

# **SAN DIEGO**

# REGIONAL WATER QUALITY CONTROL BOARD

**CLEAN WATER ACT SECTION 305(b)** 

#### "OFF-CYCLE" REPORT FOR THE SAN DIEGO REGION

November 2019

#### REGIONAL WATER QUALITY CONTROL BOARD SAN DIEGO REGION

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CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

# **Executive Summary**

This report contains staff recommendations for updates to the Clean Water Act Section 305(b) Surface Water Quality Assessment for the San Diego Region. Specifically, this report describes proposed additions to the 305(b) list of Category 1 water bodies, or those supporting at least one core beneficial use and with no known impairments. In addition, this report provides information on where existing Category 5 water bodies, or those with one or more existing impairment (303(d) listing), that have evidence that some beneficial uses are supported, noted as Category "Partially Supporting." The recommendations are based on biological assessment (bioassessment) data and information collected from San Diego Regional Water Quality Control Board (San Diego Water Board) surface water bodies (rivers and streams) and submitted prior to the end of the data solicitation period for the statewide 2018 Integrated Report cycle.

This staff report provides background on the assessment process and the methods used. The primary data source used was Surface Water Ambient Monitoring Program (SWAMP) bioassessment data. The assessments are summarized in water body fact sheets (see Appendix A). Based on assessments of these data, staff recommend 17 new and five (5) updated Category 1 (fully supporting all beneficial uses assessed) and the identification of seven (7) stream segments where bioassessment data indicates the warm freshwater habitat (WARM) and/or cold freshwater habitat (COLD) Beneficial Use(s) is/are being supported (See Table 4).

Following the public participation process, the San Diego Water Board will consider adopting staff recommendations and sending them to the State Water Resources Control Board (State Water Board) for inclusion in the 2018 California Integrated Report.

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# **List of Acronyms and Abbreviations**

Term Definition

Basin Plan Regional Water Quality Control Plan CSCI California Stream Condition Index

CWA Clean Water Act

Listing Policy Water Quality Control Policy for Developing California's Section

303(d) List

LOE Line of Evidence

QAPP Quality Assurance Project Plan

San Diego Water San Diego Regional Water Quality Control Board

Board

State Water Board State Water Resources Control Board

SWAMP Surface Water Ambient Monitoring Program

TMDL Total Maximum Daily Load

U.S. EPA U.S. Environmental Protection Agency

#### 1. Introduction

The Clean Water Act (CWA) gives states the primary responsibility for protecting and restoring surface water quality. The State Water Board is California's water pollution control agency for all federal purposes (Cal. Wat. Code, § 13160). The State Water Board along with the nine Regional Water Boards (collectively, the State and Regional Boards are referred to as the Water Boards) protect and enhance the quality of California's water resources through implementing the Federal Water Pollution Control Act Amendments of 1972, as amended (33 U.S.C. § 1251 et seq.; Clean Water Act, § 101 et seq.), and California's Porter-Cologne Water Quality Control Act (Wat. Code, § 13000 et seq.).

Under the CWA, states that administer the CWA must review, make necessary changes to, and submit the CWA section 303(d) List, or list of impaired and threatened waters, to the U.S. Environmental Protection Agency (U.S. EPA). CWA section 305(b) requires each state to report biennially to U.S. EPA, on the condition of its surface water quality. The U.S. EPA guidance to the states recommends the two reports be integrated (U.S. EPA, 2005). For California, this "Integrated Report" is called the California Integrated Report and combines the State Water Board's section 303(d) and 305(b) reporting requirements. California divides the state into nine regions, which produce the Integrated Report, or combined 303(d) and 305(b) Lists, in a rotating fashion (See Section 1.2), with on- and off-cycle regions. San Diego Water Board is currently considered "off-cycle" during the 2018 reporting cycle and is not required to produce an Integrated Report. However, San Diego Region chose to assess available data to update the 305(b) List, and this Staff Report is the resulting 305(b) report. This staff report does not provide recommendations for additions, deletions, and changes to the 303(d) List for the 2018 listing cycle. The California Regional Water Quality Control Board, San Diego Region (San Diego Water Board) is "on cycle" for the 2020 Integrated Report (data solicitation period ended on June 14, 2019), when a more comprehensive assessment will be conducted and result in updates to both 305(b) and 303(d) Reports.

