the mainstem South Fork Eel River in the South Fork Eel River HA. The listing does not include Elder Creek, or any other tributaries in the HA.
Mendocino Coast HU, Gualala River HA, Gualala River	Aluminum	This listing applies to the mainstem Gualala River in the Gualala River HA.
Klamath River HU, Middle HA and Lower HA, Scott River to Trinity River	Sediment	The weight of evidence indicates there is sufficient justification in favor of placing China Creek, Fort Goff Creek, Grider Creek, Portuguese Creek, Thompson Creek, and Walker Creek on the Section 303(d) List in the Water Quality Limited Segments category.
Klamath River HU, Middle HA, Iron Gate Dam to Scott River	Sediment	The weight of evidence indicates there is sufficient justification in favor of placing Beaver Creek, Cow Creek, Deer Creek, Hungry Creek, and West Fork Beaver Creek on the Section 303(d) List in the Water Quality Limited Segments category.

B. Water body pollutant combinations held in abeyance due to existing litigation

The transmittal letter from Thomas Howard to Alexis Strauss dated October 11, 2010 identifies the following water body pollutant combinations as being held in abeyance due to existing litigation:

Old River - Electrical Conductivity, Lower San Joaquin River between Mendota Pool and Airport Way Bridge - Electrical Conductivity, and Delta Waterways Stockton Ship

Channel – Organic Enrichment and Dissolved Oxygen.

In light of the letter, EPA understands that the State is not listing the following water body pollutant combinations as requiring a TMDL as part of its 2008-2010 submittal:

Old River (San Joaquin River to Delta-Mendota Canal; in Delta Waterways, southern portion) – Salinity
San Joaquin River (Mendota Pool to Bear Creek) – Electrical Conductivity
San Joaquin River (Bear Creek to Mud Slough) – Electrical Conductivity
San Joaquin River (Mud Slough to Merced River) – Electrical Conductivity
San Joaquin River (Merced River to Tuolumne River) – Electrical Conductivity
San Joaquin River (Tuolumne River to Stanislaus River) – Electrical Conductivity
San Joaquin River (Stanislaus River to Delta Boundary) – Electrical Conductivity*
Delta Waterways (Stockton Ship Channel) – Organic Enrichment / Low Dissolved Oxygen*

The San Joaquin River Dissolved Oxygen TMDL approved by EPA on February 27, 2007 and the San Joaquin River Salt and Boron TMDL approved by EPA on February 8, 2007 address the two water body pollutant combinations marked with a asterisk (*) symbol above.

Basis for EPA Decisions to Add Waters To California's 303(d) List

This section describes the basis for EPA's decisions to (1) disapprove the State's decision to not list several water bodies and associated pollutants, and (2) add these water bodies and associated pollutants to the 2008-2010 Section 303(d) List. EPA analyzed the State's water body assessments and supporting rationales to determine whether the State's decisions not to list waters were consistent with federal listing requirements and the provisions of state water quality standards. The State is required to evaluate potential violations of both narrative and numeric water quality objectives 40 CFR 130.7(b)(3).

When determining whether to add waters to California's Section 303(d) List, EPA first considered provisions within State water quality standards and, if necessary, referred to listing criteria contained in EPA's water quality assessment guidance documents (EPA 2001, 2003b, 2005, 2006, 2009).

A. Electrical conductivity and total dissolved solids impairments of Old River and multiple segments of the San Joaquin River

EPA is adding the water body pollutant combinations identified in Table 2 below to the list of water quality limited segments requiring a TMDL. This is being done because they meet the federal listing requirements under 40 CFR 130.7. The water body pollutant combinations identified in Table 2 below as not having been listed in 2004-2006 are being added based on EPA's review of available data which indicates that at least one use is impaired. For the three segments that had been previously listed, no new data was included in the factsheets or supporting documentation to support removal of the impairments from the Section 303(d) List. EPA is adding these three water body

pollutant combinations listed in 2004-2006 because upon request to the State for good cause for delisting EPA did not receive a water quality based reason for their delisting. Additionally, a preliminary review of data and information not assessed by the State shows continued impairment in the San Joaquin River by electrical conductivity.

Table 2: Water Bodies Held in Abeyance that EPA is Adding to the Section 303(d) List

Water Body Name	Pollutant	Included in 2004-2006 303(d) List
Old River (San Joaquin River to Delta-Mendota Canal; in Delta Waterways, southern portion)	Total Dissolved Solids, Electrical Conductivity	
San Joaquin River (Mendota Pool to Bear Creek)	Electrical Conductivity	Listed
San Joaquin River (Bear Creek to Mud Slough)	Electrical Conductivity	Listed
San Joaquin River (Mud Slough to Merced River)	Electrical Conductivity	Listed
San Joaquin River (Merced River to Tuolumne River)	Electrical Conductivity	
San Joaquin River (Tuolumne River to Stanislaus River)	Electrical Conductivity	

