

**STATE OF CALIFORNIA
REGIONAL WATER QUALITY CONTROL BOARD
COLORADO RIVER BASIN REGION**

**DRAFT STAFF REPORT IN SUPPORT OF PROPOSED UPDATES
TO THE CLEAN WATER ACT SECTION 303(d) LIST AND PREPARATION OF THE
2008 INTEGRATED REPORT-LIST OF IMPAIRED WATERS
AND SURFACE WATER QUALITY ASSESSMENT [303(d)/305(b)]**

INTRODUCTION

The California Regional Water Quality Control Board, Colorado River Basin Region (Regional Board) is charged by the Porter-Cologne Water Quality Control Act with the protection of water quality for waters within the Region. The Regional Board is also responsible for implementing provisions and pollution control requirements that the federal Clean Water Act (CWA) specifies for surface waters of the United States. The Regional Board's Water Quality Control Plan (hereafter "Basin Plan") identifies all waters in the Region and establishes water quality standards (WQSs) for those waters. WQSs consist of limits or levels of water quality constituents or characteristics that are established for the reasonable protection of the beneficial uses of a water body.

Every two years, the State of California is required by federal CWA section 303(d) and Title 40, Code of Federal Regulations (CFR) section 130.7 to develop and submit to the U.S. Environmental Protection Agency (USEPA) for approval a list of polluted waters or water quality limited (or impaired) segments (distinct portions of rivers, streams, lakes, ocean waters, etc.). This list is commonly referred to as the "303(d) List" or the "List of Impaired Waters."

The 303(d) list includes water bodies that are not meeting, or are not expected to meet all WQSs (beneficial use, water quality objectives (or criteria) (WQOs) and the State's anti-degradation policy) with the implementation of technology-based controls and best management practices (BMPs). Listed water bodies can be delisted when evidence reveals that such impacts have ceased, impacts never existed, or the water body is meeting WQSs.

Following the identification of impaired water bodies, the State is required to establish a priority list of these water bodies, identify the pollutants that cause the impairments, and in partnership with the USEPA, develop pollutant-loading limits commonly called Total Maximum Daily Loads (TMDLs) or other appropriate regulatory actions. A TMDL is the total maximum daily loads of a pollutant that can be discharged into a given water body and still ensure the attainment of applicable WQSs.

The Regional Board's 303(d) List is reviewed and updated as necessary and is subject to the approval of the State Water Resources Control Board (State Board) and the USEPA. The Regional Board's 303(d) List was last updated in 2006, approved by the State Board that same year, and approved by the USEPA in 2007. Attachment One shows the 2006 CWA Section 303(d) List for the Region. The impaired surface waters for the Region are:

- 1- New River
- 2- Alamo River
- 3- Imperial Valley Drains

- 4- Salton Sea
- 5- Palo Verde Outfall Drains
- 6- Coachella Valley Stormwater Channel
- 7- Colorado River.

Based on data and comments received from stakeholders and based on data collected and assessed by Regional Board staff, staff is proposing that the Regional Board update its 2006 CWA Section 303(d) List, and submit the updated List to the State Board for approval. The State Board, in turn, will compile the Regional lists into a statewide list and consider it for adoption.

CWA section 305(b) requires states to submit to USEPA for approval a report assessing statewide surface water quality. The updated 303(d) List when combined with the Surface Water Quality Assessment (305(b) Report) is referred to as an “Integrated Report” for the Region. Following State Board’s adoption of the statewide 303(d) lists, the Integrated Report will be submitted to the USEPA for approval.

LISTING POLICY

In developing the 303(d) List, Regional Board staff considered federal regulations under the CWA (see, e.g., 40 CFR. Parts 25 and 130) and the State’s Water Quality Control Policy for Developing California’s CWA Section 303(d) List (hereafter “Listing Policy”) developed in 2004 (SWRCB, 2004). The Listing Policy is a standardized approach for developing California’s section 303(d) list. The Listing Policy also establishes requirements for data quality, data quantity, and administration of the listing process. The Policy provides standard rules for making listing or delisting decisions based upon different kinds of data and a standard statistical test identifying impairments in water. Decision rules for listing and delisting are provided for: chemical-specific WQSSs; bacterial WQSSs; health advisories; bioaccumulation of chemicals in aquatic life tissues; nuisances conditions such as trash, odor, and foam; nutrients; water and sediment toxicity; adverse biological response; and degradation of aquatic life populations and communities.

