**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**LAHONTAN REGION**

**MEETING OF JUNE 18-19, 2014**
**BISHOP, CA**

**ITEM:** **13**

**SUBJECT:** **PUBLIC HEARING – RECOMMENDATIONS TO THE STATE WATER RESOURCES CONTROL BOARD REGARDING THE CLEAN WATER ACT SECTION 303(D) LIST OF IMPAIRED SURFACE WATER BOADIES**

**DISCUSSION:** Section 303(d) of the federal Clean Water Act (CWA) requires states to identify surface water bodies that are not attaining water quality standards, and water body-pollutant combinations that must be addressed within a certain timeframe. Several methods exist to address the impairment, which include, but are not limited to, adoption of a Total Maximum Daily Load (TMDL), issuance of a cleanup and abatement order, or adoption of a specific permit or waiver.

Section 305(b) of the CWA requires states to report on the condition of all surface water bodies, including non-impaired waters, every two years. The United States Environmental Protection Agency (USEPA) and the State Water Resources Control Board (State Water Board) have recently developed a new strategy to provide for a more efficient Integrated Report process for California. The strategy involves three of the nine Regional Water Boards submitting an Integrated Report for each listing cycle. For the current water quality assessment cycle, the State Water Board plans to prepare an "Integrated Report" meeting the requirements of Sections 303(d) and 305(b) for Regional Boards 1, 6, and 7.

The Lahontan Regional Water Quality Control Board (Water Board) last voted on recommendations for changes to the Section 303(d) List of impaired waters in 2009. Since 2009 the State Water Board developed a database to store assessment information and produce water body Fact Sheets and other reports. To accommodate the larger influx of data received and limited staff resources to evaluate this data, the State Water Board needed to focus on three regional boards at one time rather than all nine every two years.

For this assessment cycle, Water Board staff assessed Surface Water Ambient Monitoring Program (SWAMP) data and data submitted by stakeholders in response to a formal solicitation process. Database entries resulted in 1,698 new "lines of evidence" and 2,328 water body fact sheets summarizing the information and data supporting staff's recommendations. The lines of evidence and facts sheets nearly doubled this cycle in comparison to the 2010

listing cycle when 1,266 fact sheets were created. The assessment process also involved assigning ratings evaluating beneficial use support. The database uses these ratings to place water body-pollutant combinations in one of five Integrated Report categories. This assessment meets the requirements of CWA Section 305(b). The database, fact sheets, and summary tables can be found on the Water Board's website at the following address: http://www.waterboards.ca.gov/lahontan/water_issues/programs/tmdl/303d_305b/.

Twenty-seven water body-pollutant combinations are recommended for addition to the Section 303(d) list. Two water body-pollutant combinations are recommended for delisting. Staff identified 11 water body-pollutant combinations where standards are exceeded but listing is not recommended.

Water Board staff released a draft for public review on April 4, 2014, with comments due on May 19, 2014. Three written public comments were received, one from the Truckee River Watershed Council supporting the staff report recommendation to not delist the Truckee River, one from the City of South Lake Tahoe recommending that the newly identified impairments on Bijou Creek be addressed under the adopted Lake Tahoe TMDL where appropriate, and one from the San Francisco Regional Board for data re-assessment of mercury in fish tissue. These comments and specific staff responses are included in the agenda packet as Enclosure 3.

The Staff Report (Enclosure 2) is slightly different than the draft staff report issued for public comment on April 4, 2014. The changes arose based on the public input and on more accurate information in some water body fact sheets and database category reports. These modifications are documented in Appendix L.

**RECOMMENDATION:** Adoption of Resolution R6T-2014-(PROPOSED), including recommendations to the State Water Board for changes in the Section 303(d) List for surface water bodies of the Lahontan region. No formal Board action on staff's section 305(b) assessment is necessary.

| Enclosure | Item Description | Bates Number |
|---|---|---|
| **1** | Resolution R6T-2014-(PROPOSED) (with Attachment A) | **13-5** |
| **2** | Staff Report and Appendices A,B,C, & L | **13-15** |
| **3** | Public Comments and Responses (Appendix M) | **13-39** |

# ENCLOSURE 1

**(Proposed Resolution)**

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**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**
**LAHONTAN REGON**

**RESOLUTION NO. R6T-2014-(PROP)**

**APPROVAL OF RECOMMENDATOINS FOR THE CLEAN WATER ACT SECTION 303(D) LIST OF WATER QUALITY LIMITED SEGMENTS**

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**WHEREAS**, the California Regional Water Quality Control Board, Lahontan Region (Water Board) finds:

1. Clean Water Act Section 305(b) requires States to prepare and submit to the U.S. Environmental Protection Agency (USEPA) for approval a report assessing statewide surface water quality.

2. Clean Water Act Section 303(d) and Title 40, Code of Federal Regulations Section 130.7 requires States to develop and submit to the USEPA for approval a list of water bodies for which water quality standards (beneficial uses and water quality objectives) are not attained, or are not expected to be attained with the implementation of technology-based controls. This list is referred to as the "Section 303(d) list."

3. The Section 303(d) list must include a description of the pollutants causing impairment and a completion date for development of a Total Maximum Daily Load (TMDL) for each pollutant.

4. California's Section 303(d) list was last reviewed and updated in 2010 by the State Water Resources Control Board (State Water Board). The 2010 Section 303(d) list was approved by USEPA in 2011.

5. On behalf of the Regional Water Boards, by letters dated January 14, 2010, the State Water Board solicited water quality information and data from the public for use in the next water quality assessment under Sections 303(d) and 305(b). The results of the statewide assessment will be submitted to the USEPA as an "Integrated Report."

6. Water Board staff reviewed information and water quality data obtained from the public, data collected through the State's Surface Water Ambient Monitoring Program (SWAMP), and data affecting the status of water body-pollutant combinations on the 2010 Section 303(d) list. All readily available data and information obtained were considered in the assessment process.

7. In developing recommendations for update of the Section 303(d) list, Water Board staff relied on the State's Water Quality Control Policy for Developing California's Clean Water Action Section 303(d) list (Listing Policy), as well as applicable federal guidelines and regulations.

8. Water Board staff's recommendations for update of the Section 303(d) list were posted on the Water Board's internet web page. Interested parties were invited to submit comments on staff's recommendations for the Section 303(d) list and on staff's assessment of non-impaired water bodies under Section 305(b).

9. No action by the Water Board on staff's assessment of non-impaired water bodies under Section 305(b) is required.

10. On June 18-19, 2014, the Water Board held a Public Hearing to consider recommendations to the State Water Board for revisions to Section 303(d) list. Notice of the Public Hearing, dated April 5, 2014, was given to all interested persons in accordance with 40 CFR 132.20(h).

11. Water Board staff developed written responses to written public comments received. The Water Board considered all written comments and public hearing testimony.

**THEREFORE, BE IT RESOLVED THAT:**

1. The Water Board hereby approves the three attachments to this resolution, including the water body-pollutant combinations listed in the Integrated Report categories 4a, 4b, and 5, as the recommended Section 303(d) list for the Lahontan Region.

2. The Executive Officer is authorized to transmit the Water Board's recommendations for the revised Section 303(d) list, and other supporting information to the State Water Board for its consideration and approval.
3.

I, Patty Kouyoumdjian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a resolution adopted by the California Regional Water Quality Control Board, Lahontan Region, in June 2014.

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PATTY KOUYOUMDJIAN
EXECUTIVE OFFICER

Attachment 1: (Appendix A from 2012 Integrated Report for the Lahontan Region): Proposed New and Revised Section 303(d) Listings for 2012 [inclusive of 2010 303(d) List]

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| **Surprise Valley HU** | | | | |
| Mill Creek (Modoc County) | No | Total Dissovled Solids | 2021 | 5 |
| Bidwell Creek | No | Total Dissovled Solids | 2021 | 5 |
| **Susanville HU** | | | | |
| Susan River (Headwaters to Susanville) | No | Unknown toxicity | 2019 | 5 |
| Susan River (Headwaters to Susanville) | No | Mercury | 2019 | 5 |
| Susan River (Headwaters to Susanville) | No | Total Dissolved Solids | 2021 | 5 |
| Susan River (Headwaters to Susanville) | No | Total Nitrogen as N | 2021 | 5 |
| Susan River (Susanville to Litchfield) | No | Unknown toxicity | 2019 | 5 |
| Susan River (Susanville to Litchfield) | No | Mercury | 2019 | 5 |
| Susan River (Susanville to Litchfield) | No | Total Dissolved Solids | 2021 | 5 |
| Susan River (Susanville to Litchfield) | No | Turbidity | 2021 | 5 |
| Susan River (Susanville to Litchfield) | No | Unknown toxicity | 2021 | 5 |
| Susan River (Litchfield to Honey Lake) | No | Unknown toxicity | 2019 | 5 |
| Susan River (Litchfield to Honey Lake) | No | Mercury | 2019 | 5 |
| Eagle Lake | No | Nitrogen | 2011 | 5 |
| Eagle Lake | No | Phosphorus | 2011 | 5 |
| Honey Lake | No | Arsenic | 2019 | 5 |
| Honey Lake | No | Salinity/TDS/Chlorides | 2019 | 5 |
| Honey Lake Area Wetlands | No | Metals | 2019 | 5 |
| Honey Lake Wildfowl Management Ponds | No | Metals | 2019 | 5 |
| Honey Lake Wildfowl Management Ponds | No | Salinity/TDS/Chlorides | 2019 | 5 |
| Honey Lake Wildfowl Management Ponds | No | Trace Elements | 2019 | 5 |
| **Truckee River HU** | | | | |
| Truckee River | No | Sedimentation/Siltation | 2009 | 4A |
| Bronco Creek | No | Sedimentation/Siltation | 2009 | 4A |
| Gray Creek (Nevada County) | No | Sedimentation/Siltation | 2009 | 4A |
| Donner Lake | No | Priority Organics | 2019 | 5 |
| Donner Lake | Yes | Chlordane | 2025 | 5 |
| Donner Lake | Yes | Arsenic | 2025 | 5 |
| Squaw Creek | No | Sedimentation/Siltation | 2007 | 4A |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| **Lake Tahoe HU** | | | | |
| Lake Tahoe | No | Sedimentation/Siltation | 2011 | 4A |
| Lake Tahoe | No | Nitrogen | 2011 | 4A |
| Lake Tahoe | No | Phosphorus | 2011 | 4A |
| Blackwood Creek | No | Sedimentation/Siltation | 2008 | 5 |
| Blackwood Creek | No | Iron | 2019 | 5 |
| Blackwood Creek | No | Nitrogen | 2011 | 5 |
| Blackwood Creek | No | Phosphorus | 2011 | 5 |
| Cold Creek | No | Total Nitrogen as N | 2021 | 4B |
| General Creek | No | Iron | 2019 | 5 |
| General Creek | No | Phosphorus | 2012 | 5 |
| Heavenly Valley Creek (source to USFS boundary) | No | Chloride | 2019 | 5 |
| Heavenly Valley Creek (source to USFS boundary) | No | Phosphorus | 2011 | 5 |
| Heavenly Valley Creek (source to USFS boundary) | No | Sedimentation/Siltation | 2002 | 5 |
| Heavenly Valley Creek (USFS boundary to Trout Creek) | No | Chloride | 2019 | 5 |
| Heavenly Valley Creek (USFS boundary to Trout Creek) | No | Sedimentation/Siltation | 2011 | 5 |
| Tallac Creek | No | Pathogens | 2019 | 5 |
| Trout Creek (above HWY 50) | No | Iron | 2019 | 5 |
| Trout Creek (above HWY 50) | No | Nitrogen | 2011 | 5 |
| Trout Creek (above HWY 50) | No | Phosphorus | 2011 | 5 |
| Trout Creek (above HWY 50) | No | Pathogens | 2013 | 5 |
| Trout Creek (below HWY 50) | No | Iron | 2019 | 5 |
| Trout Creek (below HWY 50) | No | Nitrogen | 2011 | 5 |
| Trout Creek (below HWY 50) | No | Phosphorus | 2011 | 5 |
| Trout Creek (below HWY 50) | No | Pathogens | 2019 | 5 |
| Truckee River, Upper (above Christmas Valley) | No | Iron | 2019 | 5 |
| Truckee River, Upper (above Christmas Valley) | No | Phosphorus | 2011 | 5 |
| Truckee River, Upper (below Christmas Valley) | No | Iron | 2019 | 5 |
| Truckee River, Upper (below Christmas Valley) | No | Phosphorus | 2011 | 5 |
| Ward Creek | No | Iron | 2019 | 5 |
| Ward Creek | No | Nitrogen | 2011 | 5 |
| Ward Creek | No | Phosphorus | 2011 | 5 |
| Ward Creek | No | Sedimentation/Siltation | 2011 | 5 |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| Bijou Park Creek | Yes | Iron | 2025 | 5 |
| Bijou Park Creek | Yes | Oil and grease | 2025 | 5 |
| Bijou Park Creek | Yes | Phosphorus | 2025 | 5 |
| Bijou Park Creek | Yes | Total Nitrogen as N | 2025 | 5 |
| Bijou Park Creek | Yes | Turbidity | 2025 | 5 |
| **West Fork Carson River HU** | | | | |
| Carson River, West Fork (Headwaters to Woodfords) | No | Nitrogen | 2019 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | No[3] | nitrate | 2019 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | No | Phosphorus | 2019 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | Yes | Chloride | 2025 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | Yes | Sulfate | 2025 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | Yes | Total Dissolved Solids | 2025 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | Yes | Turbidity | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | No | Nitrogen | 2019 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | No | Pathogens | 2013 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Chloride | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Nitrate | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Sulfate | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Total Dissolved Solids | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Turbidity | 2025 | 5 |
| Carson River, West Fork (Paynesville to state line) | No | Pathogens | 2013 | 5 |
| Snowshoe Thompson Ditch 1 | Yes | Phosphorus | 2025 | 4B |
| Snowshoe Thompson Ditch 1 | Yes | Total Kjeldahl Nitrogen | 2025 | 4B |
| **East Fork Carson River HU** | | | | |
| Carson River, East Fork | No | Total Dissolved Solids | 2021 | 5 |
| Wolf Creek (Alpine County) | No | Sedimentation/Siltation | 2019 | 5 |
| Indian Creek (Alpine County) | No | Pathogens | 2013 | 5 |
| Indian Creek (Alpine County) | Yes | Chloride | 2025 | 5 |
| Indian Creek (Alpine County) | Yes | Dissolved Oxygen | 2025 | 5 |
| Indian Creek Reservoir | No | Phosphorus | 2003 | 4A |
| Indian Creek Reservoir | Yes | Dissolved Oxygen | 2003 | 4A |
| Aspen Creek | No | Metals | 2019 | 4B |
| Bryant Creek | No | Metals | 2019 | 4B |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| Leviathan Creek | No | Metals | 2019 | 4B |
| Monitor Creek | No | Aluminum | 2019 | 4B |
| Monitor Creek | No | Iron | 2019 | 5 |
| Monitor Creek | No | Manganese | 2019 | 5 |
| Monitor Creek | No | Silver | 2019 | 5 |
| Monitor Creek | No | Sulfate | 2019 | 5 |
| Monitor Creek | No | Total Dissolved Solids | 2019 | 5 |
| **East Walker River HU** | | | | |
| East Walker River, above Bridgeport Reservoir | No | Pathogens | 2027 | 4B |
| East Walker River, below Bridgeport Reservoir | No | Sedimentation/Siltation | 2019 | 5 |
| East Walker River, below Bridgeport Reservoir | No | Manganese | 2021 | 5 |
| East Walker River, below Bridgeport Reservoir | No | Turbidity | 2021 | 5 |
| Bridgeport Reservoir | No | Nitrogen | 2019 | 5 |
| Bridgeport Reservoir | No | Phosphorus | 2019 | 5 |
| Bridgeport Reservoir | No | Sedimentation/Siltation | 2019 | 5 |
| Buckeye Creek | No | Pathogens | 2027 | 4B |
| Robinson Creek (HWY 395 to Bridgeport Reservoir) | No | Pathogens | 2027 | 4B |
| Robinson Creek (Twin Lakes to HWY 395) | No | Pathogens | 2027 | 4B |
| Swauger Creek | No | Pathogens | 2027 | 4B |
| Swauger Creek | No | Phosphorus | 2010 | 5 |
| Bodie Creek | No | Mercury | 2027 | 5 |
| **Mono HU** | | | | |
| Mono Lake | No | Salinity/TDS/Chlorides | 2019 | 5 |
| **Owens HU** | | | | |
| Mammoth Creek (Headwaters to Twin Lakes outlet) | No | Total Dissolved Solids | 2021 | 5 |
| Mammoth Creek (Twin Lakes outlet to Old Mammoth Road) | No | Mercury | 2019 | 5 |
| Mammoth Creek (Twin Lakes outlet to Old Mammoth Road) | No | Manganese | 2021 | 5 |
| Mammoth Creek (Old Mammoth Road to HWY 395) | No | Mercury | 2021 | 5 |
| Mammoth Creek (Old Mammoth Road to HWY 395) | No | Manganese | 2021 | 5 |
| Mammoth Creek (Old Mammoth Road to HWY 395) | No | Total Dissovled Solids | 2021 | 5 |
| Mammoth Creek, unamed tributary (confluence is near Old Mammoth Rd.) | No | Arsenic | 2021 | 5 |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| Mammoth Creek, unamed tributary (confluence is near Old Mammoth Rd.) | No | Mercury | 2021 | 5 |
| Hilton Creek | No | Oxygen, Dissolved | 2021 | 5 |
| Rock Creek (tributary to Owens River) | No | Total Dissolved Solids | 2021 | 5 |
| Crowley Lake | No | Ammonia | 2019 | 5 |
| Crowley Lake | No | Dissolved Oxygen | 2019 | 5 |
| Haiwee Reservoir | No | Copper | 2019 | 5 |
| Pleasant Valley Reservoir | No | Organic Enrichment/Low DO | 2019 | 5 |
| **Amargosa HU** | | | | |
| Amargosa River (Nevada border to Tecopa) | No | Arsenic | 2021 | 5 |
| Amargoas River (Tecopa to Upper Canyon) | No | Arsenic | 2021 | 5 |
| Amargosa River (Upper Canyon to Illow Creek confluence) | N | Arsenic | 2021 | |
| Mesquite Springs (Inyo County) | No | Arsenic | 2021 | 5 |
| Mesquite Springs (Inyo County) | No | Boron | 2021 | 5 |
| **Trona HU** | | | | |
| Searles Lake | No | Salinity/TDS/Chlorides | 2019 | 4B |
| Searles Lake | No | Total Petroleum Hydrocarbons | 2019 | 4B |
| **Antelope HU** | | | | |
| Little Rock Reservoir | No | Manganese | 2021 | 5 |
| Little Rock Reservoir | Yes | Mercury | 2025 | 5 |
| Little Rock Reservoir | Yes | Polychlorinated biphenyls (PCBs) | 2025 | 5 |
| **Mojave HU** | | | | |
| Silverwood Lake | Yes | Mercuy | 2025 | 5 |
| Silverwood Lake | Yes | Polychlorinated biphenyls (PCBs) | 2025 | 5 |
| Lake Arrowhead | Yes | Mercury | 2025 | 5 |
| Lake Gregory | Yes | Mercury | 2025 | 5 |
| Holcomb Creek | No | Total Dissolved Solids | 2021 | 5 |
| Mojave River (Mojave Forks Reservoir outlet to Upper Narrows) | No | Fluoride | 2021 | 5 |
| Mojave River (Upper Narrows to Lower Narrows) | No | Fluoride | 2021 | 5 |
| Mojave River (Upper Narrows to Lower Narrows) | No | Sulfates | 2021 | 5 |
| Mojave River (Upper Narrows to Lower Narrows) | No | Total Dissolved Solids | 2021 | 5 |
| Crab Creek | No | Total Dissolved Solids | 2021 | 5 |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| Sheep Creek | No | Nitrate | 2021 | 5 |
| Sheep Creek | No | Total Dissolved Solids | 2021 | 5 |