The water bodies identified in Table 2 are designated for Municipal and Domestic Water Supply (MUN) and Agricultural Supply (AGR) uses (RWQCB Central Valley Region, 2009, Table II-1, pp. II-7-8). Of the water bodies included in Table 2, a specific water quality objective for the AGR use applies to Old River only. The AGR use applies to all segments. This objective for electrical conductivity is expressed as follows in the Sacramento and San Joaquin River Basin Plan:

> Maximum 30-day running average of mean daily, in mmhos
> Apr 1 – Aug 31 0.7, Sep 1 – Mar 31 1.0
> (RWQCB Central Valley Region, 2009, Table III-5)

The applicable standards for the MUN use for all of the water bodies included in Table 2 are included by reference into the Sacramento and San Joaquin River Basin Plan as chemical constituents that shall not exceed the secondary maximum contaminant levels (MCLs) specified in Title 22 of the California Code of Regulations (RWQCB Central Valley Region, 2009, pp. III-3). The secondary MCL's for electrical conductivity provide a range of values including a recommended level (900 uS/cm), upper level (1600 uS/cm) and a short-term level (2200 uS/cm). The State's Old River assessment for salinity includes an assessment of total dissolved solids (TDS) as well as electrical conductivity. For TDS the recommended level is 500 mg/L, upper level is 1,000 mg/L and the short term level is 1,500 mg/L. EPA assessed available data using the "Recommended" MCLs because they are protective of all drinking water uses and because using those MCLs is consistent with the decision recommendations and supporting factsheets the State approved at their August board hearing. A summary of the water body specific findings are included in Table 3 at the end of the document. Observed exceedances are greater than the 10% exceedance threshold for conventional and other pollutants as expressed in Table 3.2 of the State Listing Policy.

B. Temperature impairment of the San Joaquin River and tributaries

EPA has determined to add the following to the list of water quality limited segments for

which a TMDL is required for temperature: San Joaquin River (Stanislaus River to Delta Boundary); San Joaquin River (Tuolumne River to Stanislaus River); San Joaquin River (Merced River to Tuolumne River); Merced River, Lower (McSwain Reservoir to San Joaquin River); Stanislaus River, Lower; and Tuolumne River, Lower (Don Pedro Reservoir to San Joaquin River). Applicable water quality standards for these water bodies are established in the Sacramento and San Joaquin River Basin Plan. All the aforementioned segments have the Migration of Aquatic Organisms (MIGR) designated use for Cold Freshwater Habitat (COLD) with a footnote indicating "salmon and steelhead" (See RWQCB Central Valley, 2009, Table II-1). The three tributary segments have the Spawning, Reproduction, and/or Early Development (SPWN) designated use for COLD with a footnote indicating "salmon and steelhead" (See RWQCB Central Valley, 2009, Table II-1, pp.II-8). Additionally, the Sacramento and San Joaquin River Basin Plan addresses temperature with the following narrative and numeric objectives:

> "The natural receiving water temperature of intrastate waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Water Board that such alteration in temperature does not adversely affect beneficial uses.
> …
> At no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5°F above natural receiving water temperature. …
> In determining compliance with the water quality objectives for temperature, appropriate averaging periods may be applied provided that beneficial uses will be fully protected." (RWQCB Central Valley Region, 2009, pp. III-8)

Documentation of the natural receiving water temperature is not readily available so an assessment of whether the migration and spawning uses were being achieved was conducted by comparing the current temperatures to the temperature requirements of salmonid species identified in the EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards (2003a). EPA believes that the Region 10 guidance and its associated Technical Issue Papers provide the most comprehensive compilation of research related to salmonid temperature requirements available. The studies compiled in the guidance and associated papers address the full geographic extent of salmonid populations including California. The recommended numeric criteria to protect coldwater salmonids in this report were recommended for use by California's Department of Fish and Game in their temperature data submittal and subsequent comments. Additionally, the guidance's recommended numeric criteria have been used by the National Marine Fisheries Service as thresholds when considering the suitability of expected water temperatures for Central Valley steelhead in the Stanislaus River under the proposed actions in their Biological and Conference Opinion on the Long-term Operations of the Central Valley and State Water Project (2009). An enormous amount of temperature data has been collected for the subject segments of the San Joaquin River and its tributaries. After review of the data EPA finds that the subject segments are not attaining the relevant numeric temperature criteria for migration and spawning of coldwater salmonids. Observed exceedances are greater than the 10% exceedance threshold for conventional and other pollutants as expressed in Table 3.2 of the State Listing Policy. A summary of the water body specific findings are included in Table 3 at the end of this document.