DATA SOLICITATION

Federal regulation [(40 CFR § 130.7(b) (5)] states that “Each State shall assemble and evaluate all existing and readily available water quality-related data and information” when developing the 303(d) list. Section 6.1.2.1 of the Listing Policy states that “Readily available data and information shall be solicited from any interested party, including but not limited to, private citizens, public agencies, state and federal governmental agencies, non-profit organizations, and businesses possessing data and information regarding the quality of the Region’s waters.” In December 2006, Regional Board staff solicited the public to submit any and all water quality data and information to be considered in preparation of the 2008 Integrated Report-List of Impaired Waters and Surface Water Quality Assessment [303(d)/305(b)]. This solicitation set a data submittal deadline of February 28, 2007. On January 30, 2007, staff transmitted a second notice clarifying that there were no limits on the type or format of data and information that the public could provide to the Water Boards for their assessment (see Attachment Two). The following agencies submitted responses to the notices:

<u>Agency</u>	<u>Information Submitted</u>
International Boundary and Water Commission, United States Section:	Letter requesting to be involved in reviewing the draft regional list (303(d)) and water quality assessments.
Riverside County Flood Control and Water Conservation District:	Letter notifying Regional Board staff that District data were already submitted to the Regional Board staff via the Fiscal Year 2005-2006 NPDES MS4 Permit Annual Report.
California Department of Pesticide Regulation:	Letter referring the Regional Board staff to the Department's Internet Databases that include water quality data on the region's surface waters.

Copies of all responses from the public will be sent to the State Water Resources Control Board in support of the Regional Board's List.

ASSESSMENT PROTOCOL

The first step of the water quality assessment involved collecting all readily available data and gathering metadata to evaluate the quality of the data. Due to the relatively limited number of data sets identified through the solicitation process, much effort was focused on collecting and assessing readily available data from the list of sources identified in Section 6.1.1 of the Listing Policy. The readily available data gathered for the assessment came from; Regional Board water quality monitoring programs; State Board water, fish tissue and sediment quality monitoring programs; Other State Agency monitoring programs, and; Federal Agency water quality monitoring programs. Emphasis was placed on evaluating data collected through the State of California's Surface Water Ambient Monitoring Program (SWAMP), because it was determined to be relatively balanced water quality information, not necessarily focusing on impaired or unimpaired water bodies. The objectives of SWAMP include: (1) water quality is comprehensively measured to protect beneficial uses, and to evaluate the State's protection and restoration efforts; (2) develop and implement a progressive quality assurance program using a systems-based approach to the generation and storage of application-appropriate data and metadata, and; (3) provide a consistent science-based framework for the evaluation of monitoring data relative to state and regional standards and the protection of beneficial uses and for tracking the effectiveness of management actions (SWRCB, 2005).

The second step of the water quality assessment involved screening all the data against the available water quality criteria and guidelines, and noting the number of samples that exceeded water quality criteria versus the total number of acceptable samples collected. The screening were completed in accordance with the Listing Policy guidance, using applicable narrative and numeric WQSs expressed in the Colorado River Basin Regions' Basin Plan and established criteria expressed in the California and National Toxic Rules. When the standard was expressed as a numeric level or a limit of a water quality constituent, that value was applied when assessing the data. When the standard was expressed as a characteristic established for the reasonable protection of the beneficial uses of a water body, staff applied numeric guidelines and criteria developed by the U.S. EPA and other government agencies, or findings published in peer-reviewed scientific literature, to evaluate the level of impairment or water

quality condition. These evaluation guidelines and criteria met the requirements of Section 6.1.3 of the Listing Policy. Please note that evaluation guidelines and criteria not explicitly expressed in the Basin Plan or applicable state wide policies are not WQSs and shall only be used for the purpose of developing the section 303(d) list. Attachment Three shows the criteria and objectives applied when screening water quality data. Note that not all of the criteria were applied because not all of the constituents were analyzed in samples.

The third step of the water quality assessment involved preparing lines of evidence. A line of evidence identifies: the specific water body segment/pollutant combination; beneficial use affected; applicable criteria, objective, or evaluation guideline when necessary to evaluate the data; a summary of the data used to assess water quality; information concerning the spatial and temporal representativeness of the data, and; information related to the quality of the data. Regional Board staff assessed all readily available data and prepared lines of evidence assessing individual water body segment/pollutant combinations for possible impairments.

The fourth step of the water quality assessment involved making listing decisions. Listing or delisting decisions were made in accordance with Listing Policy guidance. For the purpose of developing the proposed revisions to the 303(d) list, the Listing Policy recommends a “weight of evidence” approach to evaluate whether the evidence is in favor of listing or delisting a water body segment/pollutant combination. The lines of evidence serve as supporting information when making a decision of whether to list or delist a water body segment/pollutant combination. Lines of evidence with similar water body segment/pollutant combinations are combined and incorporated into the Fact Sheets. The Listing Policy specifies the frequency of exceedances of applicable WQOs that is necessary to make a determination that the water quality in the water body segment does or does not support a Beneficial Use.