[1]**Completion Year**. For listings with USEPA-approved TMDLs, this refers to the USEPA approval year. For listings still needing TMDLs, the completion year is the projected Lahontan Water Board action date. For listings being addressed by actions other than TMDLs, the completion year is the projected attainment date for water quality standards.

[2]**Category**. The Integrated Report includes two categories and subcategories for water body-pollutant combinations in which the applicable standard is not attained ("listings"). The subcategories can be summarized as follows:

4A. All listings for this water body are being addressed by USEPA-approved TMDLs.

4B. All listings for this water body are being addressed by regulatory actions other than TMDLs.

4C. This water body is impacted by "pollution" rather than by a "pollutant."

5. Evidence shows at least one use is not supported (and a TMDL is needed). Although the category did not change, in some cases the TMDL requirements may have changed. Refer to Appendix H for more information.

[3]This segment was previously listed for "Nitrogen" on the basis of data for several forms of nitrogen. State Board staff requested that nitrate be assessed separately, resulting in a separate listing.

# ENCLOSURE 2

**STAFF REPORT WITH APPENDICES A-C AND APPENDIX L INCLUDED.**

**THE ADDITIONAL APPENDICES OF THE STAFF REPORT ARE LOCATED AT:**
**http://www.waterboards.ca.gov/lahontan/water_issues/programs/tmdl/303d_305b/**

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LAHONTAN REGIONAL
WATER QUALITY CONTROL BOARD

# CLEAN WATER ACT
# SECTIONS 305(b) AND 303(d)
# INTEGRATED REPORT
# FOR THE LAHONTAN REGION

PUBLIC REVIEW DRAFT

April 2014

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

## EXECUTIVE SUMMARY

This Integrated Report provides the draft recommendations of the staff of the California Regional Water Quality Control Board, Lahontan Region (Water Board) for changes to the federal Clean Water Act (CWA) Section 303(d) list of impaired surface water bodies, and, pursuant to CWA section 305(b), analyzes the extent to which all navigable waters in the region are meeting the minimum fishable/swimmable beneficial uses. The water quality assessment applies to surface waters of the United States within the Lahontan Region.

Following a public participation process, the Water Board will consider adopting recommendations to the State Water Resources Control Board (State Water Board) for inclusion in a statewide Section 303(d) list. The statewide list will be submitted to, and considered for approval by, the U.S. Environmental Protection Agency (USEPA). The Lahontan Water Board will not take action on staff's Section 305(b) assessment, but may provide direction to staff. Public comments will be accepted on Section 305(b) issues and included in the administrative record.

This staff report provides background on the assessment process and the methods used. Results and recommendations are summarized in tables in the appendices. The appendices also include "fact sheets" for specific water body-pollutant combinations that provide more detailed information and links to online data and reference documents.

The 303(d) assessment focused on data from the Lahontan Region's Surface Water Ambient Monitoring Program (SWAMP), data submitted by stakeholders, and data affecting the status of current (2010) Section 303(d) listings. This assessment process was more intensive than the Water Board's previous Section 303d list updates. Over 2,320 fact sheets, each assessing a unique water body-pollutant combination, were developed during this evaluation in comparison to the 2010 listing cycle when approximately 1,250 fact sheets were developed. These fact sheets are included in Appendix I of this document. The fact sheets contain over 3,550 lines of evidence. The proposed updates include new listings to the 303(d) list, delistings from the 303(d) list, category changes to existing 303(d) listings, and other modifications. The proposed updates for the section 303(d) list include:

**New Listings:**

1. Bijou Park Creek: iron, oil and grease,
2. Carson River, West Fork (Headwaters to Woodfords): chloride, sulfates, total dissolved solids, turbidity
3. Carson River, West Fork (Woodfords to Paynesville): chloride, nitrate, sulfates, total dissolved solids, turbidity
4. Donner Lake: chlordane, arsenic
5. Indian Creek: chloride, dissolved oxygen
6. Littlerock Reservoir: mercury, polychlorinated biphenyls (PCBs)
7. Silverwood Reservoir: mercury, polychlorinated biphenyls (PCBs)
8. Lake Arrowhead: mercury
9. Lake Gregory: mercury

**New Listings (being addressed by USEPA approved TMDL):**

1. Bijou Park Creek: phosphorus, total nitrogen as N, turbidity
2. Indian Creek Reservoir: dissolved oxygen

**New Listings (being addressed other than an action of a TMDL):**

1. Snowshoe Thompson ditch 1: phosphorus, TKN

**Category Changes:**

1. Blackwood Creek: phosphorus, nitrogen
2. Heavenly Valley Creek (USFS to Trout Creek): sediment
3. Heavenly Valley Creek (source to USFS boundary): phosphorus
4. Trout Creek (above HWY 50): nitrogen, phosphorus
5. Trout Creek (below HWY 50): nitrogen, phosphorus
6. Truckee River (above Christmas Valley): phosphorus
7. Truckee River (below Christmas Valley): phosphorus
8. Ward Creek: nitrogen, phosphorus, sedimentation/siltation

**New Delistings:**

1. Clearwater Creek: sedimentation/siltation
2. Amargosa River (Willow Creek confluence to Badwater): arsenic

**Modifications:**

1. Amargosa River (Upper Canyon to Willow Creek confluence): arsenic (changes to mapping)
2. Amargosa River (Willow Creek confluence to Badwater): arsenic (changes to mapping)
3. Pathogens in some cases changed to fecal coliform to align with our Basin Plan objective
4. All water bodies were remapped using the National Hydrography Dataset (NHD) in 1:24,000 resolution to provide greater flexibility and efficiency when performing analysis using a geographic information system (GIS). As a result the water body size calculations for Integrated Report water bodies will change due to the greater accuracy of this higher resolution data set.

When adopting recommendations for updated Section 303(d) lists, Regional Water Boards are required to identify dates for completion of Total Maximum Daily Loads (TMDLs). Most of the recommended new listings are likely to be addressed through update of water quality standards or alternative regulatory programs, rather than through development of TMDLs.

The Section 305(b) assessment focuses on attainment of “core” beneficial uses related to protection of aquatic life, human health, and recreation. Water bodies are placed in one of five categories depending on whether or not applicable standards are attained, and whether there is sufficient information to evaluate whether a specific pollutant is exceeding the water quality objectives for a specific water body. In some cases, the water quality objectives in the Basin Plan are set at levels that were representative of ambient conditions, and the ambient water quality is typically higher quality than levels necessary to protect beneficial uses.

Please refer to Appendix L for any modifications to the draft Staff Report since release for public comment on April 4, 2014.

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## INTRODUCTION

The federal Clean Water Act (CWA) gives states the primary responsibility for protecting and restoring surface water quality. In California, the State Water Resources Control Board (State Water Board) and nine Regional Water Quality Control Boards (Regional Water Boards) administer the CWA and serve as the agencies with the primary responsibility for implementing CWA requirements, including developing and implementing programs to ensure attainment of water quality standards. Water quality standards include designated beneficial uses of water bodies, criteria or water quality objectives (numeric or narrative limits) established to protect those beneficial uses, and policies to prevent or limit the degradation of water bodies.

Section 305(b) of the CWA requires each state to report biennially to the United States Environmental Protection Agency (USEPA) on the condition of its surface waters. CWA Section 303(d) requires each State to develop, update, and submit to the USEPA a list of polluted surface waters or water quality limited surface water body segments (distinct portions of rivers, streams, or lakes) that are "impaired or threatened" – meaning they contain pollutants at levels that exceed protective water quality criteria and standards. The list is commonly referred to as the 303(d) list. Impaired water bodies or segments on the 303(d) list must be addressed through the development of Total Maximum Daily Loads (TMDLs), through alternative regulatory programs (e.g., waivers or National Pollutant Discharge Elimination System Permits), or through revisions in water quality standards.

The requirement to develop TMDLs applies to "pollutants" as defined in the CWA. Pollutants include chemicals, sediment, and temperature. TMDLs are not required for impairment due to "pollution." Pollution includes factors such as flow alteration, hydromodification, and alterations in aquatic habitat that are not related to specific pollutants.

Under the 2004 Water Quality Policy for Developing California's Clean Water Act Section 303(d) list ("Listing Policy"), the nine Regional Water Boards assess information and data, conduct public participation processes and adopt recommendations to the State Water Board for inclusion of specific water body-pollutant combinations ("listings") in a statewide Section 303(d) list. Following additional participation, the State Water Board submits a statewide list to the USEPA. The USEPA may approve or disapprove specific listings, and may add water body-pollutant combinations to the list. The most recent USEPA–approved Section 303(d) list for California is for the 2010 assessment cycle and is available at the State Water Board's website at 2010 Integrated Report (Clean Water Act Section 303(d) List / 305(b) Report) - Statewide.

In coordination with the Section 303(d) assessment, the State Water Board has historically prepared a statewide Section 305(b) Report with information on the total miles of streams, acres of lakes, and areas of other surface water bodies that support or do not support beneficial uses. In the past, the Section 303(d) list has been updated every two years, but the USEPA and the State Water Board have developed a new strategy moving forward to provide for a more efficient Integrated Report process. The strategy involves dividing California into thirds by Regional Water Boards and submitting an Integrated Report for three Regional Water Boards per listing cycle. For the 2012 listing cycle, the Integrated Report will consist only of data submitted for Regional Water Boards 1, 6, and 7 followed by the immediate solicitation for the 2014 listing cycle, which will rely on the continuous submittal capabilities of the California Environmental Data Exchange Network (CEDEN). Though Region 6 would not be included in the Integrated Report process for another six years in 2020, the new process allows for Regional Water Boards in the "off-cycle" to evaluate high-priority data and make decisions related directly to listings and de-listings, which could be submitted for inclusion into the current listing cycle. The Section 303(d)/305(b) assessment process is not a regulatory action, and

does not require environmental analysis under the California Environmental Quality Act (CEQA) because the Water Board is not taking a discretionary action that may affect the environment. Project-specific CEQA documents will be prepared as appropriate for TMDLs and other regulatory actions used to address water body-pollutant combinations on the Section 303(d) list.

This staff report summarizes Water Board staff's recommendations and provides background on the assessment process. The appendices to this report included more detailed "fact sheets" with recommendations for specific water body-pollutant combinations. Fact Sheets are used in the creation of and are included in the Integrated Report.

## DATA AND INFORMATION USED FOR THE ASSESSMENT

**Solicited information and data.** The Integrated Report process begins with a formal "Notice of Public Solicitation of Water Quality Data and Information for the California Integrated Report (Notice of Public Solicitation)" sent to interested parties subscribed to the Region 6 TMDLs – 303(d) List (Impaired Waters) e-mail subscription list. A copy of the 2012 data solicitation letter can be found here: 2012 Notice of Public Solicitation of Water Quality Data and Information. The State Board sent the Notice of Public Solicitation for the 2012 Integrated Report on January 19, 2010 and specified June 30, 2010 as the data submission deadline. The deadline was extended from June 30 to August 30, 2010. Information gathered was used for assessing overall surface water quality conditions and identifying impaired waters (waters not meeting water quality standards), for the development of the 2012 California Integrated Report. State Water Board received over 100 data submissions. Each data submission includes multiple data sets for one or more pollutants. Data sources included government agencies, municipalities, environmental groups, citizen groups, and receiving water data from the National Pollutant Discharge Elimination System (NPDES) dischargers.

Electronic copies of the submitted data are included in the electronic administrative record of the assessment process. The stakeholder data and data collected through the State Water Board's Surface Water Ambient Monitoring Program (SWAMP) include:

Stakeholder data:

- Data for turbidity in Truckee River collected July 2008-August 2010, submitted by the California Department of Water Resources (2010).
- Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe collected October 2007–September 2009, submitted by Heavenly Valley Ski Resort (2010).
- Data for temperature in Rush Creek (below Grant Lake) and Lee Vining Creek collected Oct. 1999-October 2008, submitted by Los Angeles Department of Water and Power (2009).
- Data for temperature, nutrients, and bacteria in Heavenly Valley Creek (USFS boundary to Trout Creek) and various water bodies in Alpine County collected July 1980-June 2010, submitted by South Tahoe Public Utility District (2010).

**SWAMP.** In addition to various stakeholder data submissions, data collected through the State Board's Surface Water Ambient Monitoring Program (SWAMP) were also considered during the 2012 listing cycle. SWAMP conducts carefully designed, externally reviewed, monitoring programs conducted at both the statewide and regional levels that support water resource management in California. SWAMP produces high-quality information that State and Regional Water Board staff use to evaluate the condition of all surface waters throughout California.

SWAMP data:

- SWAMP. RWB6 Donner Lake Fish Bioaccumulation Status.
- SWAMP. RWB6 Trend Monitoring for 2006 and 2007.
- SWAMP. Statewide Lakes Sportfish Contamination Study 2007 2008. Contaminant concentrations measured in fish tissue throughout waters of the state.
- SWAMP. Statewide Perennial Streams Assessment 2008.
- SWAMP. Statewide Reference Condition Management Plan 2008.
- SWAMP. Stream Pollution Trends Study 2008. Sediment toxicity and sediment contaminant concentrations measured in selected large rivers throughout California.
- SWAMP. Statewide Project Urban Pyrethroid Status Monitoring.