C. Bacterial indicator impairment of ten water Bodies in the Santa Ana Region

EPA has determined to add ten inland surface waters (identified in Table 3) in the Santa Ana Region to the list of water quality limited segments requiring a TMDL for indicator bacteria. These water bodies are designated as Water Contact Recreation (REC1) water bodies either explicitly or implicitly as tributaries to other designated segments (RWQCB Santa Ana Region, 2008, Table 3-1, pp.3-23 - 3-35). The Santa Ana Basin Plan has the following water quality objective for fecal coliform to protect REC1 uses:

> Fecal coliform: log mean less than 200 organisms/100 mL based on five or more samples/30 day period, and not more than 10% of the samples exceed 400 organisms/100 mL for any 30-day period. (RWQCB Santa Ana Region, 2008, pp.4-9)

Recent monitoring data collected in these water bodies measures Escherichia coli indicator bacteria. Escherichia coli is one species within the broader category of fecal coliform bacteria and monitoring data for E. coli can be used to evaluate whether the fecal coliform objective is being met in the subject water bodies. In addition, EPA has recommended that California use EPA's Ambient Water Quality Criteria for Bacteria (1986) when there is no adopted E. coli standard. Specifically, EPA recommends that for REC1 uses the following criteria be used:

> Steady state geometric mean indicator density - 126 indicator densities/100ml
> Designated beach area (upper 75% confidence limit) - 235 indicator densities/100ml
> (EPA, 1986, Table 4, pp.15)

EPA compared the E. coli data for subject water bodies to the Basin Plan's fecal coliform objective, as well as to EPA's recommended E. coli criteria. For eight of the ten water bodies sufficient exceedances of the fecal coliform objective and the EPA recommended criteria exist to merit listings per the 10% exceedance threshold for conventional pollutants expressed in Table 3.2 of the State Listing Policy. For Morning Canyon Creek and Temescal Creek Reach 6 only one of the sites sampled in each reach showed sufficient exceedances to merit listing under both methodologies. Since at least one site shows a significant impairment of the recreational use EPA concludes that these reaches are also impaired and is adding these entire reaches. If the State would like to re-segment these reaches to avoid listing the entire reach when the impaired segment is more localized, the State can do so in the next listing cycle. Alternately, the entire segment can remained listed as impaired and during TMDL development the TMDL can be aimed to address the appropriate portion of the segment. Two additional water bodies, San Diego Creek Reach 1 and Buck Gully Creek, show impairment by E. coli bacteria but are also identified as impaired by total and/or fecal coliform by the State. In these cases, EPA is not recommending listing for indicator bacteria for these reaches since they are already listed. The recent E. coli data for these two water bodies indicate that the previously identified total and/or fecal coliform impairments remain a concern. EPA recommends that the State adopt listings for the various forms of indicator bacteria under the heading "Indicator Bacteria" and include the specific analyses for each type of indicator as a line of evidence for that broader impairment. A summary of EPA's findings for the ten water bodies that EPA is adding indicator bacteria listings are included in Table 3 at the end of this document.

D. Copper and lead impairments of three segments in the Santa Ana Region

EPA is adding listings for copper and/or lead for Cucamonga Creek Reach 1 and Santa Ana River Reaches 3 and 6. These segments all have at least one designated use that protects aquatic life such as: Warm Freshwater Habitat (WARM); Limited Warm Freshwater Habitat (LWRM); Cold Freshwater Habitat (COLD); Rare, Threatened or Endangered Species (RARE); and Spawning, Reproduction, and/or Early Development (SPWN) (RWQCB Santa Ana Region, 2008, Table 3-1, pp.3-25, 3-30). The metals criteria established in the California Toxics Rule (CTR) therefore apply to these segments. EPA evaluated data using the criteria and default conversion factors established in the CTR, and found impairment of three water bodies by copper and/or lead. Upon examination of the data the State had assessed for these waterbodies EPA finds that the detection limits of the data reported by San Bernardino County Stormwater Program pursuant to their NPDES permit was in most cases too low to assess compliance with the water quality standard. EPA strongly encourages the Regional Board to lower the monitoring detection limit required by the permit during the next permit renewal. A summary of the water body specific findings are included in Table 3 at the end of this document. Observed exceedances are greater than the 3% exceedance threshold for toxicants as expressed in Table 3.1 of the State Listing Policy.

E. Total dissolved solids impairments of two segments in the Lahontan Region

EPA is adding listings for Total Dissolved Solids (TDS) to Mammoth Creek (Headwaters to Twin Lakes) and East Fork of Carson River. Our review of readily available data against applicable water quality standards indicates these waters are impaired. These two segments have the following uses: Municipal and Domestic Supply (MUN); Agricultural Supply (AGR); Ground Water Recharge (GWR); Freshwater Replenishment (FRSH); Water Contact Recreation (REC1); Noncontact Water Recreation (REC2); Commercial and Sportfishing (COMM); Cold Freshwater Habitat (COLD); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Spawning, Reproduction, and Development (SPWN). Additionally, Mammoth Creek has Migration of Aquatic Organisms (MIGR) use and East Fork, Carson River has Navigation (NAV) use. The Lahontan Regional Basin Plan identifies specific water quality objectives for certain waterbodies and these waterbodies have the following applicable objectives for TDS:

> East Fork, Carson River
> Annual Average: 80 mg/L and 90th Percentile: 100 mg/L
> (RWQCB Lahontan Region, 2005, Table 3-14, pp.3-39)
> Mammoth Creek (Twin Lakes Bridge)
> Annual Average: 60 mg/L and 90th Percentile: 90 mg/L
> (RWQCB Lahontan Region, 2005, Table 3-17, pp.3-45)