PROPOSED CHANGES TO THE 303(d) LIST

Regional Board staff has reviewed the data and comments submitted by stakeholders and reviewed existing and readily available water quality-related data according to Listing Policy requirements. Based on that review, staff is proposing that the Regional Board update its 303(d) List so that the updated List:

1. Adds Diazinon, Endosulfan, Chlordane, Mercury, Enterococcus, and E. coli as pollutants from unknown sources impairing the Alamo River;
2. Adds DDT, Dieldrin, and PCBs as pollutants from unknown sources impairing the Coachella Valley Stormwater Channel;
3. Adds Chlordane as a pollutant from unknown sources impairing Imperial Valley Drains; The listing for Chlordane only applies to the Barbara Worth Drain, Peach Drain, Greeson Drain, South Central and Holtville Main Drain areas of the Imperial Valley drains.
4. Replaces the general pollutant “Pesticides” with the existing specific pesticides Chlorpyrifos, DDT, Diazinon, Dieldrin, and Toxaphene as pollutants from unknown sources impairing the New River;
5. Adds Hexachlorobenzene as a pollutant from unknown sources impairing the New River;
6. Adds Toxaphene as a pollutant from unknown sources impairing the Palo Verde Outfall Drain and Lagoon;

7. Adds Arsenic, Chlorpyrifos, DDT, Diazinon, and Enterococcus as pollutants from unknown sources impairing the Salton Sea;
8. Adds DDT as a pollutant from unknown sources impairing Wiest Lake;
9. Removes Trash as a pollutant from out-of-state sources impairing the New River category and places it in the Being Addressed by a USEPA approved TMDL category
10. Removes 1,2,4-Trimethylbenzene, Chloroform, p-Dichlorobenzene, p-Cymene, Toluene, m,p-Xylene, and o-Xylene, as pollutants from Industrial Point and out-of-state sources impairing the New River;
11. Modifies the time schedule for TMDL development.

Attachment Four shows the proposed updated 303(d) List for the Region. The following section describes the rationale for the changes.

RATIONALES FOR PROPOSED CHANGES TO THE 303(d) LIST

The proposed new listings, delistings, and modifications to the Colorado River Basin Region 2008 303(d) List are described in Attachment Four. The rationales for the proposed changes follow:

- 1- Add Diazinon, Endosulfan, Chlordane, Mercury, Enterococcus, and E. coli as pollutants from unknown sources impairing the Alamo River. These pollutants should be added to the 303(d) List because the assessed data shows that the number of measured exceedances of applicable criteria or objectives supports rejection of the null hypotheses as presented in Table 3.1 and Table 3.2 of the Listing Policy.
- 2- Add DDT, Dieldrin, and PCBs as pollutants from unknown sources impairing the Coachella Valley Stormwater Channel. These pollutants should be added to the 303(d) List because the assessed data shows that the number of measured exceedances of applicable criteria or objectives supports rejection of the null hypothesis as presented in Table 3.1 of the Listing Policy.
- 3- Add Chlordane as a pollutant from unknown sources impairing Imperial Valley Drains. The listing for Chlordane only applies to the Barbara Worth Drain, Peach Drain, Greenson Drain, South Central and Holtville Main Drain areas of the Imperial Valley drains. This pollutant should be added to the 303(d) List because the assessed data shows that the number of measured exceedances of applicable criteria or objectives supports rejection of the null hypothesis as presented in Table 3.1 of the Listing Policy.
- 4- Replace the general pollutant "Pesticides" with the existing specific pesticides Chlorpyrifos, DDT, Diazinon, Dieldrin, and Toxaphene as pollutants from unknown sources impairing the New River. The 2006 303(d) List replaced the general term "Pesticides" with specific pesticides for both the Alamo River and the Imperial Valley Drains. The New River is listed for specific pesticides, but the general pollutant "Pesticides" stayed on the list unchanged.
- 5- Add Hexachlorobenzene as a pollutant from unknown sources impairing the New River. This pollutant should be added to the 303(d) List because the assessed data shows that the number of measured exceedances of applicable criteria or objectives supports rejection of the null hypothesis as presented in Table 3.1 of the Listing Policy.