# 2. Water Quality Assessment

The water quality assessment process begins with the evaluation of data collected from surface water quality monitoring activities in California. The data collected are analyzed to determine if a water body is meeting or exceeding water quality standards. The attainment of water quality standards is determined by comparing data to objectives, criteria, and guidelines (protective limits). This analysis forms the basis of 303(d) and 305(b) assessments. Whether or not these protective limits are exceeded determines a water segment's ability to support its assigned beneficial uses (305(b)) and whether to recommend listing, or not listing, a water body-pollutant combination as impaired on the 303(d) List.

#### 2.1 The Listing Policy

Recommendations to place a water body segment on the 303(d) List are made in conformance with the <u>Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List<sup>1</sup>, commonly referred to as the Listing Policy (SWRCB, 2015). The Listing Policy establishes a standardized approach for developing California's section 303(d) List.</u>

The Listing Policy also establishes requirements for data quality used for generating both the 303(d) and 305(b) Lists. The Listing Policy requires the water quality assessments (305(b)) and listing decisions (303(d)) to be documented in water body Fact Sheets. Fact Sheets contain Lines of Evidence (LOEs) for each data type which are used to make listing Decisions for each water body-pollutant combination. The Fact Sheets supporting the 2018 305(b) Report for water bodies in the San Diego Water are provided in Appendix A.

# 3. Integrated Report Cycles

The Integrated Report is released in "cycles" with each cycle occurring every two years, on even numbered years. Each Integrated Report cycle consists primarily of assessments from the three Regional Boards that are "on-cycle" (see Table 1 below). The other six Regional Boards that are "off-cycle" may also assess new high-priority data and make new listing or delisting decisions at their discretion.

| Year | Regional Water Boards           |  |  |
|------|---------------------------------|--|--|
|      | North Coast (Region 1)          |  |  |
| 2018 | Lahontan (Region 6)             |  |  |
|      | Colorado River Basin (Region 7) |  |  |
|      | Central Coast (Region 3)        |  |  |
| 2020 | Central Valley (Region 5)       |  |  |
|      | San Diego (Region 9)            |  |  |
|      | San Francisco Bay (Region 2)    |  |  |
| 2022 | Los Angeles (Region 4)          |  |  |
|      | Santa Ana (Region 8)            |  |  |

**Table 1. Integrated Report Schedule** 

For the San Diego Water Board, the 2018 year is "off-cycle", so this report consists of the assessment of new high-priority data not associated with listing or delisting decisions.

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<sup>&</sup>lt;sup>1</sup> https://www.waterboards.ca.gov/water\_issues/programs/tmdl/303d\_listing.html

#### 4. Data Solicitation

On November 3, 2016, the State Water Board solicited data from the public with the Notice of Public Solicitation of Water Quality Data and Information for the California Integrated Report<sup>2</sup> sent to interested parties subscribed to the Integrated Report e-mailing list<sup>3</sup>. This Notice, for Regions 1, 6 and 7 listed the types of data that would be accepted and described the procedure for submitting data for consideration for the Integrated Report. For the 2018 Integrated Report cycle, data were required to be submitted via the California Environmental Exchange Data Network (CEDEN), unless as otherwise noted in the solicitation. Data submitted prior to May 3, 2017, were considered for the 2018 cycle.