EPA assessed data against the applicable standards for both the annual average and 90th percentile and determined that both aspects of the standard are not achieved. The Lahontan Regional Board and State Board stated that data was "not temporally representative." However, the data include many values above the water quality objectives throughout the year for both water bodies. Furthermore, not only do the

annual averages consistently exceed the applicable water quality standards, data from multiple seasons indicate that the 90th percentile objective is also not achieved. A summary of the water body specific findings are included in Table 3 at the end of this document. Observed exceedances in both water bodies are greater than the 10% exceedance threshold for conventional and other pollutants as expressed in Table 3.2 of the State Listing Policy.

Good Cause for Delisting

California's Staff Report identified 131 water body-pollutant combinations that were not included on the Section 303(d) List because analysis of available monitoring data supported a conclusion that applicable standards were no longer exceeded (Staff Report Table 2, pp.iv). EPA reviewed California's rationale for its decision not to include on its 2008-2010 Section 303(d) List several waters that were included on its 2004-2006 Section 303(d) List. Except for the water body-pollutant combinations noted above, the State demonstrated to EPA's satisfaction good cause for not listing each of the waters. See, 40 CFR 130.7(b)(6)(iv).

California determined not to include Buckeye Creek, East Walker River (above Bridgeport Reservoir), Robinson Creek (Hwy 395 to Bridgeport Res), Robinson Creek (Twin Lakes to Hwy 395) and Swauger Creek on its list of water quality limited segments requiring a TMDL for pathogens based on its determination that this impairment would be addressed via other pollutant control requirements. EPA requested that the State provide a more detailed rationale to support its determination. The State provided information about its Grazing Waiver (RWQCB Lahontan Region, 2007) that identifies "an interim fecal coliform objective of 200 colonies per 100 ml" which is less stringent than their applicable water quality standard (RWQCB Lahontan Region, 2005, pp.3-4). Without a requirement in the Grazing Waiver to achieve the applicable standard, EPA is concerned that implementation of the Grazing Waiver will not achieve the water quality standard. However, since this is the first five year cycle of the Grazing Waiver an interim target is reasonable. Upon renewal of the Grazing Waiver, EPA expects the applicable water quality standard should be utilized as the water quality requirement if the Grazing Waiver is to be used as justification for not identifying these water body pollutant combinations as requiring a TMDL.

Public Comments

EPA carefully reviewed the State and Regional Board's detailed responses to several thousand comments received from the public during the list development process. EPA commends the State for its intensive effort to involve the public in Section 303(d) List decision-making. EPA found the State's responses to public comments reasonable and in accordance with federal listing requirements.

Priority Ranking /Scheduling

The State's submittal includes a schedule for TMDL completion for those waters requiring a TMDL, including waters scheduled for TMDL development over the next two

years (Staff Report, pp. 6-7). We understand that these schedules serve as priority rankings for TMDL development as required by federal regulations at 40 CFR 130.7(b). The State Listing Policy provides ranking criteria for determining the schedule for TMDL development for each water body pollutant combination. TMDL development schedules were not set for waters and pollutants for which TMDLs have been completed or that are being addressed through other control actions. EPA concludes that the decision not to identify priority rankings or schedules for these waters and pollutants is appropriate. In future listing cycles, if it is determined the TMDLs or alternative control mechanisms do not result in attainment of applicable water quality standards, the waters should be included on the next Section 303(d) List and scheduled for TMDL development or revision. EPA is not taking action on these schedules as federal regulations do not require EPA approval of priority rankings or schedules.

Administrative Record Supporting This Action

In support of this decision to partially approve and partially disapprove California's listing decisions, EPA carefully reviewed the materials submitted by California with its listing decisions. The administrative record supporting EPA's decision to approve the State's inclusion of the waters and pollutants identified on the State's 2010 Integrated Report, Appendix A, Category 5 List (except for those listings held in abeyance) and to add certain waters and/or pollutants is comprised of the materials submitted by the State, copies of Section 303(d), associated federal regulations, EPA guidance concerning preparation of Section 303(d) lists, EPA's past comments on California's listing methodology and draft lists, EPA's decision letter and this enclosure. EPA determined that the materials provided by the State with its submittal generally provided sufficient documentation to support our analysis and findings that the State decisions to list waters meet the requirements of the Clean Water Act and associated federal regulations. We are aware that the State compiled and considered additional materials (e.g. raw data and water quality analysis reports) as part of its list development process that were not included in the materials submitted to EPA. EPA did not consider all of these additional materials as part of its review. It was unnecessary for EPA to consider all of the materials considered by the State in order to determine that, based on the materials submitted to EPA, the State complied with the applicable federal listing requirements. Moreover, federal regulations do not require the State to submit all data and information considered as part of the submittal. At EPA's request, the State did provide additional materials on case-specific basis for our review of the raw data and other relevant information. EPA's decisions to add certain waters and/or pollutants to the State's proposed final Section 303(d) List is supported by the monitoring data and information available within the State's administrative record and additional material cited in References.