The individual fact sheets for each assessed water body-pollutant combination contain specific references to the data upon which each proposed 303(d) listing decision is based. The electronic versions of these fact sheets also contain Internet links to the files and documents containing the actual data and information used.

Data for future listing cycles will be required to be submitted through CEDEN (California Environmental Data Exchange Network) except in the few instances that CEDEN cannot accept the data type (i.e. flow data, qualitative data, narrative data). This is to ensure adequate quality assurance measures are taken and provided with the data.

## WATER QUALITY STANDARDS AND CRITERIA USED FOR ASSESSMENT

Water Board staff assessed data using regulatory limits, when available. Regulatory limits used include water quality objectives (numeric and narrative) in the Water Quality Control Plan for the Lahontan Region (Basin Plan), and standards for toxic chemical promulgated by the USEPA under the California Toxics Rule (40 CFR 131.27). Water Board staff also used the USEPA's National Recommended Water Quality Criteria, and California water quality criteria developed by the Department of Public Health and the Office of Environmental Health Hazard Assessment (OEHHA). California drinking water standards (Maximum Contaminant Levels or MCLs) apply as regulatory limits to most ambient, untreated surface and ground waters under the narrative water quality objectives for "Chemical Constituents" and "Radioactivity" in the Basin Plan.

Most of the Lahontan Region is undeveloped public land where natural water quality is not expected to be significantly affected by human activities. Very good water quality occurs in many of the high elevation lakes and streams of the eastern Sierra Nevada. Most of the narrative and numeric water quality objectives in the Basin Plan are based on protection of natural background quality, rather than on state or federal criteria for protection of specific beneficial uses. The Basin Plan contains hundreds of numeric site-specific objectives (SSOs) for individual water bodies, for constituents such as Total Dissolved Solids (TDS), chloride, nitrogen, phosphorus, and sulfate. According to the "Tributary Rule", numeric water quality objectives for specific surface water bodies apply upstream to tributaries that do not have SSOs. In many cases the Lahontan Region's SSOs are much more stringent than the state or federal criteria for the same constituents established in connection with specific beneficial uses. Exceedances of antidegradation-based SSOs do not necessarily indicate that beneficial uses are impaired as water quality levels may be of higher quality than that needed to provide for the beneficial use.

Most of the current SSOs were developed using monitoring data available in the early 1970s. In some cases, individual SSOs are based on very limited data, and they probably do not reflect the full range of seasonal, annual, and inter annual variability in constituent concentrations. Due to this limitation, some Section 303(d) listings for exceedances of SSOs may be addressed

through update of the SSOs (using more recent data to define reference conditions), rather than through TMDLs or other regulatory programs.

## DEVELOPMENT OF THE PROPOSED SECTION 303(D) LIST CHANGES

Listing Policy. The State Water Board's 2004 Listing Policy, which provides a standardized approach for developing California's section 303(d) list, can be viewed and downloaded here: State Water Board's Listing Policy. The policy was developed through a stakeholder process and reflects political compromises in addition to statistical and scientific considerations.

The Listing Policy 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 on different kinds of data and a standard statistical test identifying impairments in water. The Listing Policy mandates listing for toxicants if water quality standards or criteria are exceeded more than three percent of the time, and mandates listing for "conventional" or other pollutants if standards or criteria are exceeded more than ten percent of the time. The Policy includes tables based on a "binomial model" that summarize the numbers of allowable exceedances associated with specific ranges of sample numbers. The number of exceedances required for listings is calculated using hypothesis testing based on binomial statistics. The minimum sample numbers required for listing are smaller than those statistically required by the model. As few as two samples with two exceedances are needed to list for toxicants (defined to include nutrients), and five samples with five exceedances are needed to list for "conventional" pollutants. The Listing Policy is structured so it is more difficult to delist a water body-pollutant combination than to list it; more samples and fewer exceedances are required to delist.

The Listing Policy includes other "listing factors" that may be used in certain situations where specific conditions apply. For example, data related to an antidegradation-based standard may be assessed by evaluating baseline-trend conditions. Water Board staff used the baseline-trend provisions to evaluate compliance with antidegradation-based water quality objectives such as those for temperature, pH, and suspended sediment. The Listing Policy also allows the Water Boards to make "weight of evidence" arguments for or against listing and delisting.

For water quality standards that are expressed as annual means (or some other measurement of central tendency) the Listing Policy requires that data be transformed before being assessed. Thus annual mean "data points" are treated as if they were single samples when evaluating numbers of exceedances in relation to numbers of samples. Most of the SSOs in the Basin Plan are expressed as annual means.

The Listing Policy allows data to be rejected in assessment decisions if acceptable quality assurance/quality control (QA/QC) procedures were not followed or if the data are not spatially or temporally representative of the water body. Some the datasets assessed for the 2012 had inadequate documentation of QA/QC, and some of the datasets were not temporally representative.

The Regional Water Boards first took action on Section 303(d) list recommendation in the 1990 assessment cycle. Some of the Lahontan Region's current listings date from that time. Assessment criteria have changed over time, and some of the older listings would not be required under the current Listing Policy. Delisting is allowed in these circumstances.

The Listing Policy requires the data assessed and staff recommendations for specific water body-pollutant combinations to be documented in water body "fact sheets." Fact sheets consist of "lines of evidence" (LOEs) summarizing the applicable standards and the data for a water

body of segment in relation to a specific beneficial use, and “decisions,” including staff recommendations regarding listing and beneficial use support.

CalWQA Database. In 2007, the web-based interface known as California Water Quality Assessment (CalWQA) database was developed to support the creation of the California Integrated Report (CWA Section 303(d) List / 305(b) Report). The State Water Board manages CalWQA which stores detailed water quality assessment information to evaluate California water bodies. State and Regional Water Board staff uses the CalWQA database to store LOEs and make decisions on pollutants found in water bodies within their respective regions. The database is designed so information can be exported to the USEPA’s Assessment Database at the end of each assessment cycle and the information can be stored for future assessment cycles.

## REGION-SPECIFIC ASSESSMENT ISSUES

**Sampling frequency and environmental variability**. Most of the data assessed for the 2010 Integrated Report cycle is from the SWAMP. The 2006-2010 SWAMP samples were limited to quarterly collection and analysis due to funding restraints. The data is collected to illustrate long-term trends and changes in water quality but quarterly sampling is not comprehensive enough to accurately determine impairments in water quality. In some cases, such as dry streams due to drought in the upper Mojave River watershed, fewer than four SWAMP samples per year per station were collected. Because most of the Lahontan Region’s SSOs are expressed as annual means, the low sampling frequency resulted in averages based on only one to four samples per year.

Annual averages based on samples collected at quarterly or less frequent intervals do not adequately reflect the range of diel, seasonal and annual variations in pollutant concentrations and the environmental conditions (including streamflows) that typically affect pollutant concentrations.

In addition to year to year variations between wet and dry years, and normal seasonal temperature extremes, surface waters of the Lahontan Region are affected by extreme climatic and hydrological conditions that can change over short time periods. Water chemistry can be affected by rapid spring snowmelt, flooding from rain on snow events, severe summer thunderstorms, desert flash floods, and atmospheric deposition of smoke from wildfires. Seasonal changes in land use, such as the timing of diversions for pasture irrigation, the dates when summer livestock grazing begins and ends, and the timing of surges in recreational use (e.g., hiking, mountain biking, informal camping, user created trails) can have significant effects on pollutant concentrations.

Diel variations in flows during the snowmelt season can cause corresponding variation in constituent concentrations. The timing of peak snowmelt varies from year to year depending on factors such as air temperature, snowpack depth, precipitation (e.g., rain-on-snow storms.)

To meet monitoring objectives, according to USEPA:

> “States should ensure that the selected monitoring design yields scientifically valid results and meets the needs of the decision maker. The monitoring design should incorporate appropriate methods to control decision errors and balance the possibility of making incorrect decisions. The levels of precision and confidence should be appropriate to the monitoring objective and the type of data collected.”
>
> (cited from the *Recommended Elements of a State Monitoring Program*).”

Because our region has such wide fluctuations, more than two to four samples per year are necessary to characterize ambient conditions and provide staff with confidence in determining impairment.

**Natural Sources of Pollutants.** The geology and climate of the Lahontan Region leads to local high concentrations of "pollutants" that come entirely from natural sources. These include arsenic, fluoride, boron, and mercury from geothermal and volcanic sources, and radioactive elements and elemental phosphorus from the Sierra Nevada granitic soils. Due to evaporative concentration, salts and trace elements such as arsenic can accumulate to very high concentrations over geologic time in internally drained saline lakes and groundwater basins. Because of the undeveloped nature of most of the Lahontan region and the consequent lack of industrial or agricultural sources of metals and trace elements, it is relatively easy to conclude that exceedances

of standards in geothermally influenced and inland saline waters are entirely due to natural sources.

In 1989, the Water Board adopted Basin Plan amendments designating most waters of the Lahontan Region, including waters with poor quality due to natural sources, for the Municipal and Domestic Supply (MUN) beneficial use. The Water Board's rationale was that, because of the scarcity of water in much of the Region, even poor quality water might be in demand for treatment and domestic use in the future. Since the Basin Plan applies drinking water standards (MCLs) to untreated ambient waters that are designated for the MUN use, the unforeseen result of the designation was the potential for Section 303(d) listing of "naturally impaired" waters.

In past assessment cycles, Water Board staff justified delisting or not listing waters with standards exceedances entirely due to natural sources of pollutants. The 2004 Listing Policy is silent on natural sources.

## PROPOSED CHANGES TO THE SECTION 303(d) LIST

Appendices A through B show the proposed changes the Section 303(d) list for the 2012 assessment cycle. The rationales for Section 303(d) listing and delisting decisions are documented in "fact sheets" in Appendix I. Appendices A, B, and C group water bodies by watershed from north to south in the Lahontan Region; appendices D through I, produced by the CalWQA database, list water bodies alphabetically by name.

**Proposed new listings** to the current 303(d) list includes new water body segment-pollutant combinations where a TMDL is needed, or are otherwise being addressed by a USEPA approved TMDL or pollution control requirements other than a TMDL. Proposed new listings include:

- List on 303(d) list (TMDL required list): 21
- List on 303(d) list (being addressed by a USEPA approved TMDL): 4
- List on 303(d) list (being addressed by an action other than a TMDL): 2

**Proposed new delistings** can be found in Appendix B and include 2 water body-pollutant combinations.

**Proposed Category Changes to current 303(d) list.** A number of water bodies- pollutant combinations considered this listing cycle were changed from requiring a TMDL (Category 5) to

being addressed by a USEPA approved TMDL. For additional information, refer to the water body-pollutant “fact sheets” in Appendix I.

New listings are not recommended for 10 water body-pollutant combinations where standards were exceeded according to the statistical provisions of the Listing Policy’s binomial model, but where the data are not temporally representative. Additional reasons for not listing apply in some cases. These water body-pollutant combinations and justification for not listing as impaired are shown in Appendix C.

## WATER BODIES OF SPECIAL INTEREST EVALUATED THIS LISTING CYCLE

**Truckee River TMDL**. This TMDL requires reductions in sediment loading to the Truckee River and specifically sets the following targets to achieve the TMDL: 1) water column target is an annual 90th percentile value of less than or equal to 25 milligrams per liter (mg/L) suspended sediment, as measured at Farad (USGS gauge 10346000); 2) implementation targets to restore legacy disturbed sites, apply road deicing and traction materials using BMPs and recover it to the maximum extent practicable, implement BMPs at ski areas to control erosion and sedimentation into streams, and decommission or improve dirt roads. Several responsible parties have implemented projects and sediment reducing activities over the past several years, but a comprehensive assessment and evaluation of the implemented actions has not been completed relative to the TMDL targets. Though the total suspended sediment data shows the Truckee River meets the TMDL sediment target since 2004, consistent exceedances of the turbidity water quality objective for the past several years raises concern about effectiveness of the implemented actions and the other TMDL targets. Because total suspended sediment is closely related to turbidity, the fact that the total suspended sediment target is met while the turbidity objective is not met must be further investigated. Either additional implementation measures are needed to reduce loads or the current sediment and turbidity water quality objectives may not accurately account for natural conditions. Therefore, Lahontan Water Board staff determined that the Truckee River is not ripe for delisting for sedimentation/siltation at this time.

## TMDL SCHEDULING

The Listing Policy requires that dates for completion of TMDLs are identified for all listed water body-pollutant combinations, and includes a list of criteria for determining dates.

For water bodies that still need TMDLs, the proposed TMDL completion dates shown in the fact sheets are the years that TMDLs are expected to be brought before the Water Board (TMDLs are often, but not always, adopted as Basin Plan amendments). The USEPA expects TMDLs to be completed no later than 13 years after the list update cycle when the water body-pollutant combination was first listed. The TMDLs for listing on the current 2008 303(d) list are projected to be completed no later than 2021. TMDLs for proposed new listings in the Lahontan Region are projected to be completed no later than 2025.

Short term priorities for Regional Water Board work on TMDLs are set one-year at a time with annual workplans for the TMDL program. Priorities and estimated completion dates can change from year to year based on factors such as budget limitations and the need for additional monitoring to confirm impairment and/or provide data for use in TMDL development.

Most of the existing and new listings for the Lahontan Region are likely to be addressed in ways other than TMDLs. Some of the older listings were based on limited information and data, and additional monitoring may justify delisting. Other listings are likely to be addressed through changes in water quality standards or recognition that the listings are being addressed through alternative regulatory programs.

## DETERMINATION OF BENEFICIAL USE SUPPORT AND INTEGRATED REPORT WATER BODY CATEGORIES

The 2012 assessment under CWA Section 305(b) of whether beneficial uses are being supported focuses primarily on a group of "core" beneficial uses related to human health, aquatic habitat, and recreation, although other beneficial uses may be assessed. For each LOE in the CalWQA database, Regional Water Board staff must enter a beneficial use rating of "Fully Supporting," "Not Supporting," or "Insufficient Information."

The database uses the beneficial use support ratings together with recommendations regarding listing to place each water body-pollutant combination into one of five Integrated Report categories. Brief descriptions of the categories are as follows:

- Category 1: Evidence shows that all core beneficial uses are supported in relation to the specific pollutants assessed.
- Category 2: Evidence shows that at least some core beneficial uses are supported in relation to the specific pollutants assessed. Other core uses either were not assessed, or the available data were rated insufficient for assessment of beneficial use support.
- Category 3: Evidence is insufficient to support determinations in relation to the specific pollutants assessed.
- Category 4A: Evidence shows at least one use is not supported but a TMDL has been developed and approved by the USEPA (This category applies only to waters with all of their listings addressed by USEPA-approved TMDLs).
- Category 4B: Evidence shows at least one use is not supported but a TMDL is not needed because an existing regulatory program is reasonably expected to result in the attainment of the water quality standard within a reasonable, specified time frame (The category applies only to waters with all of their listings addressed by alternative regulatory programs).
- Category 4C: Evidence shows at least one use is not supported but a TMDL is not needed because the impairment is not caused by a "pollutant" as defined by CWA.
- Category 5: Evidence shows at least one use is not supported (and a TMDL is needed).

Categories 4A, 4B, and 5 comprise the Section 303(d) list. For listings in categories 4B and 5C, the fact sheets include projected attainment dates for water quality standards.

The USEPA's category system equates exceedances of water quality standards or criteria with non-support of beneficial uses. In the Lahontan region, the data assessed are too limited to support conclusions that uses are "fully supported." For example, most of the assessed waters have no biological data available to evaluate support of aquatic habitat uses. Staff used the "Insufficient Information" use rating for most LOEs, and most water bodies are recommended for Category 3. The water body-pollutant combinations in Category 2 are mostly the result of "Fully Supporting" use ratings assigned by State Water Board staff for water body-pollutant combinations that were delisted during the 2006 assessment cycle.

Appendices D through H are reports produced by the CalWQA database that summarize all the recommended beneficial use category classifications. There are no water bodies recommended for Category 1 or Category 4C.