In response to the Board's disappointment that the previous Region 9 "on-cycle" (2016) Integrated Report did not include recent biological assessment data, the San Diego Water Board focused on assessing stream segments with biological assessment data available during this "off-cycle" assessment. The intention of the assessments is to add water bodies to Category 1 and to identify those stream segments (Category "Partially Supporting") where bioassessment results indicate conditions are supporting the WARM and/or COLD Beneficial Use even though the stream segment may currently be on the 303(d) List for one or more impairments.

During the data solicitation period, data and information collected from San Diego Water Board surface waters were received from Surface Water Ambient Monitoring Program (SWAMP) and are available online on the <u>SWAMP Bioassessment Scores Map</u><sup>4</sup>.

# 5. Data Processing

Data and information were processed and evaluated as required by the Listing Policy.

For this "off-cycle" report, all readily available data and information were considered relative to the focused effort on biological assessment; however, only high-quality data supported by a Quality Assurance Project Plan were used as primary lines of evidence to make determinations of water quality standards attainment. In the absence of quality assurance documentation, data were used only as supporting evidence and not the basis of a listing decision.

<sup>&</sup>lt;sup>2</sup>https://www.waterboards.ca.gov/water\_issues/programs/water\_quality\_assessment/docs/2018\_solicit\_ltr.pdf

<sup>&</sup>lt;sup>3</sup> https://www.waterboards.ca.gov/resources/email\_subscriptions/swrcb\_subscribe.html <sup>4</sup>https://www.waterboards.ca.gov/water\_issues/programs/swamp/bioassessment/csci\_s cores\_map.html

Data were aggregated by water body segments and assessments were performed on each water body segment. Water bodies were segmented to account for hydrologic features or as described in The Water Quality Control Plan for the San Diego Basin (Basin Plan).

Temporal representation of data was assessed using the requirements and guidance of the Listing Policy. The available data used include California Stream Condition Index (CSCI) scores, which represent the biological condition of the water body or water body segments.

#### 6. Water Quality Standards Used in Assessments

As defined in CWA and federal regulations, water quality standards include the designated uses of a water segment, the adopted water quality criteria, and the State's Antidegradation Policy (State Water Board Resolution No. 68-16). Under State law (Porter-Cologne Water Quality Control Act, California Water Code § 13300 et seq.), water quality standards are beneficial uses of a water segment, the established water quality objectives (both narrative and numeric), and the State's Antidegradation Policy.

Beneficial uses of the stream segments assessed for this report are identified in the Basin Plan and provided in Table 2-1. The beneficial uses considered were WARM and COLD.

The evaluation guideline used for the assessments was selected in conformance with section 6.1.3 of the Listing Policy. The San Diego Water Board used the CSCI (Mazor et al., 2016), a biological assessment scoring tool that helps aquatic resource managers translate complex data about benthic macroinvertebrates found living in a stream into an overall measure of stream biological integrity. The CSCI score is calculated by comparing the expected condition with actual (observed) results (Rehn, A.C. et al., 2015) and range from 0 (highly degraded) to greater than 1 (equivalent to reference). CSCI scoring of biological condition are found below in Table 2 and follow the scientific paper supporting the development of the CSCI scoring tool. Sites with scores below 0.79 are considered to not be supporting the WARM and/or COLD Beneficial Use.

Table 2. Condition of Water Body Segment Biological Integrity based on CSCI Scores

| Condition                 | Scoring Range      |
|---------------------------|--------------------|
| Likely to be Intact       | CSCI ≥ 0.92        |
| Possibly Altered          | 0.92 > CSCI ≥ 0.79 |
| Likely to be Altered      | 0.79 > CSCI ≥ 0.63 |
| Very Likely to be Altered | 0.63 > CSCI        |

Reference sites are the core of the statewide biological and habitat assessment program and set the benchmark for biological conditions expected when human activity in the landscape is absent or minimal. Scientifically defined (Ode et al., 2016), these reference, or minimally disturbed, sites are found in water bodies that pass specific screening criteria, such as limited development and other human impacts in its watershed. They were used to develop the CSCI tool and provide a comparison for generating scores per stream segment.