References

Submittal

California State Water Resources Control Board (SWRCB), 2010. Transmittal of the 2010 Integrated Report [Clean Water Act Section 303(d) and Section 305(b)]. Letter to Alexis Strauss, USEPA and four CDs of supporting materials, including the Staff Report, fact sheets, and responsiveness summary, October 11, 2010

Other Documents

40 CFR Part 130 Water Quality Planning and Management.

California Code of Regulations, Title 22, Division 4, Chapter 15. Domestic Water Quality and Monitoring. http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Lawbook.aspx

California Regional Water Quality Control Board Central Valley Region. 2009. Water Quality Control Plan (Basin Plan) for the California Regional Water Quality Control Board Central Valley Region Fourth Edition: The Sacramento River Basin and the San Joaquin River Basin.

California Regional Water Quality Control Board Lahontan Region. 2005. Water Quality Control Plan for the Lahontan Region North and South Basins.

California Regional Water Quality Control Board Lahontan Region. 2007. Resolution No. R6T-2007-0019, Waiver of Waste Discharge Requirements for Grazing Operations in the East Walker River Watershed (Bridgeport Valley and Tributaries) of the Lahontan Region

California Regional Water Quality Control Board Santa Ana Region. 2008. Water Quality Control Plan Santa Ana River Basin.

EPA 1978. December 28, 1978 Federal Register Notice, *Total Maximum Daily Loads Under Clean Water Act*, finalizing EPA's identification of pollutants suitable for TMDL calculations, 43 Fed. Reg. 60662.

EPA 1985. January 11, 1985 Federal Register Notice, *40 CFR Parts 35 and 130, Water Quality Planning and Management: Final Rule*, 50 Fed. Reg. 1774.

EPA 1986. Ambient Water Quality Criteria for Bacteria – 1986. EPA 440/5-84-002. US Environmental Protection Agency, Office of Water, Washington DC.

EPA 1991. *Guidance for Water Quality Based Decisions: The TMDL Process*. EPA 440/4-91-001 U.S. Environmental Protection Agency, Office of Water, Washington, DC.

EPA, 2000. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California. 65 FR 97, p. 31681 et. seq., May 18, 2000.

EPA, 2001. 2002 Integrated Water Quality Monitoring and Assessment Report Guidance, Robert H. Wayland III, Director, Office of Wetlands, Oceans and Watersheds, November 19, 2001.

EPA, 2003a. EPA Region 10 Guidance for Pacific Northwest State and Tribal Temperature Water Quality Standards. EPA 910-B-03-002. Region 10 Office of Water, Seattle, WA.

EPA, 2003b. Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act; TMDL-01-03, Diane Regas, Director, Office of Wetlands, Oceans and Watersheds, July 21, 2003.

EPA, 2005. Guidance for 2006 Assessment, Listing, and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act. Diane Regas, Director, Office of Wetlands, Oceans and Watersheds, July 29, 2005.

EPA, 2006. Information Concerning 2008 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions. Diane Regas, Director, Office of Wetlands, Oceans and Watersheds, October 12, 2006.

EPA, 2009. Information Concerning 2010 Clean Water Act Sections 303(d), 305(b) and 314 Integrated Reporting and Listing Decisions. Suzanne Schwartz, Director, Office of Wetlands, Oceans and Watersheds, May 5, 2009.

National Marine Fisheries Service Southwest Region. 2009. Biological and conference opinion on the long-term operations of the Central Valley Project and State Water Project. http://swr.nmfs.noaa.gov/ocap.htm

San Joaquin River SWAMP Monitoring Data - Main-Stem San Joaquin River http://www.waterboards.ca.gov/centralvalley/water_issues/water_quality_studies/surface_water_ambient_monitoring/sjrsites.shtml