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| **Surprise Valley HU** | | | | |
| Mill Creek (Modoc County) | No | Total Dissovled Solids | 2021 | 5 |
| Bidwell Creek | No | Total Dissovled Solids | 2021 | 5 |
| **Susanville HU** | | | | |
| Susan River (Headwaters to Susanville) | No | Unknown toxicity | 2019 | 5 |
| Susan River (Headwaters to Susanville) | No | Mercury | 2019 | 5 |
| Susan River (Headwaters to Susanville) | No | Total Dissolved Solids | 2021 | 5 |
| Susan River (Headwaters to Susanville) | No | Total Nitrogen as N | 2021 | 5 |
| Susan River (Susanville to Litchfield) | No | Unknown toxicity | 2019 | 5 |
| Susan River (Susanville to Litchfield) | No | Mercury | 2019 | 5 |
| Susan River (Susanville to Litchfield) | No | Total Dissolved Solids | 2021 | 5 |
| Susan River (Susanville to Litchfield) | No | Turbidity | 2021 | 5 |
| Susan River (Susanville to Litchfield) | No | Unknown toxicity | 2021 | 5 |
| Susan River (Litchfield to Honey Lake) | No | Unknown toxicity | 2019 | 5 |
| Susan River (Litchfield to Honey Lake) | No | Mercury | 2019 | 5 |
| Eagle Lake | No | Nitrogen | 2011 | 5 |
| Eagle Lake | No | Phosphorus | 2011 | 5 |
| Honey Lake | No | Arsenic | 2019 | 5 |
| Honey Lake | No | Salinity/TDS/Chlorides | 2019 | 5 |
| Honey Lake Area Wetlands | No | Metals | 2019 | 5 |
| Honey Lake Wildfowl Management Ponds | No | Metals | 2019 | 5 |
| Honey Lake Wildfowl Management Ponds | No | Salinity/TDS/Chlorides | 2019 | 5 |
| Honey Lake Wildfowl Management Ponds | No | Trace Elements | 2019 | 5 |
| **Truckee River HU** | | | | |
| Truckee River | No | Sedimentation/Siltation | 2009 | 4A |
| Bronco Creek | No | Sedimentation/Siltation | 2009 | 4A |
| Gray Creek (Nevada County) | No | Sedimentation/Siltation | 2009 | 4A |
| Donner Lake | No | Priority Organics | 2019 | 5 |
| Donner Lake | Yes | Chlordane | 2025 | 5 |
| Donner Lake | Yes | Arsenic | 2025 | 5 |
| Squaw Creek | No | Sedimentation/Siltation | 2007 | 4A |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| **Lake Tahoe HU** | | | | |
| Lake Tahoe | No | Sedimentation/Siltation | 2011 | 4A |
| Lake Tahoe | No | Nitrogen | 2011 | 4A |
| Lake Tahoe | No | Phosphorus | 2011 | 4A |
| Blackwood Creek | No | Sedimentation/Siltation | 2008 | 5 |
| Blackwood Creek | No | Iron | 2019 | 5 |
| Blackwood Creek | No | Nitrogen | 2011 | 5 |
| Blackwood Creek | No | Phosphorus | 2011 | 5 |
| Cold Creek | No | Total Nitrogen as N | 2021 | 4B |
| General Creek | No | Iron | 2019 | 5 |
| General Creek | No | Phosphorus | 2012 | 5 |
| Heavenly Valley Creek (source to USFS boundary) | No | Chloride | 2019 | 5 |
| Heavenly Valley Creek (source to USFS boundary) | No | Phosphorus | 2011 | 5 |
| Heavenly Valley Creek (source to USFS boundary) | No | Sedimentation/Siltation | 2002 | 5 |
| Heavenly Valley Creek (USFS boundary to Trout Creek) | No | Chloride | 2019 | 5 |
| Heavenly Valley Creek (USFS boundary to Trout Creek) | No | Sedimentation/Siltation | 2011 | 5 |
| Tallac Creek | No | Pathogens | 2019 | 5 |
| Trout Creek (above HWY 50) | No | Iron | 2019 | 5 |
| Trout Creek (above HWY 50) | No | Nitrogen | 2011 | 5 |
| Trout Creek (above HWY 50) | No | Phosphorus | 2011 | 5 |
| Trout Creek (above HWY 50) | No | Pathogens | 2013 | 5 |
| Trout Creek (below HWY 50) | No | Iron | 2019 | 5 |
| Trout Creek (below HWY 50) | No | Nitrogen | 2011 | 5 |
| Trout Creek (below HWY 50) | No | Phosphorus | 2011 | 5 |
| Trout Creek (below HWY 50) | No | Pathogens | 2019 | 5 |
| Truckee River, Upper (above Christmas Valley) | No | Iron | 2019 | 5 |
| Truckee River, Upper (above Christmas Valley) | No | Phosphorus | 2011 | 5 |
| Truckee River, Upper (below Christmas Valley) | No | Iron | 2019 | 5 |
| Truckee River, Upper (below Christmas Valley) | No | Phosphorus | 2011 | 5 |
| Ward Creek | No | Iron | 2019 | 5 |
| Ward Creek | No | Nitrogen | 2011 | 5 |
| Ward Creek | No | Phosphorus | 2011 | 5 |
| Ward Creek | No | Sedimentation/Siltation | 2011 | 5 |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| Bijou Park Creek | Yes | Iron | 2025 | 5 |
| Bijou Park Creek | Yes | Oil and grease | 2025 | 5 |
| Bijou Park Creek | Yes | Phosphorus | 2025 | 5 |
| Bijou Park Creek | Yes | Total Nitrogen as N | 2025 | 5 |
| Bijou Park Creek | Yes | Turbidity | 2025 | 5 |
| **West Fork Carson River HU** | | | | |
| Carson River, West Fork (Headwaters to Woodfords) | No | Nitrogen | 2019 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | No[3] | nitrate | 2019 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | No | Phosphorus | 2019 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | Yes | Chloride | 2025 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | Yes | Sulfate | 2025 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | Yes | Total Dissolved Solids | 2025 | 5 |
| Carson River, West Fork (Headwaters to Woodfords) | Yes | Turbidity | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | No | Nitrogen | 2019 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | No | Pathogens | 2013 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Chloride | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Nitrate | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Sulfate | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Total Dissolved Solids | 2025 | 5 |
| Carson River, West Fork (Woodfords to Paynesville) | Yes | Turbidity | 2025 | 5 |
| Carson River, West Fork (Paynesville to state line) | No | Pathogens | 2013 | 5 |
| Snowshoe Thompson Ditch 1 | Yes | Phosphorus | 2025 | 4B |
| Snowshoe Thompson Ditch 1 | Yes | Total Kjeldahl Nitrogen | 2025 | 4B |
| **East Fork Carson River HU** | | | | |
| Carson River, East Fork | No | Total Dissolved Solids | 2021 | 5 |
| Wolf Creek (Alpine County) | No | Sedimentation/Siltation | 2019 | 5 |
| Indian Creek (Alpine County) | No | Pathogens | 2013 | 5 |
| Indian Creek (Alpine County) | Yes | Chloride | 2025 | 5 |
| Indian Creek (Alpine County) | Yes | Dissolved Oxygen | 2025 | 5 |
| Indian Creek Reservoir | No | Phosphorus | 2003 | 4A |
| Indian Creek Reservoir | Yes | Dissolved Oxygen | 2003 | 4A |
| Aspen Creek | No | Metals | 2019 | 4B |
| Bryant Creek | No | Metals | 2019 | 4B |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| Leviathan Creek | No | Metals | 2019 | 4B |
| Monitor Creek | No | Aluminum | 2019 | 4B |
| Monitor Creek | No | Iron | 2019 | 5 |
| Monitor Creek | No | Manganese | 2019 | 5 |
| Monitor Creek | No | Silver | 2019 | 5 |
| Monitor Creek | No | Sulfate | 2019 | 5 |
| Monitor Creek | No | Total Dissolved Solids | 2019 | 5 |
| **East Walker River HU** | | | | |
| East Walker River, above Bridgeport Reservoir | No | Pathogens | 2027 | 4B |
| East Walker River, below Bridgeport Reservoir | No | Sedimentation/Siltation | 2019 | 5 |
| East Walker River, below Bridgeport Reservoir | No | Manganese | 2021 | 5 |
| East Walker River, below Bridgeport Reservoir | No | Turbidity | 2021 | 5 |
| Bridgeport Reservoir | No | Nitrogen | 2019 | 5 |
| Bridgeport Reservoir | No | Phosphorus | 2019 | 5 |
| Bridgeport Reservoir | No | Sedimentation/Siltation | 2019 | 5 |
| Buckeye Creek | No | Pathogens | 2027 | 4B |
| Robinson Creek (HWY 395 to Bridgeport Reservoir) | No | Pathogens | 2027 | 4B |
| Robinson Creek (Twin Lakes to HWY 395) | No | Pathogens | 2027 | 4B |
| Swauger Creek | No | Pathogens | 2027 | 4B |
| Swauger Creek | No | Phosphorus | 2010 | 5 |
| Bodie Creek | No | Mercury | 2027 | 5 |
| **Mono HU** | | | | |
| Mono Lake | No | Salinity/TDS/Chlorides | 2019 | 5 |
| **Owens HU** | | | | |
| Mammoth Creek (Headwaters to Twin Lakes outlet) | No | Total Dissolved Solids | 2021 | 5 |
| Mammoth Creek (Twin Lakes outlet to Old Mammoth Road) | No | Mercury | 2019 | 5 |
| Mammoth Creek (Twin Lakes outlet to Old Mammoth Road) | No | Manganese | 2021 | 5 |
| Mammoth Creek (Old Mammoth Road to HWY 395) | No | Mercury | 2021 | 5 |
| Mammoth Creek (Old Mammoth Road to HWY 395) | No | Manganese | 2021 | 5 |
| Mammoth Creek (Old Mammoth Road to HWY 395) | No | Total Dissovled Solids | 2021 | 5 |
| Mammoth Creek, unamed tributary (confluence is near Old Mammoth Rd.) | No | Arsenic | 2021 | 5 |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| Mammoth Creek, unamed tributary (confluence is near Old Mammoth Rd.) | No | Mercury | 2021 | 5 |
| Hilton Creek | No | Oxygen, Dissolved | 2021 | 5 |
| Rock Creek (tributary to Owens River) | No | Total Dissolved Solids | 2021 | 5 |
| Crowley Lake | No | Ammonia | 2019 | 5 |
| Crowley Lake | No | Dissolved Oxygen | 2019 | 5 |
| Haiwee Reservoir | No | Copper | 2019 | 5 |
| Pleasant Valley Reservoir | No | Organic Enrichment/Low DO | 2019 | 5 |
| **Amargosa HU** | | | | |
| Amargosa River (Nevada border to Tecopa) | No | Arsenic | 2021 | 5 |
| Amargoas River (Tecopa to Upper Canyon) | No | Arsenic | 2021 | 5 |
| Amargosa River (Upper Canyon to Illow Creek confluence) | N | Arsenic | 2021 | |
| Mesquite Springs (Inyo County) | No | Arsenic | 2021 | 5 |
| Mesquite Springs (Inyo County) | No | Boron | 2021 | 5 |
| **Trona HU** | | | | |
| Searles Lake | No | Salinity/TDS/Chlorides | 2019 | 4B |
| Searles Lake | No | Total Petroleum Hydrocarbons | 2019 | 4B |
| **Antelope HU** | | | | |
| Little Rock Reservoir | No | Manganese | 2021 | 5 |
| Little Rock Reservoir | Yes | Mercury | 2025 | 5 |
| Little Rock Reservoir | Yes | Polychlorinated biphenyls (PCBs) | 2025 | 5 |
| **Mojave HU** | | | | |
| Silverwood Lake | Yes | Mercuy | 2025 | 5 |
| Silverwood Lake | Yes | Polychlorinated biphenyls (PCBs) | 2025 | 5 |
| Lake Arrowhead | Yes | Mercury | 2025 | 5 |
| Lake Gregory | Yes | Mercury | 2025 | 5 |
| Holcomb Creek | No | Total Dissolved Solids | 2021 | 5 |
| Mojave River (Mojave Forks Reservoir outlet to Upper Narrows) | No | Fluoride | 2021 | 5 |
| Mojave River (Upper Narrows to Lower Narrows) | No | Fluoride | 2021 | 5 |
| Mojave River (Upper Narrows to Lower Narrows) | No | Sulfates | 2021 | 5 |
| Mojave River (Upper Narrows to Lower Narrows) | No | Total Dissolved Solids | 2021 | 5 |
| Crab Creek | No | Total Dissolved Solids | 2021 | 5 |

| Waterbody | New Listing? | Pollutant | Completion Year[1] | Category[2] |
|---|---|---|---|---|
| Sheep Creek | No | Nitrate | 2021 | 5 |
| Sheep Creek | No | Total Dissolved Solids | 2021 | 5 |

[1]**Completion Year**. For listings with USEPA-approved TMDLs, this refers to the USEPA approval year. For listings still needing TMDLs, the completion year is the projected Lahontan Water Board action date. For listings being addressed by actions other than TMDLs, the completion year is the projected attainment date for water quality standards.

[2]**Category**. The Integrated Report includes two categories and subcategories for water body-pollutant combinations in which the applicable standard is not attained ("listings"). The subcategories can be summarized as follows:

4A. All listings for this water body are being addressed by USEPA-approved TMDLs.

4B. All listings for this water body are being addressed by regulatory actions other than TMDLs.

4C. This water body is impacted by "pollution" rather than by a "pollutant."

5. Evidence shows at least one use is not supported (and a TMDL is needed). Although the category did not change, in some cases the TMDL requirements may have changed. Refer to Appendix H for more information.

[3]This segment was previously listed for "Nitrogen" on the basis of data for several forms of nitrogen. State Board staff requested that nitrate be assessed separately, resulting in a separate listing.

# APPENDIX B: RECOMMENDED DELISTINGS FOR 2012 ASSESSMENT CYCLE

Waters are grouped by watershed (Hydrologic Unit or HU).

| Waterbody or Segment | Pollutant | Comment | Additional Information |
|---|---|---|---|
| **East Walker Tributaries HU** | | | |
| Clearwater Creek | sedimentation/ siltation | Applicable water quality objective is attained and original basis for listing was incorrect. | Staff recommendations for Clearwater Creek; Bioassessment Study (Herbst 1995); Clearwater Creek Surveys (Tetra Tech 2003); refer to fact sheet for Clearwater Creek in Appendix I |
| **Amargosa River HU** | | | |
| Amargosa River (Willow Creek confluence to Badwater) | Arsenic | Original listing was flawed and based on insufficient information. No state or federal aquatic life criteria to assess whether aquatic saline habitat within this segment of the Amargosa River is being supported or impaired by arsenic. Data were not temporally representative. Arsenic is naturally high in this waterbody. | Refer to fact sheet for Amargosa River (Willow Creek confluence to Badwater) in Appendix I |

## APPENDIX C: STANDARDS EXCEEDANCES THAT ARE NOT RECOMMENDED FOR LISTING

The following waterbody-pollutant combinations meet binomial model criteria for listing (Listing Policy Tables 3.1 or 3.2) but are not recommended for listing for various reasons. Waters are grouped by watershed (Hydrologic Unit or HU).

| Waterbody or Segment | Pollutant | Type of Standard | Reason That Listing is Not Recommended |
|---|---|---|---|
| **Lake Tahoe HU** | | | |
| Hidden Valley Creek | Phosphorus | SSO[1] | Data are not temporally representative (Listing Policy section 6.1.5.3). Phosphorus in this watershed is naturally occurring as it is used as a reference site for Heavenly Valley Creek. |
| Tahoe Keys Sailing Lagoon | pH | SSO[1] | Data are not temporally representative (Listing Policy section 6.1.5.3). |
| **East Fork Carson River HU** | | | |
| Carson River, East Fork | Boron | SSO[1] | Data are not temporally representative (Listing Policy section 6.1.5.3). Boron in this watershed are naturally occurring in geothermal sources including Grover Hot Springs. |
| Carson River, East Fork | Phosphorus | SSO[1] | Data does not meet the minimum quality assurance/quality control requirments. (Listing Policy section6.1.4). Results are not valid due to holding time violations. |
| Carson River, East Fork | Sulfates | SSO[1] | Data are not temporally representative (Listing Policy section 6.1.5.3). Sulfates in this watershed are naturally occurring in geothermal sources including Grover Hot Springs. |
| **West Fork Carson River HU** | | | |
| Carson River, West Fork (Woodfords to Paynesville) | Boron | SSO[1] | Listing is not recommended at this time because water quality has improved and there have been no exceedances for 25 year period between 1986-2010. There is 25 years of data indicating that the SSO is meet. |
| Dressler Ditch | Turbidity | SSO[1] | Data are not temporally representative (Listing Policy section 6.1.5.3). |
| **West Walker River HU** | | | |
| West Walker River | boron | SSO[1] | Data are not temporally representative (Listing Policy section 6.1.5.3). Boron in this watershed may be naturally occurring in geothermal sources including Fales Hot Springs. |
| West Walker River | chloride | SSO[1] | Data are not temporally representative (Listing Policy section 6.1.5.3). |
| **East Walker River HU** | | | |
| Twin Lake, Upper | Mercury | USEPA evaluation guideline | Data is not temporally or spatially representative (Listing Policy section 6.1.5.3). Based on the limited data set, more information is necessary to determine an impairment. |

| | | | |
|---|---|---|---|
| **Amargosa HU** | | | |
| Amargosa River (Willow Creek confluence to Badwater) | Copper | CTR[2] | Data are not temporally representative (Listing Policy Section 6.1.5.3). Only one sample per year is available, so data are not temporally representative of the conditions in the river, which are characterized by great seasonal and annual variability in flows.CTR saltwater aquatic life standards were developed for marine/estuarine organisms and are not appropriate to evaluate protection of organisms in inland saline waters. |