In 2014, the State Water Board redefined the Integrated Report categories in order to make them more reflective of the actual water quality conditions in the State. This revision allows minimally disturbed (reference) stream segments to be placed into Category 1. Unless there is additional data showing that beneficial uses in the water body are not being supported, these reference water bodies will be placed in Category 1 (all core beneficial uses are supported). A non-reference water body with a CSCI score of 0.79 or higher and no impairment listings, supports the WARM and/or COLD Beneficial Use(s) and will be placed in Category 1 (all core beneficial uses are supported). A non-reference water body with a CSCI score of 0.79 or higher and impairment listings (or evidence of lack of beneficial use support) will remain in Category 5. However, to indicate that at least one beneficial use (WARM and/or COLD) is being supported by these water bodies, they will also be identified by the San Diego Water Board as Category "Partially Supporting." Such water body segments were formerly identified in the Integrated Report as Category 2 waters (see Section 3 below).

# 7. Region-Specific Issues

None included. This "off-cycle" 305b Report is limited to data on biological assessments.

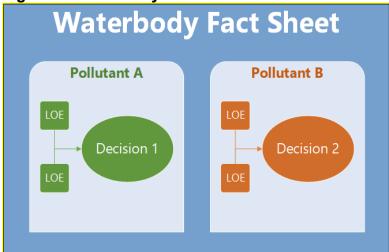
# 8. Water Body Fact Sheets

A water body Fact Sheet is comprised of Lines of Evidence (LOEs) and beneficial use support decisions based on available water quality data and information collected within the water body.

A LOE was developed for each unique combination of a water body, pollutant, matrix and fraction. LOEs were developed for each stream segment considered in the "off-cycle" assessment for the pollutant described as Benthic Community Effects.

A Fact Sheet is prepared for each water body that summarizes the decisions and supporting LOEs for each water body. Figure 1 below illustrates how LOEs and decisions are combined into the water body Fact Sheets. Detailed Fact Sheets for all water bodies assessed for the 2018 305(b) Report are available in Appendix A.

Figure 1. Water body Fact Sheets



Potential sources are only identified in Fact Sheets when a specific source analysis has been performed as part of a TMDL or other regulatory process. Otherwise, the potential source is marked "Source Unknown."

#### 9. Recommended Updates to the Integrated Report

#### 9.1 Recommended Updates to the 305(b) Report

To meet CWA section 305(b) requirements of reporting on water quality conditions, the Integrated Report places each water body into one of five Integrated Report Categories based on the assessment of all available data collected in that water body. The water body's overall category is determined based on the outcomes of all beneficial use support decisions in the water body, as described below.

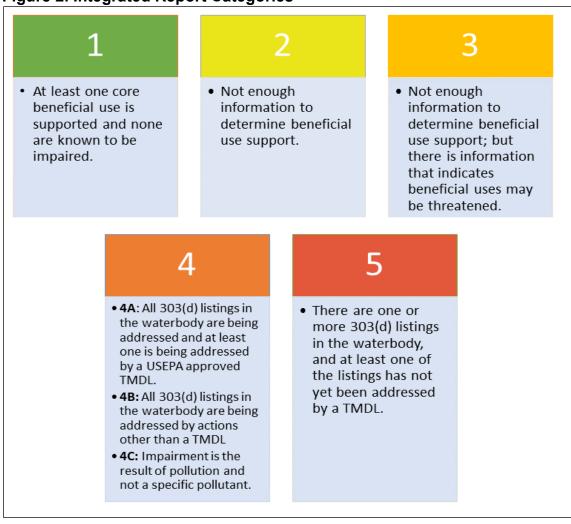
If a water body segment has no existing or proposed 303(d) listings, and staff concluded that at least one beneficial use is fully supported, it is placed into Category 1. If staff could not determine use support for at least one beneficial use, the water body segment is placed into Category 2, or Category 3 depending on the likelihood of impairment. This approach was taken to prevent water bodies with insufficient data from being classified as fully attaining standards, thus providing a more accurate baseline for future assessments.