Enclosure: Review of California's 2008-2010 Section 303(d) List

Table 3: Water bodies and/or pollutants added by EPA to California's 2008-2010 Section 303(d) List (Arranged by Regional Board and pollutant)				
RB	**State Assessment Decision**	**Water body name**	**Pollutant**	**EPA Assessment Summary**
5	List on 303(d) list, held in abeyance 2010	Old River (San Joaquin River to Delta-Mendota Canal; in Delta Waterways, southern portion)	Total Dissolved Solids, Electrical Conductivity (referred to as Salinity in the State's submittal)	Available data show electrical conductivity and total dissolved solids impairments in this water body which are identified as salinity objectives in the applicable Basin Plan. EPA is adding the two pollutants separately. 20/62 weekly averages exceeded the Secondary MCL for electrical conductivity. 7/15 weekly averages exceeded the Secondary MCL for total dissolved solids. Samples collected in Old River at Tracy Boulevard. Data Record: 2000-2005
5	Previously listed, held in abeyance 2010	San Joaquin River (Mendota Pool to Bear Creek)	Electrical Conductivity	This water body was has been listed since the 1998 Section 303(d) List. A good cause for delisting this water body in 2010 has not been provided and no new data were identified by the State in their fact sheets to support a revised assessment decision.
5	Previously listed, held in abeyance 2010	San Joaquin River (Bear Creek to Mud Slough)	Electrical Conductivity	Preliminary review of data show electrical conductivity impairment in this water body. 95/104 samples exceeded the Secondary MCL. Samples collected in the San Joaquin River at Hills Ferry by SWAMP monthly and sometimes weekly. Data Record: 2000-2007
5	Previously listed, held in abeyance 2010	San Joaquin River (Mud Slough to Merced River)	Electrical Conductivity	Preliminary review of data show electrical conductivity impairment in this water body. 543/732 samples exceeded the Secondary MCL. Samples collected in the San Joaquin River at Landers Ave and Fremont Ford by SWAMP weekly. Data Record: 2000-2007
5	Do Not Delist, held in abeyance 2010	San Joaquin River (Merced River to Tuolumne River)	Electrical Conductivity	Available data show electrical conductivity impairment in this water body. 341/563 weekly averages exceeded the Secondary MCL. 217/317 weekly averages exceeded the Secondary MCL. Samples collected in the San Joaquin River at Patterson and Crows

Table 3: Water bodies and/or pollutants added by EPA to California's 2008-2010 Section 303(d) List (Arranged by Regional Board and pollutant)				
RB	**State Assessment Decision**	**Water body name**	**Pollutant**	**EPA Assessment Summary**
				Landing sites. Data Record: 2000-2006
5	Do Not Delist, held in abeyance 2010	San Joaquin River (Tuolumne River to Stanislaus River)	Electrical Conductivity	Available data show electrical conductivity impairment in this water body. 162/556 weekly averages exceeded the Secondary MCL. Samples collected in the San Joaquin River at Maze Road. Data Record: 1995-2005
5	Do Not List	San Joaquin River (Stanislaus River to Delta Boundary)	Temperature	Available data show temperature impairment in this water body. 13/13 yearly maximum 7DADM[2] values during the adult migration life stage (Julian weeks 36- 43, Sept 1- Oct 31) exceeded the <20 ^{o}C criteria for salmon and trout migration in lower parts of river basins. 5/7 yearly maximum 7DADM values during the smoltification life stage (Julian weeks 11- 24, Mar 15- June 15) exceeded the <20 ^{o}C criteria for salmon and trout migration in lower parts of river basins. Samples collected at river miles: 71, 73.5, 74 and 74.5. Data record: 2001 –2005
5	Do Not List	San Joaquin River (Tuolumne River to Stanislaus River)	Temperature	Available data show temperature impairment in this water body. 13/13 yearly maximum 7DADM values during the adult migration life stage (Julian weeks 36-43, Sep1-Oct31) exceeded the <20 ^{o}C criteria for salmon and trout migration in lower parts of river basins. 9/12 yearly maximum 7DADM values during the smoltification life stage (Julian weeks 11-24, Mar15-Jun15) exceeded the <20 ^{o}C criteria for salmon and trout migration in lower parts of river basins. Samples collected at river miles: 80, 81, 83 and 84. Data record: 1996 –2006

2 7DADM is defined as the seven-day averages of maximum daily temperatures.

Table 3: Water bodies and/or pollutants added by EPA to California's 2008-2010 Section 303(d) List (Arranged by Regional Board and pollutant)				
RB	**State Assessment Decision**	**Water body name**	**Pollutant**	**EPA Assessment Summary**
5	Do Not List	San Joaquin River (Merced River to Tuolumne River)	Temperature	Available data show temperature impairment in this water body. 19/20 yearly maximum 7DADM values during the adult migration life stage (Julian weeks 36-43, Sep1-Oct31) exceeded the <20 ^{o}C criteria for salmon and trout migration in lower parts of river basins. 5/7 yearly maximum 7DADM values during the smoltification life stage (Julian weeks 11-24, Mar15- Jun15) exceeded the <20 ^{o}C criteria for salmon and trout migration in lower parts of river basins. Samples collected at river miles: 86.2, 89, 91, 93, 117, and 118. Data record: 1996 –2006
5	Do Not List	Merced River, Lower (McSwain Reservoir to San Joaquin River)	Temperature	Available data show temperature impairment in this water body. 107/130 yearly maximum 7DADM values during the adult migration life stage (Julian weeks 36-43, Sep1-Oct31) exceeded the <18 ^{o}C criteria for salmon and trout migration. 95/96 yearly maximum 7DADM values during the spawning life stage (Julian weeks 40-50, Oct1-Dec15) exceeded the <13 ^{o}C criteria for salmon and trout spawning, egg incubation and fry emergence. 102/125 yearly maximum 7DADM values during the smoltification and juvenile rearing life stage (Julian weeks 11-24, Mar15–Jun15) exceeded the <16 ^{o}C criteria for salmon and trout "core" juvenile rearing. 31/ 47 yearly maximum 7DADM values during the steelhead summer rearing life stage (Julian weeks 24-37, Jun15-Sep15) exceeded the <18 ^{o}C criteria for non-"core" juvenile rearing. Samples collected at river miles: 0, 1, 4, 12, 13, 21, 22, 28, 30.5, 31, 39, 40, 41, 42, 43, 44, 46, 47 and 52. Data record: 1991 –2007
5	Do Not List	Stanislaus River, Lower	Temperature	Available data show temperature impairment in this water body. 38/76 yearly maximum 7DADM values during the adult migration