[1] Site Specific Objective

[2] CTR: California Toxics Rule

Modifications to draft Staff Report since public comment release on April 4, 2014

| Change | Comment |
|---|---|
| Added Silverwood Lake to 303(d) list for PCBs and mercury | Listing added due to an OEHHA fish advisory and so this addition was added to the webpage as an addendum and included in the Final Staff Report. |
| Removed the Category 5 subcategories | This is only for distinction in CalWQA but the subcategories are not recognized by USEPA. Changes made to staff report and Appendix A |
| Appendix A additions | Appendix A only reflected the proposed listings from regional board staff during the 2010 Integrated Report cyle. Appendix A has been updated to include additional listings recommended by State Board and US Environmental Protection Agency in the 2010 cycle. |
| Added Lake Gregory and Lake Arrowhead to 303(d) list for mercury | Comment received by regional board recommended evaluation of individual fish species rather than composites. The changes made to the data evaluation resulted in two additional listings based on the Bioaccumulation Oversight Group Lakes survey of 2007-2008. |
| Added Upper Twin Lake (East Walker HU)- mercury to Appendix C | Comment received by regional board recommended evaluation of individual fish species rather than composites. The changes made to the data evaluation resulted in two additional listings based on the Bioaccumulation Oversight Group Lakes survey of 2007-2008. Staff concluded that the limited data for this speciifc watebody did not support listing. |
| Bijou Creek category change for turbidity, nitrogen as N, and phosphorus | Final listing decision changed from "List on 303(d) list (TMDL required)" to "List on 303(d) list (being addressed by USEPA approved TMDL)" in response to comments received by the City of South Lake Tahoe. |

# ENCLOSURE 3

**(APPENDIX M OF THE STAFF REPORT –**

**COMMENTS RECEIVED AND RESPONSE TO COMMENTS**

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530.550.8760
P.O. Box 8568
Truckee, CA 96162
truckeeriverwc.org



Truckee River Watershed Council
Collaborative solutions to protect, enhance and restore the Truckee River Watershed

Carly Nilson
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

May 16, 2014

**RE: 305(b)/303(d) Integrated Report, April 2014**

Thank you for the opportunity to offer comments on the recently released Clean Water Act Sections 305(b) and 303(d) Integrated Report (Integrated Report) for the Lahontan Region.

**Support for Maintaining Listings**

The Truckee River Watershed Council (TRWC) supports maintaining the listings for water bodies in the Truckee River watershed, including the Middle Truckee River, Donner Lake, and Squaw Creek. This comment letter will focus on data regarding the Middle Truckee River.

We agree with the conclusion presented in in the Integrated Report Staff Report that the Truckee River is not ready for delisting. As stated on Page 10 of the Report, we agree that there needs to be further investigation of the current sediment target and turbidity water quality objectives.

**Data in Support of the Listing**

**Impairment of Beneficial Uses**. The Integrated Report is based on data collected through 2010. Data TRWC has collected since 2010 indicate that:

1. The current TMDL standard may not detect impairment of beneficial uses.
2. Beneficial uses are impacted in the Truckee River.

In 2010 and 2011 TRWC implemented a monitoring plan in support of the Truckee River TMDL. The monitoring program consisted of suspended sediment and turbidity monitoring as well as bioassessment studies.

**Suspended Sediment Concentration.** Our suspended sediment (SSC) and turbidity monitoring focused on three key tributary streams: Cold Creek, Donner Creek, and Trout Creek. The SSC data collected from these tributaries demonstrated that for the monitoring period the three tributary streams had suspended sediment concentrations below the TMDL standard, which is that the SSC concentration is 25 mg/L or less 90% of the time.

**Bioassessment.** In contrast, the bioassessment data strongly supported that beneficial uses are impaired in the Truckee River. We summarize below the key results from these studies.

We developed a monitoring program with Dr. David Herbst of U.C. Santa Barbara – Sierra Nevada Aquatic Research Laboratory. In 2010, we conducted a "reference-test" study comparing several sites along the Truckee River to similar eastern Sierra streams with less watershed disturbance (Carson, Walker, and Markleeville Creek). **Compared to similar reference streams, the Truckee River consistently scored lower on the Eastern Sierra Index of Biological Integrity.** All sampling sites on the Truckee River scored below the "not supporting of beneficial uses" or "partially supporting" thresholds. Reference streams scored as "supporting" or "partially supporting".

Based upon this work, we completed additional monitoring in 2011 to more specifically examine the relationship between sediment and biological communities. We completed a "patch-scale" study to examine the relationship between deposited sediment and biological condition of the benthic community. **There were significant differences in biological conditions starting with sediment coverage of just 20%. At 80% or greater sediment coverage there were very significant decreases in biological condition**.

The differences in biological condition include:

- Decrease in the quantity and quality of food resources, meaning that both the number and size of benthic macroinvertebrates decreased with increasing sediment coverage;
- The BMI community shifted away from organisms intolerant of pollution towards species that are more tolerant of poor water quality.

**Sediment Deposition.** In addition to the bioassessment work, we completed surveys to assess the extent of sediment deposition near our bioassessment sampling sites. In these surveys, we found that:

- **Sediment deposition was fairly widespread;**
- At six of the ten sampling sites, 50% or more of the survey points measured sediment coverage in the excessive category (80 – 100% coverage by fine sediment).

**Beneficial Uses Not Supported.** Taken together, these studies indicate that beneficial uses including "Cold Freshwater Habitat" and "Spawning Reproduction and Development" are likely to not be fully supported in the Truckee River due to impacts on the base of the food web and excess deposited sediment.

**De-listing is Pre-Mature**

We recognize that data from our studies are not included in the current Integrated Report. We are highlighting our current data to support the Lahontan Water Board staff conclusions that:

- De-listing is premature;

- Beneficial uses are not being supported;
- The current TMDL numeric standard does not appear to be sufficient to detect actual impairment from excess sediment.

All data can be found in reports posted on our website: www.truckeeriverwc.org/about/documents.

**Next Steps**

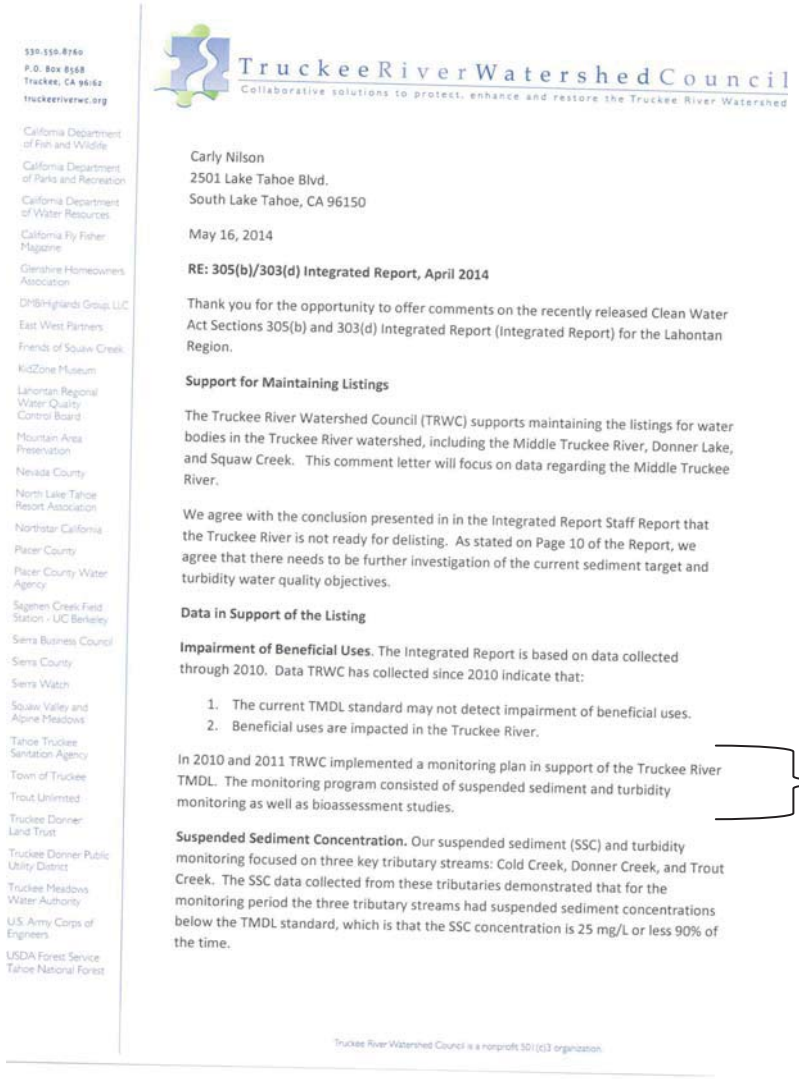
We would like to formally request a time at a future Lahontan Water Board meeting to present the results of our TMDL monitoring program in greater depth.

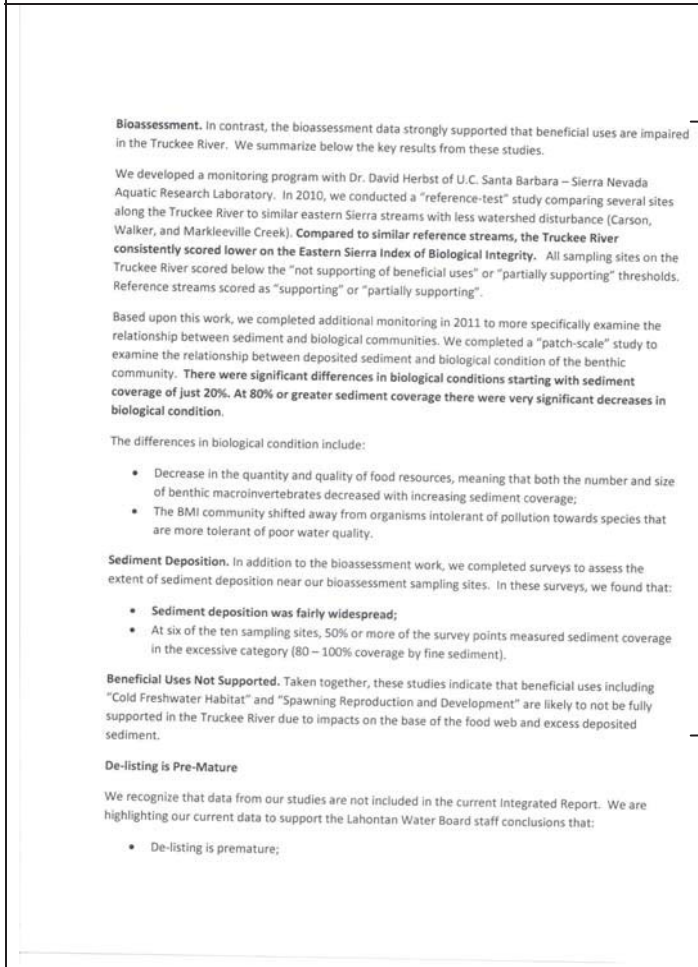
Thank you for considering our comments.

Sincerely,

Beth Christman
Director of Restoration Programs

Lisa Wallace
Executive Director

| Comments | Response |
|---|---|
|  | **TRWC-R1:** The surface water assessments made for the 2012 Integrated Report cycle considered data that was submitted up until August of 2010 as part of the State Water Resources Control Board data solicitation process. The Water Board acknowledges the TRWC's 2010 and 2011 monitoring efforts in support of the Truckee River TMDL; however, these data were not evaluated during this listing cycle. To ensure that the results of TRWC's are considered for the next Integrated Report cycle, we strongly urge you to submit the data to the California Environmental Data Exchange Network (CEDEN) using CEDEN formats. CEDEN helps transform different data sources into a standardized, integrated data sharing network and will be the sole source for evaluating data for surface waters for the upcoming Integrated report cycles. For more information on how register your organization and prepare and submit data to CEDEN please view http://www.waterboards.ca.gov/water_issues/programs/swamp/tools.shtml#datamgmt. |

| Comments | Response |
|---|---|
|  | **TRWC-R2:** The Truckee River TMDL, adopted by the USEPA in September 2009, assigned load allocations to achieve sediment related water quality objectives set to protect in-stream aquatic life beneficial uses. The suspended sediment concentrations within the Truckee River have impacted the cold freshwater habitat (COLD) and the spawning, reproduction, and development (SPWN) beneficial uses designated for the Truckee River. The sediment load allocations and implementation measures prescribed in the TMDL are established to attain these beneficial uses. The target in the TMDL only refers to suspended sediment concentration at the Nevada state line monitoring station and additional data, including biological data, provides additional measures of determining impairment of the Truckee River. The Truckee River will continue to remain on the 303(d) list of impaired water bodies until the waste load allocations are achieved and beneficial uses are supported. TWRC's continued monitoring is a critical component in tracking whether the watershed-wide sediment load reductions are protective of beneficial uses in the Truckee River.<br><br>**TRWC-R3: See TRWC-R1.** Support of Water Board's conclusion noted. No new data was presented for this Integrated Report cycle to evaluate the Truckee River for suspended sediment. Water Board staff encourage TRWC to input their current and future data into CEDEN to be evaluated in future listing cycles. |

**Bioassessment.** In contrast, the bioassessment data strongly supported that beneficial uses are impaired in the Truckee River. We summarize below the key results from these studies.

We developed a monitoring program with Dr. David Herbst of U.C. Santa Barbara – Sierra Nevada Aquatic Research Laboratory. In 2010, we conducted a "reference-test" study comparing several sites along the Truckee River to similar eastern Sierra streams with less watershed disturbance (Carson, Walker, and Markleeville Creek). **Compared to similar reference streams, the Truckee River consistently scored lower on the Eastern Sierra Index of Biological Integrity.** All sampling sites on the Truckee River scored below the "not supporting of beneficial uses" or "partially supporting" thresholds. Reference streams scored as "supporting" or "partially supporting".

Based upon this work, we completed additional monitoring in 2011 to more specifically examine the relationship between sediment and biological communities. We completed a "patch-scale" study to examine the relationship between deposited sediment and biological condition of the benthic community. **There were significant differences in biological conditions starting with sediment coverage of just 20%. At 80% or greater sediment coverage there were very significant decreases in biological condition.**

The differences in biological condition include:

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**Sediment Deposition.** In addition to the bioassessment work, we completed surveys to assess the extent of sediment deposition near our bioassessment sampling sites. In these surveys, we found that:

- **Sediment deposition was fairly widespread;**
- At six of the ten sampling sites, 50% or more of the survey points measured sediment coverage in the excessive category (80 – 100% coverage by fine sediment).

**Beneficial Uses Not Supported.** Taken together, these studies indicate that beneficial uses including "Cold Freshwater Habitat" and "Spawning Reproduction and Development" are likely to not be fully supported in the Truckee River due to impacts on the base of the food web and excess deposited sediment.

**De-listing is Pre-Mature**

We recognize that data from our studies are not included in the current Integrated Report. We are highlighting our current data to support the Lahontan Water Board staff conclusions that:

- De-listing is premature;

| Comments | Response |
| --- | --- |
| • Beneficial uses are not being supported;<br>• The current TMDL numeric standard does not appear to be sufficient to detect actual impairment from excess sediment.<br><br>All data can be found in reports posted on our website: www.truckeeriverwc.org/about/documents.<br><br>**Next Steps**<br><br>We would like to formally request a time at a future Lahontan Water Board meeting to present the results of our TMDL monitoring program in greater depth.<br><br>Thank you for considering our comments.<br><br>Sincerely,<br><br>Beth Christman<br>Director of Restoration Programs<br><br>Lisa Wallace<br>Executive Director | **TRWC-R3 continued:** Also see TRWC-R2. |

City of South Lake Tahoe
"making a positive difference now"

May 19, 2014

Attn: Carly Nilson
Mary Fiore-Wagner
Lahontan Regional Water Quality Control Board
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150

**RE: City of South Lake Tahoe Comments on the Lahontan Regional Water Quality Control Board's Clean Water Act Section 303(D) and 305(B) Assessment and Draft Integrated Report**

Dear Ms. Carly Nilson and Ms. Mary Fiore-Wagner:

The City of South Lake Tahoe (City) appreciates the opportunity to comment on the Lahontan Regional Water Quality Control Board (Regional Board) draft *2012 Clean Water Act Sections 303(D) and 305(B) Assessment* issued April 5, 2014, in preparation for submittal of the final "Integrated Report" to the State Water Resources Control Board.