In the San Diego Water Board's 2014 Integrated Report, the San Diego Water Board used a differing version of Category 2, which was defined as follows:

Category 2: At least one, but not necessarily all, core beneficial uses are supported.

In the 2014 Integrated Report, the San Diego Water Board used Category 2 to identify those water bodies where data showed one beneficial use was supported despite the Category 5 listing for another beneficial use. This is consistent with the U.S. EPA guidance for Integrated Reporting (U.S. EPA, 2005 and U.S. EPA, 2015). The State Water Board has recently changed the Category definition (see Figure 2). Thus, the San Diego Water Board can no longer place such water bodies into Category 2. As a result, these water bodies are included, for tracking purposes, in a "Partially Supporting" Category (Table 4) to identify that data indicates the some, but not all, core beneficial uses are supported.





In the 2018 cycle, a total of 29 water body segments and corresponding CSCI scores were evaluated for benthic community effects in the San Diego Region for placement into Category 1 or "Partially Supporting". Table 3 below describes each category and summarizes the number and extent of water body segments in each category. Table 4 provides a list of all San Diego Region streams that have been placed into Category 1 or "Partially Supporting."

Table 3. Summary of Existing and Recommended Updates to 305(b) Report Categories using CSCI Scores for streams and rivers, represented as both counts (number of water bodies) and length estimates (miles)

| Report Condition<br>Category   | Existing Streams<br>per Category<br>(Count) | 2018<br>Proposed<br>Changes<br>(Count) | Sum of Current<br>+ Proposed<br>(Count) | 2018<br>Proposed<br>Changes<br>(Miles) |
|--|---|--|---|--|
| 1 (At least one core beneficial use is supported and none are known to be impaired)            | 25  | 17                                     | 42                                      | 76.06                                  |
| Partially Supporting (At least one, but not necessarily all, core beneficial use is supported) | 1   | 7                                      | 8                                       | 84.95                                  |

Table 4. Current and recommended new Category 1 streams and stream segments where bioassessment data indicates the WARM and/or COLD Beneficial Use is being supported though other Beneficial Uses may not ("Partially Supporting"). HU = Hydrologic Unit. Names in parenthesis indicate clarifications or references to source data names.

| Category             | HU  | Listing Cycle | Stream/Stream Segment                  |
|----------------------|-----|---------------|--|
| 1                    | 901 | 2014/2016     | Upper Arroyo Trabuco (USFS)            |
| 1                    | 901 | 2014/2016     | Hot Spring Canyon Creek                |
| Partially Supporting | 901 | 2014/2016     | San Mateo                              |
| 1                    | 901 | Current       | Falls Canyon                           |
| Partially Supporting | 901 | Current       | Bell Canyon Creek                      |
| 1                    | 901 | Current       | Cold Spring Canyon                     |
| 1                    | 901 | Current       | Devils Canyon                          |
| 1                    | 902 | 2014/2016     | Roblar Creek                           |
| 1                    | 902 | Current       | Unnamed Tributary to Arroyo Seco Creek |
| 1                    | 902 | Current       | Upper De Luz Creek (unnamed tributary  |
|                      |     |               | at De Luz Murrieta Road)               |
| 1                    | 902 | Current       | Bear Creek (unnamed tributary to       |
|                      |     |               | Murrieta Creek near Keith Road)        |
| Partially Supporting | 902 | Current       | Sandia Creek                           |
| 1                    | 903 | 2014/2016     | Upper Agua Caliente Creek              |
| 1                    | 903 | 2014/2016     | Upper Pauma Creek                      |
| 1                    | 903 | 2014/2016     | Doane Creek                            |
| 1                    | 903 | 2014/2016     | Fry Creek                              |
| 1                    | 903 | 2014/2016     | Iron Springs Creek                     |
| 1                    | 903 | Current       | French Creek                           |
| 1                    | 903 | Current       | Weaver Creek                           |