Table 3: Water bodies and/or pollutants added by EPA to California's 2008-2010 Section 303(d) List (Arranged by Regional Board and pollutant)				
RB	**State Assessment Decision**	**Water body name**	**Pollutant**	**EPA Assessment Summary**
				life stage (Julian weeks 36-43, Sep1-Oct31) exceeded the <18 ^{o}C criteria for salmon and trout migration. 38/ 49 yearly maximum 7DADM values during the spawning life stage (Julian weeks 40-50, Oct1-Dec15) exceeded the <13 ^{o}C criteria for salmon and trout spawning, egg incubation and fry emergence. 36/ 73 yearly maximum 7DADM values during the smoltification and juvenile rearing life stage (Julian weeks 11-24, Mar15–Jun15) exceeded the <16 ^{o}C criteria for salmon and trout "core" juvenile rearing. 7/27 yearly maximum 7DADM values during the steelhead summer rearing life stage (Julian weeks 24-37, Jun15-Sep15) exceeded the <18 ^{o}C criteria for non-"core" juvenile rearing. Samples collected at river miles: 0, 15, 16, 19, 29, 31, 33, 34, 38, 40, 46, 54, and 58. Data record: 1991 –2007
5	Do Not List	Tuolumne River, Lower (Don Pedro Reservoir to San Joaquin River)	Temperature	Available data show temperature impairment in this water body. 85/147 yearly maximum 7DADM values during the adult migration life stage (Julian weeks 36-43, Sep1-Oct31) exceeded the <18 ^{o}C criteria for salmon and trout migration. 102/118 yearly maximum 7DADM values during the spawning life stage (Julian weeks 40-50, Oct1-Dec15) exceeded the <13 ^{o}C criteria for salmon and trout spawning, egg incubation and fry emergence. 75/137 yearly maximum 7DADM values during the smoltification and juvenile rearing life stage (Julian weeks 11-24, Mar15–Jun15) exceeded the <16 ^{o}C criteria for salmon and trout "core" juvenile rearing. 26/78 yearly maximum 7DADM values during the steelhead summer rearing life stage (Julian weeks 24-37, Jun15-Sep15) exceeded the <18 ^{o}C criteria for non-"core" juvenile rearing.

Table 3: Water bodies and/or pollutants added by EPA to California's 2008-2010 Section 303(d) List (Arranged by Regional Board and pollutant)				
RB	**State Assessment Decision**	**Water body name**	**Pollutant**	**EPA Assessment Summary**
				Samples collected at river miles: 3, 3.4, 12, 16, 16.3, 19, 21, 23.6, 26, 31, 32, 33, 35, 36.5, 36.7, 38, 39.5, 42.6, 42.9, 43.2, 43.4, 45, 45.5, 45.7, 47.5, 48.8, 49, 49.7, 50.5, 50.8, 51.6 and 52. Data record: 1996 –2007
6	Do Not List	Carson River, East Fork	Total Dissolved Solids	Available data show impairment by TDS in this waterbody. 5 of 5 annual averages exceeded the annual average water quality objective of 80 mg/L. The 90th percentile value, 115 mg/L, exceeded the 90th percentile water quality objective of 100 mg/L. Samples collected at site: USGS-East Fork Caron River below Markleeville (Site Tag: 632ECR005). Data record: 2001 – 2005, samples (16 total) in all seasons
6	Do Not List	Mammoth Creek (Headwaters to Twin Lakes outlet)	Total Dissolved Solids	Available data show impairment by TDS in this waterbody. 5 of 5 annual averages exceeded the annual average water quality objective of 60 mg/L. The 90th percentile value, 113 mg/L, exceeded the 90th percentile water quality objective of 90 mg/L. Samples collected at site: USGS -Mammoth Creek at Twin Lakes (Site Tag: 603MAM008) Data record: 2001 – 2005, samples (17 total) in all seasons
8	Do Not List	Bolsa Chica Channel	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 49/63 samples of E. coli exceeded EPA's SSM (235 org/100ml). 42/63 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml). Samples collected at sites: bc1 and bc2. Data record: Mar 2004 – Mar 2006, wet and dry season samples.
8	Do Not List	Borrego Creek (from Irvine Blvd to San Diego Creek Reach 2)	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 37/43 samples of E. coli exceeded EPA's SSM (235 org/100ml). 33/43 samples of E. coli exceeded RB8's fecal coliform SSM