As a responsible party named in the Lake Tahoe Total Maximum Daily Load (TMDL), and as a permittee under Order No R6T-2011-101A1, the City of South Lake Tahoe is actively participating in the watershed approach to implementation of the Lake Tahoe TMDL. It is important to restate that the comprehensive Lake Tahoe TMDL and associated Management System include not only the Lake, but also all 63 tributary stream systems to the Lake.

Based on a review of the information contained in the water body "Fact Sheets" and lines of evidence (LOE) provided by the Regional Board in support of Appendix A (Proposed New and Revised 303[D] List for 2012), the City has noticed the following items that should be changed or updated in the Proposed Revisions to the Lake Tahoe HU portion of Appendix A.

**1. Bijou Park Creek, New Listing: Iron (Category 5A, Completion Year 2025)**
The decision to include this new water body-pollutant combination on the 2012 list contradicts the supporting information for this listing (Decision ID 31735). As noted in the Regional Board Staff Conclusion in Decision ID 31735:

> "Ten of the samples exceed the water quality objective for the secondary MCL, but this creek has naturally high levels or [sic] iron".

The staff conclusion then goes on to state:

> "Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification *against* placing this water segment-pollutant combination in the section 303(d) list in the Water Quality Limited Segments category" (emphasis added, see page 5 of Attachment 1).

The Regional Board Staff Decision Recommendation in Decision ID 31735 states:

> "After review of the available data and information, RWQCB staff concludes that the water body-pollutant combinations *should not be placed on the section 303(d) list because applicable water quality standards are not being exceeded"* (emphasis added, see page 6 of Attachment 1).

Given that Bijou Park Creek is known to have naturally high levels of iron, the City supports the Regional Board staff conclusion that "there is sufficient justification against placing this water segment-pollutant combination on the section 303(d) list" and concurs with the Regional Board staff decision recommendation to not place the water body-pollutant combination on the section 303(d) list.

If the Regional Board does include the water segment pollutant in contradiction to Decision ID 31735, the Category for this new listing should be 4B, since a TMDL is not the most effective approach to addressing a naturally occurring pollutant. The City believes that the resources required to develop and implement a TMDL to address a pollutant that is a natural background condition would be more effectively utilized to address existing TMDLs addressing pollutants with documented anthropogenic sources.

**2. Bijou Park Creek, New Listing: Phosphorus (Category 5A, Completion Year 2025)**
The supporting information for this listing (Decision ID 31769, LOE ID 31971) notes that Bijou Park Creek is an upstream tributary of Lake Tahoe. The Lake Tahoe TMDL (adopted by the Regional Board on November 16, 2010 and approved by the USEPA on August 17, 2011) determined that the primary source of phosphorus in the Lake Tahoe (and tributaries, including Bijou Park Creek) watershed is urban storm water runoff and phosphorus associated with eroding sediment on disturbed undeveloped lands. On the ground efforts required by the Lake Tahoe TMDL that focus on (1) stabilizing disturbed areas within the forested uplands, (2) restoring eroding stream channels, and (3) managing and treating urban uplands (e.g. street sweeping, installing and maintaining infiltration and stormwater treatment facilities) will also achieve pollutant load reductions in waters tributary to Lake Tahoe.

The Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) permit (Order No R6T-2011-101A1), requires the California- based Lake Tahoe municipalities (El Dorado and Placer Counties, and the City of South Lake Tahoe) and the California Department of Transportation (CalTrans) to develop and implement comprehensive pollutant load reduction programs (PLRPs) to meet specified pollutant load reduction requirements. Implementation measures include a variety of alternative treatment options, roadway operation practices, and local ordinances to reduce average annual pollutant loads. These Lake Tahoe TMDL implementation efforts will also reduce inputs of phosphorus to this impaired segment of Bijou Park Creek. Maintenance activities and restoring small disturbed sites that are underway, or planned and expected, within the forested uplands of this watershed will also reduce or avoid increases in fine sediment and nutrient loads.

Additionally, the Lake Tahoe TMDL also requires implementing measures to control stationary sources of dust, which help reduce pollutant loads of fine sediments. Implementation of these measures helps address the phosphorus loading that impairs Bijou Park Creek that is associated with these fine sediments from dust sources.

Pollutant load reductions within Bijou Park Creek will be tracked through implementation of the detailed performance and compliance measures and assessment and reporting protocols included in the Lake Tahoe TMDL. The TMDL Management System project is currently establishing activity-based tracking and reporting requirements to assess activities that are

expected to reduce pollutant loading from non-urban sources. The Lahontan Water Board and the Nevada Division of Environmental Protection currently implement a Lake Tahoe TMDL Management System for managing, tracking, integrating and evaluating new information generated from TMDL implementation actions, effectiveness monitoring, research efforts, and other factors such as climate change and wildfires.

The Management System is based on an adaptive management framework to (1) link load reduction effectiveness with project implementation monitoring to improve project design and to assess if actual environmental improvement is occurring as expected; (2) establish guidance and operation protocols for how new information will be incorporated into project designs and TMDL program implementation; (3) establish prioritized TMDL research needs to fill data gaps and reduce uncertainties, and (4) implement a process for updating and reporting pollutant load reduction estimates and tracking projects within the TMDL implementation timeline.

The Lake Tahoe TMDL requires implementation, effectiveness, and status and trends monitoring. Tributary stream status and trends monitoring will track long-term changes in water quality conditions relative to established water quality standards or goals, and project-specific monitoring will be used to assess the efficacy of various implementation measures.

Long-term water quality trends and pollutant load reduction tracking in Bijou Park Creek will be captured through the ongoing efforts of the Lake Tahoe Interagency Monitoring Program (LTIMP) whose primary objective is to monitor discharge, nutrient load, and sediment loads from representative streams that flow into Lake Tahoe. Nitrogen and phosphorus loading calculations are performed using the LTIMP flow and nutrient concentration database.

Pollutant loading of Phosphorus from Bijou Park Creek (a tributary to Lake Tahoe) is currently addressed through the existing Lake Tahoe TMDL. This tributary approach was used for impairment listings for Heavenly Creek (Decision IDs 28449 and 19683), Trout Creek (Decision IDs 20459, 20304, 20460, and 19951), Upper Truckee River (Decision IDs 27228 and 20022) and Ward Creek (Decision IDs 20141, 27275 and 20142). The creation of a new TMDL for this one tributary to Lake Tahoe would create redundant and duplicative requirements currently addressed by the Lake Tahoe TMDL.

*The City requests that the Category for this new listing be revised to 5B, as this new impairment listing is already being addressed by a USEPA-approved TMDL.*

**3. Bijou Park Creek, New Listing: Total Nitrogen as N (Category 5A, Completion Year 2025)**

The supporting information for this listing (Decision ID 31770) confirms that Bijou Park Creek is an upstream tributary of Lake Tahoe. The Lake Tahoe TMDL (adopted by the Regional Board on November 16, 2010 and approved by the USEPA on August 17, 2011) notes that the largest source of nitrogen in the Lake Tahoe (and tributary watersheds) is transportation-related emissions that lead to atmospheric nitrogen deposition. The Lake Tahoe TMDL also includes implementation measures to reduce atmospheric nitrogen sources. The Tahoe Regional Planning Agency leads efforts to improve transportation infrastructure and reduce overall vehicle miles traveled in the Lake Tahoe region to reduce emissions that lead to atmospheric nutrient loading. Public transit and vehicle fleet turnover are expected to further reduce nutrient-laden emissions in the Tahoe basin that will reduce nitrogen loading in the Bijou Park Creek watershed.

Pollutant load reductions within the Bijou Park Creek watershed will be tracked through implementation of detailed performance and compliance measures and assessment and reporting protocols included in the Lake Tahoe TMDL. The Lahontan Water Board and the Nevada Division of Environmental Protection are currently implementing a Lake Tahoe TMDL Management System for managing, tracking, integrating and evaluating new information generated from TMDL implementation actions, effectiveness monitoring, research efforts, and other factors such as climate change and wildfires. The Management System is currently establishing activity-based tracking and reporting requirements to assess activities that are expected to reduce pollutant loading from non-urban sources, as discussed in detail above.

The Management System is based on an adaptive management framework to (1) link load reduction effectiveness with project implementation monitoring to improve project design and to assess if actual environmental improvement is occurring as expected; (2) establish guidance and operation protocols for how new information will be incorporated into project designs and TMDL program implementation; (3) establish prioritized TMDL research needs to fill data gaps and reduce uncertainties, and (4) implement a process for updating and reporting pollutant load reduction estimates and tracking projects within the TMDL implementation timeline.

The Lake Tahoe TMDL requires implementation, effectiveness, and status and trends monitoring. Existing Lake Tahoe TMDL tributary stream status and trends monitoring will track long-term changes in water quality conditions relative to established water quality standards or goals, and project-specific monitoring will be used to assess the efficacy of various implementation measures.

Pollutant loading of Total Nitrogen as N from Bijou Park Creek (a tributary to Lake Tahoe) is currently addressed through the existing Lake Tahoe TMDL. This approach was used for related impairments in Heavenly Creek (Decision IDs 28449 and 19683), Trout Creek (Decision IDs 20459, 20304, 20460, and 19951), Upper Truckee River (Decision IDs 27228 and 20022) and Ward Creek (Decision IDs 20141, 27275 and 20142). The creation of a new TMDL for this one tributary to Lake Tahoe would create redundant and duplicative requirements currently addressed by the Lake Tahoe TMDL.

*The City requests that the Category for this new listing be revised to 5B, as this new impairment listing is already being addressed by a USEPA-approved TMDL.*

**4. Bijou Park Creek, New Listing: Turbidity (Category 5A, Completion Year 2025)**
Bijou Park Creek is an upstream tributary of Lake Tahoe. The Lake Tahoe TMDL (adopted by the Regional Board on November 16, 2010 and approved by the USEPA on August 17, 2011) addresses clarity (turbidity) impairments primarily caused by suspended sediment. On the ground efforts required by the Lake Tahoe TMDL that focus on (1) stabilizing disturbed areas within the forested uplands and (2) managing and treating urban uplands (e.g. street sweeping, installing and maintaining infiltration and stormwater treatment facilities) will also achieve pollutant load reductions of sediment within this waterbody segment, which is tributary to Lake Tahoe.

The Lake Tahoe TMDL identifies actions that resource management agencies, California-based Lake Tahoe municipalities (El Dorado and Placer Counties, and the City of South Lake Tahoe) and California Department of Transportation must take to reduce fine sediment and nutrient loading to the Lake. Municipal Stormwater NPDES permits require the municipalities and CalTrans to develop and implement comprehensive PLRPs to meet specified pollutant load

reduction requirements. Expected implementation measures include a variety of alternative treatment options, roadway operation practices, and local ordinances to reduce average annual pollutant loads. These Lake Tahoe TMDL implementation efforts will also reduce inputs of sediment to this impaired segment of Bijou Park Creek.

Additionally, the Lake Tahoe TMDL requires that the USFS-Lake Tahoe Basin Management Unit undertake restoration actions to reduce erosion and treat urban storm water runoff from paved and unpaved roadways, campgrounds, and recreational trails within the Lake Tahoe watershed. Storm water collection, conveyance, and treatment facilities coupled with revegetation of previously disturbed lands and stabilizing areas designated for recreational use are expected to reduce erosion and help control sediment discharges resulting in elevated turbidity levels in Bijou Park Creek.

Finally, the Lake Tahoe TMDL requires implementation of measures to control stationary sources of dust, which help reduce pollutant loads of fine sediments. Implementation of these measures helps address the sedimentation/siltation loading that impairs Bijou Park Creek from dust sources.

Pollutant load reductions within Bijou Park Creek tributary watershed will be tracked through implementation of detailed performance and compliance measures and assessment and reporting protocols included in the Lake Tahoe TMDL. As discussed above, the TMDL Management System is establishing activity-based tracking and reporting requirements to assess activities that are expected to reduce pollutant loading from non-urban sources.

The Lake Tahoe TMDL requires implementation, effectiveness, and status and trends monitoring. Tributary stream status and trends monitoring will track long-term changes in water quality conditions relative to established water quality standards or goals, and project-specific monitoring will be used to assess the efficacy of various implementation measures.

Long-term water quality trends and pollutant load reduction tracking in Bijou Park Creek will be captured through the ongoing efforts of the LTIMP, whose primary objective is to monitor discharge, nutrient load, and sediment loads from representative streams that flow into Lake Tahoe.

Pollutant loading of turbidity, sediment and siltation from Bijou Park Creek (a tributary to Lake Tahoe) is currently addressed through the existing Lake Tahoe TMDL. This approach was used for related impairments for Heavenly Creek (Decision IDs 28449 and 19683), Trout Creek (Decision IDs 20459, 20304, 20460, and 19951), Upper Truckee River (Decision IDs 27228 and 20022) and Ward Creek (Decision IDs 20141, 27275 and 20142).

The creation of a new TMDL for this one tributary to Lake Tahoe would create redundant and duplicative requirements currently addressed by the Lake Tahoe TMDL.

*The City requests that the Category for this new listing be revised to 5B, as this new impairment listing is already being addressed by a USEPA-approved TMDL.*

**5. Tallac Creek: Pathogens (Category 5A, Completion Year 2019)**

The supporting information for this listing (Decision ID 30390) notes that the Line of Evidence are based on unspecified data, and the LOE is a placeholder to support a 303(d) listing decision made prior to 2006. Is should be recognized that historic grazing is the most likely source.

*Is should be recognized that historic grazing is the most likely source of contamination, and the City believes this impaired can be addressed by regulatory actions other than TMDL, such as restrictions on grazing allotments. The City requests a Category 4B designation for this impairment.*

**6. Trout Creek (above HWY 50): Pathogens (Category 5A, Completion Year 2013)**
The Trout Creek (above HWY 50) segment is listed for completion "2013", which appears to be a typo, as the other portions of the Upper Truckee River and surrounding pathogen impaired waterbodies are designated for completion in 2019. Decision ID 28339 (Trout Creek, above HWY 50) notes the expected Fecal Coliform TMDL Completion Date is 2019, not 2013.

*Is should be recognized that historic grazing is the most likely source of contamination, and the City believes this impaired can be addressed by regulatory actions other than TMDLs. As such, the City requests a Category 4B designation for this impairment, and the Completion Year be listed as 2019.*

**7. Trout Creek (below HWY 50): Pathogens (Category 5A, Completion Year 2019)**
The supporting information for this listing (Decision ID 30194, LOE ID 27160) includes information in the Environmental Conditions that livestock grazing formerly occurred in the meadow near the confluence where samples were collected. LOE 27160 noted that 3 of the 19 collected samples exceeded the water quality objective for fecal coliform.

*Is should be recognized that historic grazing is the most likely source of contamination, and the City believes this impaired can be addressed by regulatory actions other than TMDL, such as restrictions on grazing allotments. The City requests a Category 4B designation for this impairment.*

Thank you for the opportunity to provide comments on the Lahontan Regional Water Quality Control Board's Clean Water Act Section 305(b) and 303(d) Assessment and Draft Integrated Report. The City is dedicated to improving water quality in all receiving waters within the Lake Tahoe basin, and supports policies that effectively utilize existing efforts and prioritize feasible solutions to meet water quality objectives within the basin. Please contact the City's Stormwater Program Coordinator, Jason Burke, at (530) 542-6038 if you have any questions or need additional information.

Sincerely,

Ray Jarvis, P.E.
Public Works Director

Attachment 1 – Highlighted portions of Bijou Park Creek Supporting Information

Cc: Nancy Kerry, City Manager
Sarah Hussong-Johnson, P.E., Deputy Public Works Director/ City Engineer
Robert Larsen, Lahontan Regional Quality Control Board
Jason Burke, Stormwater Program Coordinator

# Draft California 2012 Integrated Report( 303(d) List/305(b) Report)

## Supporting Information

### Regional Board 6 - Lahontan Region

**Water Body Name:** Bijou Park Creek
**Water Body ID:** CAR6341003120110919092625
**Water Body Type:** River & Stream

| DECISION ID | 30482 | Region 6 |
|---|---|---|
| Bijou Park Creek | | |

**Pollutant:** Chloride
**Final Listing Decision:** Do Not List on 303(d) list (TMDL required list)
**Last Listing Cycle's Final Listing Decision:** New Decision
**Revision Status** Revised
**Impairment from Pollutant or Pollution:** Pollutant

**Regional Board Staff Conclusion:**

This pollutant is being considered for placement on the section 303(d) list under section 3.2 of the Listing Policy. Under section 3.2, one line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant.Two of the samples exceed the water quality objective.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of two samples exceeded the objective and and this sample size is insufficient to determine with the power and confidence of the Listing Policy if standards are not met. A minimum of 26 samples is needed for application of table 3.2.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**Regional Board Staff Decision Recommendation:** After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should not be placed on the section 303(d) list because it cannot be determined if applicable water quality standards are not being exceeded.