| Category             | HU  | Listing Cycle | Stream/Stream Segment                   |
|----------------------|-----|---------------|---|
| 1                    | 903 | Current       | Pine Valley Creek (Unnamed Tributary to |
|                      |     |               | West Fork San Luis Rey River)           |
| Partially Supporting | 903 | Current       | Keys Creek                              |
| 1                    | 905 | 2014/2016     | Carney Canyon Creek                     |
| 1                    | 905 | 2014/2016     | Boden Canyon Creek                      |
| 1                    | 905 | 2014/2016     | Temescal Creek above Pamo Road          |
| 1                    | 905 | Updated       | Santa Ysabel Creek above Sutherland     |
|                      |     |               | Reservoir                               |
| 1                    | 905 | Current       | Black Canyon Creek                      |
| 1                    | 905 | Current       | Sycamore Creek                          |
| Partially Supporting | 905 | Current       | Kit Carson Creek (San Bernardo Valley)  |
| 1                    | 907 | 2014/2016     | Cedar Creek                             |
| 1                    | 907 | Updated       | Upper San Diego River                   |
| 1                    | 907 | 2014/2016     | Upper King Creek                        |
| 1                    | 907 | 2014/2016     | Boulder Creek above Boulder Creek       |
|                      |     |               | Road                                    |
| 1                    | 907 | Current       | Conejos Creek                           |
| Partially Supporting | 907 | Current       | Los Coches Creek                        |
| 1                    | 909 | Updated       | Japacha Creek above 79                  |
| 1                    | 909 | 2014/2016     | Sweetwater River above Tanglewood       |
|                      |     |               | Lane                                    |
| 1                    | 909 | 2014/2016     | Cold Spring Creek                       |
| 1                    | 909 | Current       | Juaquapin Creek                         |
| 1                    | 909 | Current       | Viejas Creek                            |
| Partially Supporting | 910 | Current       | Jamul Creek                             |
| 1                    | 911 | 2014/2016     | Noble Canyon                            |
| 1                    | 911 | Updated       | Indian Creek                            |
| 1                    | 911 | 2014/2016     | Pine Valley Creek above Barrett         |
|                      |     |               | Reservoir                               |
| 1                    | 911 | 2014/2016     | Kitchen Creek above Kitchen Creek Road  |
| 1                    | 911 | Updated       | Long Canyon Creek                       |
| 1                    | 911 | 2014/2016     | Wilson Creek above Barrett Reservoir    |
| 1                    | 911 | Current       | Antone Canyon Creek                     |
| 1                    | 911 | Current       | Troy Canyon Creek                       |
| 1                    | 911 | Current       | Copper Canyon Creek (Unknown tributary  |
|                      |     |               | to Tijuana River)                       |
| Partially Supporting | 911 | Current       | Cottonwood Creek (Tijuana River         |
|                      |     |               | Watershed)                              |

# 10. Recommended Updates to the 303(d) List of Impaired Water bodies

During this "off-cycle" assessment, there are no recommended updates to the 303(d) list.

#### 11. TMDL Scheduling

During this "off-cycle" assessment, there are no new TMDL recommendations. Based on the 2018 Triennial Basin Plan Review, the San Diego Water Board has begun development of TMDLs for the Tijuana River for bacteria and trash to complement the alternative TMDL approach for impaired habitat-related beneficial uses.