Table 3: Water bodies and/or pollutants added by EPA to California's 2008-2010 Section 303(d) List (Arranged by Regional Board and pollutant)				
RB	**State Assessment Decision**	**Water body name**	**Pollutant**	**EPA Assessment Summary**
				(400/100ml). Samples collected at sites: bor1 and bor2. Data record: Mar 2004 – Mar 2006, wet and dry season samples.
8	Do Not List	Goldenstar Creek	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 19/79 samples of E. coli exceeded EPA's SSM (235 org/100ml). 19/79 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml). Samples collected at sites: gs1, gs2 and gs3. Data record: Oct 2002 – June 2004, wet and dry season samples.
8	Do Not List	Peters Canyon Channel	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 40/66 samples of E. coli exceeded EPA's SSM (235 org/100ml). 37/66 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml). Samples collected at sites: pc1 and pc2. Data record: Mar 2004 – Mar 2006, wet and dry season samples.
8	Do Not List	Santa Ana Delhi Channel	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 39/62 samples of E. coli exceeded EPA's SSM (235 org/100ml). 33/63 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml). Samples collected at sites: del1 and del2. Data record: Mar 2004 – Mar 2006, wet and dry season samples.
8	Do Not List	Santa Ana River Reach 2	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 37/150 samples of E. coli exceeded EPA's SSM (235 org/100ml). 27/150 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml). Samples collected at sites: sar1, sar2, sar3, sar4, sar5 and sar6. Data record: Oct 2002 – Jun 2004, wet and dry season samples.

Table 3: Water bodies and/or pollutants added by EPA to California's 2008-2010 Section 303(d) List (Arranged by Regional Board and pollutant)				
RB	**State Assessment Decision**	**Water body name**	**Pollutant**	**EPA Assessment Summary**
8	Do Not List	Temescal Creek, Reach 6 (Elsinore Groundwater sub basin boundary to Lake Elsinore Outlet)	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 12/77 samples of E. coli exceeded EPA's SSM (235 org/100ml) and 10/26 exceeded at site tem3. 9/77 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml) and 9/26 exceeded at site tem3. Samples collected at sites: tem1, tem2 and tem3. Data record: Oct 2002 – Jun 2004, wet and dry season samples.
8	Do Not List	Morning Canyon Creek	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 17/61 samples of E. coli exceeded EPA's SSM (235 org/100ml) and 13/34 exceeded at site mc2. 9/61 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml) and 8/34 exceeded at site mc2. Samples collected at sites: mc1 and mc2. Data record: Mar 2004 – Apr 2006, wet and dry season samples.
8	Do Not List	San Diego Creek Reach 2	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 31 of 64 samples of E. coli exceeded EPA's SSM (235 org/100ml). 28/64 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml). Samples collected at sites: sd1, sd2 and sd3. Data record: Oct 2002– Jun 2004, wet and dry season samples.
8	Do Not List	Serrano Creek	Indicator Bacteria	Available data show indicator bacteria impairment in this water body. 35/68 samples of E. coli exceeded EPA's SSM (235/100ml). 32/68 samples of E. coli exceeded RB8's fecal coliform SSM (400/100ml). Samples collected at sites: ser1 and ser2. Data record: Mar 2004 – Mar 2006, wet and dry season samples.

Table 3: Water bodies and/or pollutants added by EPA to California's 2008-2010 Section 303(d) List (Arranged by Regional Board and pollutant)				
RB	**State Assessment Decision**	**Water body name**	**Pollutant**	**EPA Assessment Summary**
8	Do Not List	Cucamonga Creek Reach 1 (Valley Reach)	Lead	Available data show lead impairment in this water body. 76/79 samples of lead exceeded CTR criteria. An additional 54 samples were collected with detection limits that were inadequate to assess the standard and may represent additional exceedances. Samples collected at sites: NPDES Sites 2 and 3; HCMP sites: Cucamonga Creek above Ely Basin, Cucamonga Creek Near Mira Loma and Mill Creek at Chino. Data record: 1997-2005, wet and dry weather samples.
8	Do Not List	Santa Ana River Reach 3	Lead	Available data show lead impairment in this water body. 22/28 samples of lead exceeded CTR criteria. An additional 14 samples were collected with detection limits that were inadequate to assess the standard and may represent additional exceedances. Samples collected at sites: NPDES Site 8; HCMP sites: SAR at Etiwanda Ave, SAR at Hamner, SAR at MWD Xing, SAR at River Road and SAR at Van Buren Rd Data record: 1997-2006, wet and dry weather samples.
8	Do Not List	Santa Ana River Reach 6	Copper, Lead	Available data show copper and lead impairment in this water body. 5/8 samples of lead exceeded CTR criteria. An additional 28 samples were collected with detection limits that were inadequate to assess the standard and may represent additional exceedances. 3/3 samples of lead exceeded CTR criteria. An additional 33 samples were collected with detection limits that were inadequate to assess the standard and may represent additional exceedances. Samples collected at sites: NPDES Site 10 Data record: 1997-2006, wet and dry weather samples.