### Line of Evidence (LOE) for Decision ID 30482, Chloride — Region 6

**Bijou Park Creek**

LOE ID: 32534

Pollutant: Chloride
LOE Subgroup: Pollutant-Water
Matrix: Water
Fraction: None

| | |
|---|---|
| Beneficial Use: | Cold Freshwater Habitat |
| Number of Samples: | 2 |
| Number of Exceedances: | 2 |
| Data and Information Type: | PHYSICAL/CHEMICAL MONITORING |
| Data Used to Assess Water Quality: | The annual averages from the sampling location in 2008 and 2009 this water body exceeded the water quality objective. One measurement was used to calculate the annual average for 2008 and 3 samples were used to calculate the annual average in 2009. |
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |
| Water Quality Objective/Criterion: | The water quality objective is an annual average of 0.15 mg/L. (from Table 5.1-3 of the Lahontan Region Basin Plan). |
| Objective/Criterion Reference: | Water Quality Control Plan for the Lahontan Region (as amended) |
| Evaluation Guideline: | |
| Guideline Reference: | |
| Spatial Representation: | Samples were collected at the following sampling stie: HV-C4 (Sky Mdw, California Parking Lot) |
| Temporal Representation: | Samples were collected once quarterly between August of 2008 and September of 2009. |
| Environmental Conditions: | |
| QAPP Information: | Data were collected for NPDES permit R6T-2003-0032. This data was collected under waste discharge requirements for a TMDL and therefore is of adequate quality. |
| QAPP Information Reference(s): | |

| DECISION ID | 31736 | Region 6 |
|---|---|---|
| Bijou Park Creek | | |

| | |
|---|---|
| **Pollutant:** | **Nitrate/Nitrite (Nitrite + Nitrate as N)** |
| **Final Listing Decision:** | **Do Not List on 303(d) list (TMDL required list)** |
| **Last Listing Cycle's Final Listing Decision:** | New Decision |
| **Revision Status** | Revised |
| **Impairment from Pollutant or Pollution:** | Pollutant |

**Regional Board Staff Conclusion:**

This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 a single line of evidence is necessary to assess listing status.

One lines of evidence are available in the administrative record to assess this pollutant. Zero of the 30 samples exceed the water quality objective.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:

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1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Zero of 30 samples exceeded the objective and this does not exceed the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**Regional Board Staff Decision Recommendation:** After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should not be placed on the section 303(d) list because applicable water quality standards are not being exceeded.

**Line of Evidence (LOE) for Decision ID 31736, Nitrate/Nitrite (Nitrite + Nitrate as N)** **Region 6**

**Bijou Park Creek**

| | |
|---|---|
| LOE ID: | 31969 |
| Pollutant: | Nitrate/Nitrite (Nitrite + Nitrate as N) |
| LOE Subgroup: | Pollutant-Water |
| Matrix: | Water |
| Fraction: | Total |
| Beneficial Use: | Municipal & Domestic Supply |
| Number of Samples: | 30 |
| Number of Exceedances: | 0 |
| Data and Information Type: | PHYSICAL/CHEMICAL MONITORING |
| Data Used to Assess Water Quality: | None of the 30 samples exceeded the water quality objective for nitrate + nitrate as N. Samples collected within a 7-day period were averaged and considered as a single sample. |
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |
| Water Quality Objective/Criterion: | The Water Quality Control Plan, Lahontan Basin, Objective for Municipal and Domestic Supply uses of inland surface waters states the following: waters shall not contain concentrations of inorganic chemicals in excess of the limits specified in California Code of Regulations, Title 22, Table 64431-A of section 64431 (Inorganic Chemicals). The maximum contaminant level listed in Table 64431-A for nitrate + nitrite as N is 10.0 mg/L. |
| Objective/Criterion Reference: | Water Quality Control Plan for the Lahontan Region (as amended) |
| Evaluation Guideline: | |
| Guideline Reference: | |
| Spatial Representation: | Samples were collected at HV-C4 Bijou Park Creek below California Parking Lot. |
| Temporal Representation: | Samples were collected from 10/23/2007 to 9/15/2009. |
| Environmental Conditions: | |
| QAPP Information: | Data were collected as part of Water Discharge Requirements R6T-2003-0032 for Heavenly Mountain Resort. |
| QAPP Information Reference(s): | |

**DECISION ID 31737 Region 6**

**Bijou Park Creek**

| | |
|---|---|
| **Pollutant:** | **Temperature, water** |
| **Final Listing Decision:** | **Do Not List on 303(d) list (TMDL required list)** |
| **Last Listing Cycle's Final Listing Decision:** | New Decision |
| **Revision Status** | Revised |
| **Impairment from Pollutant or Pollution:** | Pollutant |

**Regional Board Staff Conclusion:**

This pollutant is being considered for placement on the section 303(d) list under section 3.2 of the Listing Policy. Under section 3.2 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Zero of 17 samples exceed the water quality objective.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Zero of 17 samples exceeded the objective and this sample size is insufficient to determine with the power and confidence of the Listing Policy if standards are not met. A minimum of 26 samples is needed for application of table 3.2.
4. Pursuant to 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**Regional Board Staff Decision Recommendation:**

After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should not be placed on the section 303(d) list because it cannot be determined if applicable water quality standards are not being exceeded.

**Line of Evidence (LOE) for Decision ID 31737, Temperature, water** **Region 6**

**Bijou Park Creek**

| | |
|---|---|
| LOE ID: | 32248 |
| Pollutant: | Temperature, water |
| LOE Subgroup: | Pollutant-Water |
| Matrix: | Water |
| Fraction: | None |
| Beneficial Use: | Cold Freshwater Habitat |
| Number of Samples: | 17 |
| Number of Exceedances: | 0 |
| Data and Information Type: | PHYSICAL/CHEMICAL MONITORING |
| Data Used to Assess Water Quality: | None of the 17 samples exceeded the evaluation guideline for temperature in this water body. |
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |

| | |
|---|---|
| Water Quality Objective/Criterion: | The natural receiving water temperature of all waters shall not be altered unless it can be demonstrated to the satisfaction of the Regional Board that such an alteration in temperature does not adversely affect the water for beneficial uses. (Water Quality Control Plan for the Lahontan Region) |
| Objective/Criterion Reference: | Water Quality Control Plan for the Lahontan Region (as amended) |
| Evaluation Guideline: | Inland Fishes of California (Moyle 1976) states that for rainbow trout the optimum range for growth and completion of most life stages is 13-21 degrees C (page 129). |
| Guideline Reference: | Fish introductions in CA: History and impact on native fishes. Davis, CA: University of CA, Davis |
| Spatial Representation: | Samples were collected at HV-C4 Bijou Park Creek below California Parking Lot. |
| Temporal Representation: | Samples were collected monthly between October of 2008 and September of 2009. |
| Environmental Conditions: | |
| QAPP Information: | This data was collected under waste discharge requirements for a TMDL and therefore is of adequate quality. |
| QAPP Information Reference(s): | |

DECISION ID 31735 Region 6

Bijou Park Creek

| | |
|---|---|
| **Pollutant:** | **Iron** |
| **Final Listing Decision:** | **List on 303(d) list (TMDL required list)** |
| **Last Listing Cycle's Final Listing Decision:** | New Decision |
| **Revision Status** | Revised |
| **Sources:** | Natural Sources |
| **Expected TMDL Completion Date:** | 2025 |
| **Impairment from Pollutant or Pollution:** | Pollutant |

**Regional Board Staff Conclusion:** This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 a single line of evidence is necessary to assess listing status.

Two lines of evidence are available in the administrative record to assess this pollutant. Ten of the samples exceed the water quality objective for the secondary MCL, but this creek has naturally high levels or iron.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification against placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:

1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Ten of ten samples exceeded the water quality objective and though this does exceed the allowable frequency listed in Table 3.1 of the Listing Policy, iron is naturally occurring in this creek.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**Regional Board Staff** After review of the available data and information, RWQCB staff concludes that the water

**Decision Recommendation:** Body-pollutant combination should not be placed on the section 303(d) list because applicable water quality standards are not being exceeded.

**Line of Evidence (LOE) for Decision ID 31735, Iron** **Region 6**

**Bijou Park Creek**

| | |
|---|---|
| LOE ID: | 31980 |
| Pollutant: | Iron |
| LOE Subgroup: | Pollutant-Water |
| Matrix: | Water |
| Fraction: | Total |
| Beneficial Use: | Municipal & Domestic Supply |
| Number of Samples: | 9 |
| Number of Exceedances: | 9 |
| Data and Information Type: | Fixed station physical/chemical (conventional plus toxic pollutants) |
| Data Used to Assess Water Quality: | All nine of the samples exceeded the secondary MCL. |
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |
| Water Quality Objective/Criterion: | The Water Quality Control Plan, Lahontan Basin, Objective for Municipal and Domestic Supply uses of inland surface waters states the following: waters shall not contain concentrations of inorganic chemicals in excess of the limits specified in California Code of Regulations, Title 22,Table 64449-B of Section 64449 (Secondary Maximum Contaminant Levels-Ranges). The secondary MCL for iron is 0.3 mg/L. |
| Objective/Criterion Reference: | Water Quality Control Plan for the Lahontan Region (as amended) |
| Evaluation Guideline: | |
| Guideline Reference: | |
| Spatial Representation: | Samples were collected at HV-C4 Bijou Park Creek below California Parking Lot. |
| Temporal Representation: | Samples were collected quarterly from the fourth quarter of 2008 to the third quarter of 2009. Additionally, three storm samples were collected. |
| Environmental Conditions: | Three storm samples were collected. |
| QAPP Information: | Data were collected as part of Water Discharge Requirements R6T-2003-0032 for Heavenly Mountain Resort. |
| QAPP Information Reference(s): | |

**Line of Evidence (LOE) for Decision ID 31735, Iron** **Region 6**

**Bijou Park Creek**

| | |
|---|---|
| LOE ID: | 31981 |
| Pollutant: | Iron |
| LOE Subgroup: | Pollutant-Water |
| Matrix: | Water |
| Fraction: | Total |
| Beneficial Use: | Cold Freshwater Habitat |

| | |
|---|---|
| Number of Samples: | 1 |
| Number of Exceedances: | 1 |
| Data and Information Type: | Fixed station physical/chemical (conventional plus toxic pollutants) |
| Data Used to Assess Water Quality: | The annual average of iron at this station is 3.44 mg/L, which exceeds the objective. |
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |
| Water Quality Objective/Criterion: | The maximum concentration of iron discharge to surface water is 0.5 mg/L. |
| Objective/Criterion Reference: | Water Quality Control Plan for the Lahontan Region (as amended) |
| Evaluation Guideline: | |
| Guideline Reference: | |
| Spatial Representation: | Samples were collected at HV-C4 Bijou Park Creek below California Parking Lot. |
| Temporal Representation: | Samples were collected quarterly from the fourth quarter of 2008 to the third quarter of 2009. Additionally, three storm samples were collected. |
| Environmental Conditions: | Three storm samples were collected. |
| QAPP Information: | Data were collected as part of Water Discharge Requirements R6T-2003-0032 for Heavenly Mountain Resort. |
| QAPP Information Reference(s): | |

| DECISION ID | 31768 | Region 6 |
|---|---|---|
| Bijou Park Creek | | |

| | |
|---|---|
| **Pollutant:** | **Oil and Grease** |
| **Final Listing Decision:** | **List on 303(d) list (TMDL required list)** |
| **Last Listing Cycle's Final Listing Decision:** | New Decision |
| **Revision Status** | Revised |
| **Sources:** | Source Unknown |
| **Expected TMDL Completion Date:** | 2025 |
| **Impairment from Pollutant or Pollution:** | Pollutant |

**Regional Board Staff Conclusion:**

This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 a single line of evidence is necessary to assess listing status.

One lines of evidence is available in the administrative record to assess this pollutant. Seventeen of the seventeen samples exceed the water quality objective.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Seventeen of seventeen samples exceed the objective and guideline and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.

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4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**Regional Board Staff Decision Recommendation:** After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

**Line of Evidence (LOE) for Decision ID 31768, Oil and Grease** **Region 6**

**Bijou Park Creek**

| | |
|---|---|
| LOE ID: | 34094 |
| Pollutant: | Oil and Grease |
| LOE Subgroup: | Pollutant-Water |
| Matrix: | Water |
| Fraction: | Total |
| Beneficial Use: | Cold Freshwater Habitat |
| Number of Samples: | 17 |
| Number of Exceedances: | 17 |
| Data and Information Type: | PHYSICAL/CHEMICAL MONITORING |
| Data Used to Assess Water Quality: | 17 of the 17 oil and grease samples exceeded the USEPA recommended criteria for this water body. |
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |
| Water Quality Objective/Criterion: | Waters shall not contain oils, greases, waxes or other materials in concentrations that result in a visible film or coating on the surface of the water or on objects in the water, that cause nuisance, or that otherwise adversely affect the water for beneficial uses (Lahontan Region Water Quality Control Plan). |
| Objective/Criterion Reference: | Water Quality Control Plan for the Lahontan Region (as amended) |
| Evaluation Guideline: | Per the Water Quality Criteria (USEPA 1986) also known as the Gold Book: concentrations of oil at 0.001 mg/l can harm aquatic life. |
| Guideline Reference: | Quality Criteria for Water 1986. United States Environmental Protection Agency. Office of Water. Regulations and Standards. Washington D.C. EPA 440/5-86-001. |
| Spatial Representation: | Samples were collected at the following sample site: HV-C4 (Sky Mdw, California parking lot). |
| Temporal Representation: | Samples were collected monthly between August of 2008 and September 2009. |
| Environmental Conditions: | |
| QAPP Information: | Data were collected for NPDES permit R6T-2003-0032. This data was collected under waste discharge requirements for a TMDL and therefore is of adequate quality. |
| QAPP Information Reference(s): | |

**DECISION ID 31769 Region 6**

**Bijou Park Creek**

| | |
|---|---|
| **Pollutant:** | **Phosphorus** |
| **Final Listing Decision:** | **List on 303(d) list (TMDL required list)** |
| **Last Listing Cycle's Final Listing Decision:** | New Decision |
| **Revision Status** | Revised |
| **Sources:** | Source Unknown |
| **Expected TMDL Completion Date:** | 2025 |
| **Impairment from Pollutant or Pollution:** | Pollutant |

**Regional Board Staff Conclusion:**

This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Two of the samples exceed the water quality objective.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of two samples exceed the water quality objective (annual average) and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**Regional Board Staff Decision Recommendation:**

After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

**Line of Evidence (LOE) for Decision ID 31769, Phosphorus** **Region 6**

**Bijou Park Creek**

| | |
|---|---|
| LOE ID: | 31971 |
| Pollutant: | Phosphorus |
| LOE Subgroup: | Pollutant-Water |
| Matrix: | Water |
| Fraction: | Total |
| Beneficial Use: | Cold Freshwater Habitat |
| Number of Samples: | 2 |
| Number of Exceedances: | 2 |
| Data and Information Type: | PHYSICAL/CHEMICAL MONITORING |
| Data Used to Assess Water Quality: | Both of the two annual averages exceeded the water quality objective for total phosphorus. Annual averages were calculated by water year starting in October 1st through September 30th. A total of 33 samples were collected. None of the individual samples showed concentrations meeting the annual average objective. |