# 12. Public Review and Approval Process

#### 12.1 Regional (San Diego) and State Board Approval Process

Pursuant to section 6.2 of the Listing Policy, water bodies proposed for the 303(d) listing require public review and approval by the San Diego Water Board during a public Board hearing. They are then submitted to the State Water Board for compiling into the statewide 303(d) List. As described in Section 3.1 above, these water bodies are placed into Integrated Report Categories 4a, 4b, and 5. Water bodies listed in Integrated Report Categories 1, 2, 3, 4c, or "Partially Supporting" are also provided to the State Water Board. Water bodies listed in Integrated Report Category 1 and "Partially Supporting" do not require public review, but will be distributed for public review and comment and then presented to the San Diego Water Board during a public Board hearing. Water bodies in Categories 1-5 and "Partially Supporting" are then compiled by the State Water Board staff into the California Integrated Report. Once compiled, the California Integrated Report is noticed for additional public review and approval by the State Water Board Executive Director or the State Water Board, as outlined in section 6.3 of the Listing Policy.

#### 12.2 Timely Requests for State Board Review

If any person or entity seeks to have the State Water Board review a listing recommendation made by the San Diego Water Board with respect to one or more water bodies, the individual or entity must submit a request to the State Water Board to review the specific listing recommendation no later than 30 days after the date of the San Diego Water Board's approval of the resolution. The State Water Board may refuse to receive public comment concerning listing recommendations from a Regional Water Board that are not timely requested for review. A request for review shall include the identification of the water body/pollutant combination of concern and an explanation of why the requestor believes that the Regional Water Board's corresponding recommendation is unsupported or inadequate.

Before the State Water Board approves the 2018 303(d) List, the State Water Board shall provide advance notice and an opportunity for public comment. The public comment will be limited to the listing recommendations that are timely requested for review unless the State Water Board elects to consider recommendations on other waters.

#### 12.3 U.S. EPA Review

Upon approval by the State Water Board, the statewide 2018 List shall be submitted to U.S. EPA for approval as required by the Clean Water Act.

The 303(d) List of impaired waters and 305(b) List of surface water quality conditions will require final approval by the U.S. EPA. If U.S. EPA determines that changes are needed to the submitted report, they will initiate further public review before finalizing and publishing the report.

#### 13. References

Mazor, R.D., Rehn, A.C., Ode, P.R., Engeln, M., Schiff, K.C., Stein, E.D., Gillett, D. J., Herbst, D.B. and C.P. Hawkins. 2016. Bioassessment in complex environments: designing an index for consistent meaning in different settings. *Freshwater Science* 35(1): 249-271.

Ode P.R., Rehn, A.C., Mazor, R.D., Schiff, K.C., Stein, E.D., May, J.T., Brown, L.R., Herbst, D.B., Gillett, D., Lunde, K. and C.P. Hawkins. 2016. Evaluating the adequacy of a reference-site pool for ecological assessments in environmentally complex regions. *Freshwater Science* 35(1): 237-248.

Rehn, A.C., Mazor, R.D. and P. R. Ode. 2015. The California Stream Condition Index (CSCI): A New Statewide Biological Scoring Tool for Assessing the Health of Freshwater Streams. SWAMP Technical Memorandum. SWAMP-TM-2015-0002.

State Water Resources Control Board (SWRCB). 2015. Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List. SWRCB. Sacramento, CA.

SWRCB. 2005. Water Quality Control Policy of Addressing Impaired Waters. State Water Resources Control Board Resolution No. 2005-0050. SWRCB. Sacramento. CA.

United States Environmental Protection Agency (U.S. EPA). 1997. Memorandum from Robert Perciasepe, Assistant Administrator, to Regional Administrators and Regional Water Division Directors Regarding New Policies for Establishing and Implementing Total Maximum Daily Loads (TMDLs).

U.S. EPA. 2003. Elements of a State Water Monitoring and Assessment Program. U.S. EPA. Washington, D.C.

U.S. EPA. 2005. Guidance for 2006 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d), 305(b), and 314 of the Clean Water Act. U.S. EPA. Washington, D.C.

U.S. EPA. 2015. Memorandum from Robert Perciasepe, Assistant Administrator, to Regional Administrators and Regional Water Division Directors Regarding Information Concerning 2016 Clean Water Act Sections 303(d), 305(b), and 314 Integrated Reporting and Listing Decisions. U.S. EPA. Washington, D.C.