- 6- Add Toxaphene as a pollutant from unknown sources impairing the Palo Verde Outfall Drain and Lagoon. This pollutant should be added to the 303(d) List because the assessed data shows that the number of measured exceedances of applicable criteria or objectives supports rejection of the null hypothesis as presented in Table 3.1 of the Listing Policy.
- 7- Add Arsenic, Chlorpyrifos, DDT, Diazinon, and Enterococcus as pollutants from unknown sources impairing the Salton Sea. These pollutants should be added to the 303(d) List because the assessed data shows that the number of measured exceedances of applicable criteria or objectives supports rejection of the null hypothesis as presented in Table 3.1 of the Listing Policy.
- 8- Add DDT as a pollutant from unknown sources impairing Wiest Lake. This pollutant should be added to the 303(d) List because the assessed data shows that the number of measured exceedances of applicable criteria or objectives supports rejection of the null hypothesis as presented in Table 3.1 of the Listing Policy.
- 9- Remove Trash as a pollutant from out-of-state sources impairing the New River category and place it in the Being Addressed by a USEPA approved TMDL category. The New River Trash TMDL was adopted by the Regional Board on June 21, 2006, approved by the State Board on April 18, 2007, approved by the Office of Administrative Law on August 2, 2007, and approved by U.S. EPA on September 24, 2007. A TMDL has been developed and approved by USEPA and the approved implementation plan is expected to result in full attainment of the standard within a specified time frame, supporting placement into the Being Addressed category according to Section 2.2 of the Listing Policy
- 10- Remove 1,2,4-Trimethylbenzene, Chloroform, p-Dichlorobenzene, p-Cymene, Toluene, m,p-Xylene, and o-Xylene, as pollutants from Industrial Point and out-of-state sources impairing the New River. The original listings identify Industrial Point and out-of-state sources of these pollutants impairing the New River. Since March of 2007, a Wastewater Treatment Plant (Las Arenitas) in Mexico, has treated nearly 100% of the municipal wastewater from Mexicali Mexico. Water samples collected since March of 2007 from a sampling point on the river located immediately downstream of the International Boundary have not contained these chemicals at detectable concentrations. These pollutants should be removed from the 303(d) List because the assessed data shows that the number of measured exceedances of applicable criteria or objectives supports rejection of the null hypothesis as presented in Table 4.1 of the Listing Policy.
- 11- Modify the time schedule for TMDL development. All water body-pollutant combinations on the section 303(d) list are assigned with a proposed TMDL completion date. The maximum time that can elapse between 303(d) listing and TMDL completion is 13 years. Accordingly, all new listings are assigned a TMDL completion date of 2021 as can be seen in Attachment Four. This does not suggest that all new listings have the same priority, but rather that the factors determining TMDL priorities have not yet been evaluated as part of this listing process. These factors will be considered through the continuing planning process and with input from the Regional Board and stakeholders.

Attachment Five contains Fact Sheets in support of the proposed new Listing and Delistings.

INTEGRATED REPORT

The 303(d)/305(b) Integrated Report will be prepared by State Board staff based on the information submitted in this report and similar information prepared by all the other Regions. The Integrated Report will then be submitted to the USEPA. All of the assessments completed for the preparation of the updated 303(d) List will be included in the Integrated Report, and will be used to determine which category to assign assessed water bodies.

The USEPA defines five non-overlapping categories for use in the integrated assessment (USEPA, 2005). These categories include:

- Category 1: All designated uses are supported, no use is threatened;
- Category 2: Available data and/or information indicate that some, but not all of the designated uses are supported;
- Category 3: There is insufficient available data and/or information to make a use support determination;
- Category 4: Available data and/or information indicate that at least one designated use is not being supported or is threatened, but a TMDL is not needed;
- Category 5: Available data and/or information indicate that at least one designated use is not being supported or is threatened, and a TMDL is needed.

The 2008 Integrated Report adopted by State Board will include the 303(d) listing changes approved by the Regional Board. Categories 4 and 5 reflect those water bodies placed on the 303(d) list.

ATTACHMENTS

1. The 2006 303(d) List for the Colorado River Basin Region.
2. The December 4, 2006 Public Solicitation Letter and the January 30, 2007 Clarification Notice.
3. Tables of WQOs, Criteria, and Guidelines applied during the assessment of readily available data.
4. Proposed new listings, delistings, and modifications to the Colorado River Basin Region 2008 303(d) List.
5. Fact Sheets in support of new listings and delistings to the Colorado River Basin Region 2008 303(d) List.

REFERENCES

Colorado River Basin Regional Water Quality Control Board (CRBRWQCB). 2006. Water Quality Control Plan (Basin Plan), Colorado River Basin-Region 7. Palm Desert, CA.

Office of Environmental Health Hazard Assessment (OEHHA). 1999. Prevalence of Selected Target Chemical Contaminants in Sport Fish from Two California Lakes: Public Health Designed Screening Study. June 1999, RK Brodberg and GA Pollack, Pesticide and Environ. Toxic. Sctn, Office of Environmental Health Hazard Assessment, Calif. EPA, Sacramento, Calif.

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