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| | |
|---|---|
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |
| Water Quality Objective/Criterion: | Table 5.1-3 of the Basin Plan states that the water quality objective for total phosphorus for Trout Creek is an annual average objective of 0.008 mg/L. Bijou Park Creek is an upstream tributary of Lake Tahoe. |
| Objective/Criterion Reference: | Water Quality Control Plan for the Lahontan Region (as amended) |
| Evaluation Guideline: | |
| Guideline Reference: | |
| Spatial Representation: | Samples were collected at HV-C4 Bijou Park Creek below California Parking Lot. |
| Temporal Representation: | Samples were collected from 10/23/2007 to 9/15/2009. |
| Environmental Conditions: | Phosphorus levels spiked during storm events that occurred one month apart. Seven samples were taken during storm events. |
| QAPP Information: | Data were collected as part of Water Discharge Requirements R6T-2003-0032 for Heavenly Mountain Resort. |
| QAPP Information Reference(s): | |

| DECISION ID | 31770 | Region 6 |
|---|---|---|
| Bijou Park Creek | | |

| | |
|---|---|
| **Pollutant:** | **Total Nitrogen as N** |
| **Final Listing Decision:** | **List on 303(d) list (TMDL required list)** |
| **Last Listing Cycle's Final Listing Decision:** | New Decision |
| **Revision Status** | Revised |
| **Sources:** | Source Unknown |
| **Expected TMDL Completion Date:** | 2025 |
| **Impairment from Pollutant or Pollution:** | Pollutant |

**Regional Board Staff Conclusion:**

This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Two of the two samples exceed the water quality objective.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Two of two samples exceed the objective (annual average; 34 individual samples used to get two annual averages) and this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**Regional Board Staff**

After review of the available data and information, RWQCB staff concludes that the water

**Decision Recommendation:** body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

**Line of Evidence (LOE) for Decision ID 31770, Total Nitrogen as N** **Region 6**

**Bijou Park Creek**

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| LOE ID: | 31970 |
| Pollutant: | Total Nitrogen as N |
| LOE Subgroup: | Pollutant-Water |
| Matrix: | Water |
| Fraction: | Total |
| Beneficial Use: | Cold Freshwater Habitat |
| Number of Samples: | 2 |
| Number of Exceedances: | 2 |
| Data and Information Type: | PHYSICAL/CHEMICAL MONITORING |
| Data Used to Assess Water Quality: | Both of the two annual averages exceeded the water quality objective for total nitrogen. Annual averages were calculated by water year starting in October 1st through September 30th. A total of 34 samples were collected. None of the individual samples showed concentrations meeting the annual average objective. |
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |
| Water Quality Objective/Criterion: | Table 5.1-3 of the Basin Plan states that the water quality objective for total nitrogen for Lake Tahoe is an annual average objective of 0.15 mg/L. Bijou Park Creek is an upstream tributary of Lake Tahoe. |
| Objective/Criterion Reference: | Water Quality Control Plan for the Lahontan Region (as amended) |
| Evaluation Guideline: | |
| Guideline Reference: | |
| Spatial Representation: | Samples were collected at HV-C4 Bijou Park Creek below California Parking Lot. |
| Temporal Representation: | Samples were collected from 10/23/2007 to 9/15/2009. |
| Environmental Conditions: | Nitrogen levels spiked during storm events that occurred one month apart. Seven samples were taken during storm events. |
| QAPP Information: | Data were collected as part of Water Discharge Requirements R6T-2003-0032 for Heavenly Mountain Resort. |
| QAPP Information Reference(s): | |

**DECISION ID 31771** **Region 6**

**Bijou Park Creek**

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|---|---|
| **Pollutant:** | **Turbidity** |
| **Final Listing Decision:** | **List on 303(d) list (TMDL required list)** |
| **Last Listing Cycle's Final Listing Decision:** | New Decision |
| **Revision Status** | Revised |
| **Sources:** | Source Unknown |
| **Expected TMDL** | 2025 |

**Completion Date:**

**Impairment from Pollutant or Pollution:** Pollutant

**Regional Board Staff Conclusion:** This pollutant is being considered for placement on the section 303(d) list under section 3.1 of the Listing Policy. Under section 3.1 a single line of evidence is necessary to assess listing status.

One line of evidence is available in the administrative record to assess this pollutant. Fifteen of the samples exceed the water quality objective.

Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification in favor of placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category.

This conclusion is based on the staff findings that:
1. The data used satisfies the data quality requirements of section 6.1.4 of the Policy.
2. The data used satisfies the data quantity requirements of section 6.1.5 of the Policy.
3. Fifteen of seventeen samples exceed the objectiveand this exceeds the allowable frequency listed in Table 3.1 of the Listing Policy.
4. Pursuant to section 3.11 of the Listing Policy, no additional data and information are available indicating that standards are not met.

**Regional Board Staff Decision Recommendation:** After review of the available data and information, RWQCB staff concludes that the water body-pollutant combination should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

**Line of Evidence (LOE) for Decision ID 31771, Turbidity** **Region 6**

**Bijou Park Creek**

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|---|---|
| LOE ID: | 32535 |
| Pollutant: | Turbidity |
| LOE Subgroup: | Pollutant-Water |
| Matrix: | Water |
| Fraction: | None |
| Beneficial Use: | Municipal & Domestic Supply |
| Number of Samples: | 17 |
| Number of Exceedances: | 15 |
| Data and Information Type: | PHYSICAL/CHEMICAL MONITORING |
| Data Used to Assess Water Quality: | Fifteen of the 17 turbidity samples exceeded the MCL in this water body. |
| Data Reference: | Data from discharger self-monitoring reports for the Heavenly Mountain Resort ski area at Lake Tahoe, Oct. 2007-Sep. 2009 |
| SWAMP Data: | Non-SWAMP |
| Water Quality Objective/Criterion: | California Maximum Contaminant Levels (MCLs) apply to ambient waters under the Lahontan Basin Plan's "Chemical Constituents" objective. The MCL for turbidity is 5 NTU. |
| Objective/Criterion Reference: | Maximum Contaminant Levels for organic and inorganic chemicals, CCR |
| Evaluation Guideline: | |

CSLT 305b/303d Comments ATTACHMENT 1

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| Guideline Reference: | |
| Spatial Representation: | Samples were collected at the following sampling stie: HV-C4 (Sky Mdw, California Parking Lot) |
| Temporal Representation: | Samples were collected monthly between August of 2008 and September of 2009. |
| Environmental Conditions: | |
| QAPP Information: | Data were collected for NPDES permit R6T-2003-0032. This data was collected under waste discharge requirements for a TMDL and therefore is of adequate quality. |
| QAPP Information Reference(s): | |

| Comments | Responses |
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| City of South Lake Tahoe<br>"making a positive difference now"<br><br>May 19, 2014<br><br>Attn: Carly Nilson<br>Mary Fiore-Wagner<br>Lahontan Regional Water Quality Control Board<br>2501 Lake Tahoe Blvd.<br>South Lake Tahoe, CA 96150<br><br>**RE: City of South Lake Tahoe Comments on the Lahontan Regional Water Quality Control Board's Clean Water Act Section 303(D) and 305(B) Assessment and Draft Integrated Report**<br><br>Dear Ms. Carly Nilson and Ms. Mary Fiore-Wagner:<br><br>The City of South Lake Tahoe (City) appreciates the opportunity to comment on the Lahontan Regional Water Quality Control Board (Regional Board) draft *2012 Clean Water Act Sections 303(D) and 305(B) Assessment* issued April 5, 2014, in preparation for submittal of the final "Integrated Report" to the State Water Resources Control Board.<br><br>As a responsible party named in the Lake Tahoe Total Maximum Daily Load (TMDL), and as a permittee under Order No R6T-2011-101A1, the City of South Lake Tahoe is actively participating in the watershed approach to implementation of the Lake Tahoe TMDL. It is important to restate that the comprehensive Lake Tahoe TMDL and associated Management System include not only the Lake, but also all 63 tributary stream systems to the Lake.<br><br>Based on a review of the information contained in the water body "Fact Sheets" and lines of evidence (LOE) provided by the Regional Board in support of Appendix A (Proposed New and Revised 303[D] List for 2012), the City has noticed the following items that should be changed or updated in the Proposed Revisions to the Lake Tahoe HU portion of Appendix A.<br><br>**1. Bijou Park Creek, New Listing: Iron (Category 5A, Completion Year 2025)**<br>The decision to include this new water body-pollutant combination on the 2012 list contradicts the supporting information for this listing (Decision ID 31735). As noted in the Regional Board Staff Conclusion in Decision ID 31735:<br><br>"Ten of the samples exceed the water quality objective for the secondary MCL, but this creek has naturally high levels or [sic] iron".<br><br>The staff conclusion then goes on to state:<br><br>"Based on the readily available data and information, the weight of evidence indicates that there is sufficient justification *against* placing this water segment-pollutant combination in the section 303(d) list in the Water Quality Limited Segments category" (emphasis added, see page 5 of Attachment 1).<br><br>The Regional Board Staff Decision Recommendation in Decision ID 31735 states:<br><br>Engineering Department, Services Center • 1052 Tata Lane • South Lake Tahoe, CA 96150-6323 • (530) 542-7415 • (530) 541-3051 FAX | **CSLT R1:** Based on more accurate information and public comments received, Appendix A and portions of the 2012 Integrated Report have been updated (i.e., Staff Report, Appendix I [Fact Sheets]) in several ways:<br><br>The final listing decision for waterbody-pollutant combination Bijou Park Creek-Iron remains "List on 303(d) list (TMDL required list). Language in the Water Board Staff Conclusion and Decision Recommendation sections has been revised to be consistent with this final listing.<br><br>For Bijou Park Creek waterbody-pollutant combinations of N (Nitrogen), P (Phosphorus), and Turbidity the final listing decision has been changed from "List on 303(d) List" to "List on 303(d) List Being addressed by USEPA approved TMDL."<br><br>**CSLT R2:** The Draft 2012 Integrated Report that was circulated for public review and comment on April 4, 2014 indicates a final listing decision for the waterbody-pollutant combination: Bijou Park Creek-Iron as "List on 303(d) list (TMDL required list)." This final listing decision remains unchanged and the text has been changed to read, "…there is sufficient justification ~~**against**~~ **for** placing this water segment-pollutant combination on the section 303(d) list in the Water Quality Limited Segments category (emphasis added)." (CSLT R2 continued on next page.) |

| Comments | Responses |
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| City of South Lake Tahoe<br>May 19, 2014<br>Page **2** of **6**<br>Draft 305(d)/303(d) List Comments<br><br>"After review of the available data and information, RWQCB staff concludes that the water body-pollutant combinations *should not be placed on the section 303(d) list because applicable water quality standards are not being exceeded"* (emphasis added, see page 6 of Attachment 1).<br><br>Given that Bijou Park Creek is known to have naturally high levels of iron, the City supports the Regional Board staff conclusion that "there is sufficient justification against placing this water segment-pollutant combination on the section 303(d) list" and concurs with the Regional Board staff decision recommendation to not place the water body-pollutant combination on the section 303(d) list.<br><br>If the Regional Board does include the water segment pollutant in contradiction to Decision ID 31735, the Category for this new listing should be 4B, since a TMDL is not the most effective approach to addressing a naturally occurring pollutant. The City believes that the resources required to develop and implement a TMDL to address a pollutant that is a natural background condition would be more effectively utilized to address existing TMDLs addressing pollutants with documented anthropogenic sources.<br><br>**2. Bijou Park Creek, New Listing: Phosphorus (Category 5A, Completion Year 2025)**<br>The supporting information for this listing (Decision ID 31769. LOE ID 31971) notes that Bijou Park Creek is an upstream tributary of Lake Tahoe. The Lake Tahoe TMDL (adopted by the Regional Board on November 16, 2010 and approved by the USEPA on August 17, 2011) determined that the primary source of phosphorus in the Lake Tahoe (and tributaries, including Bijou Park Creek) watershed is urban storm water runoff and phosphorus associated with eroding sediment on disturbed undeveloped lands. On the ground efforts required by the Lake Tahoe TMDL that focus on (1) stabilizing disturbed areas within the forested uplands, (2) restoring eroding stream channels, and (3) managing and treating urban uplands (e.g. street sweeping, installing and maintaining infiltration and stormwater treatment facilities) will also achieve pollutant load reductions in waters tributary to Lake Tahoe.<br><br>The Municipal Stormwater National Pollutant Discharge Elimination System (NPDES) permit (Order No R6T-2011-101A1), requires the California- based Lake Tahoe municipalities (El Dorado and Placer Counties, and the City of South Lake Tahoe) and the California Department of Transportation (CalTrans) to develop and implement comprehensive pollutant load reduction programs (PLRPs) to meet specified pollutant load reduction requirements. Implementation measures include a variety of alternative treatment options, roadway operation practices, and local ordinances to reduce average annual pollutant loads. These Lake Tahoe TMDL implementation efforts will also reduce inputs of phosphorus to this impaired segment of Bijou Park Creek. Maintenance activities and restoring small disturbed sites that are underway, or planned and expected, within the forested uplands of this watershed will also reduce or avoid increases in fine sediment and nutrient loads.<br><br>Additionally, the Lake Tahoe TMDL also requires implementing measures to control stationary sources of dust, which help reduce pollutant loads of fine sediments. Implementation of these measures helps address the phosphorus loading that impairs Bijou Park Creek that is associated with these fine sediments from dust sources.<br><br>Pollutant load reductions within Bijou Park Creek will be tracked through implementation of the detailed performance and compliance measures and assessment and reporting protocols included in the Lake Tahoe TMDL. The TMDL Management System project is currently establishing activity-based tracking and reporting requirements to assess activities that are<br><br>Engineering Department, Services Center • 1052 Tata Lane • South Lake Tahoe, CA 96150-6323 • (530) 542-7415 • (530) 541-3051 **FAX** | **CSLT R2 (continued):** The Water Board agrees that similar to several creeks in the Lake Tahoe Basin, Bijou Park Creek has naturally high levels of iron. The State and Regional Water Boards are currently exploring options to address water bodies that may be naturally high in pollutants. Until the natural sources of pollutants are addressed by either an exclusion policy or an ambient iron concentration for Bijou Park Creek is developed by the Water Board, the secondary MCL (or maximum contaminant level) of 0.3 mg/L is applied to evaluate compliance with the MUN beneficial use. The sample results available for Bijou Park Creek indicate that iron concentrations measured in Bijou Park Creek exceed the secondary MCL for iron indicating that the MUN use is not supported. The iron concentrations measured in nine of nine samples evaluated for the MUN use exceeds the secondary MCL of 0.3 mg/L, and five of the nine samples exceeds the secondary MCL by an order of magnitude (or 10 times the MCL).<br><br>For future assessment cycles, if a natural source exclusion policy is developed the final listing decision for Bijou Park Creek-Iron may be re-evaluated. Additionally, this listing may be addressed through revision of the water quality objective rather than through a TMDL.<br><br>**CSLT R3:** See response provided on next page. |

| Comments | Responses |
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| <br><br>expected to reduce pollutant loading from non-urban sources. The Lahontan Water Board and the Nevada Division of Environmental Protection currently implement a Lake Tahoe TMDL Management System for managing, tracking, integrating and evaluating new information generated from TMDL implementation actions, effectiveness monitoring, research efforts, and other factors such as climate change and wildfires.<br><br>The Management System is based on an adaptive management framework to (1) link load reduction effectiveness with project implementation monitoring to improve project design and to assess if actual environmental improvement is occurring as expected; (2) establish guidance and operation protocols for how new information will be incorporated into project designs and TMDL program implementation; (3) establish prioritized TMDL research needs to fill data gaps and reduce uncertainties, and (4) implement a process for updating and reporting pollutant load reduction estimates and tracking projects within the TMDL implementation timeline.<br><br>The Lake Tahoe TMDL requires implementation, effectiveness, and status and trends monitoring. Tributary stream status and trends monitoring will track long-term changes in water quality conditions relative to established water quality standards or goals, and project-specific monitoring will be used to assess the efficacy of various implementation measures.<br><br>Long-term water quality trends and pollutant load reduction tracking in Bijou Park Creek will be captured through the ongoing efforts of the Lake Tahoe Interagency Monitoring Program (LTIMP) whose primary objective is to monitor discharge, nutrient load, and sediment loads from representative streams that flow into Lake Tahoe. Nitrogen and phosphorus loading calculations are performed using the LTIMP flow and nutrient concentration database.<br><br>Pollutant loading of Phosphorus from Bijou Park Creek (a tributary to Lake Tahoe) is currently addressed through the existing Lake Tahoe TMDL. This tributary approach was used for impairment listings for Heavenly Creek (Decision IDs 28449 and 19683), Trout Creek (Decision IDs 20459, 20304, 20460, and 19951), Upper Truckee River (Decision IDs 27228 and 20022) and Ward Creek (Decision IDs 20141, 27275 and 20142). The creation of a new TMDL for this one tributary to Lake Tahoe would create redundant and duplicative requirements currently addressed by the Lake Tahoe TMDL.<br><br>*The City requests that the Category for this new listing be revised to 5B, as this new impairment listing is already being addressed by a USEPA-approved TMDL.*<br><br>**3. Bijou Park Creek, New Listing: Total Nitrogen as N (Category 5A, Completion Year 2025)**<br>The supporting information for this listing (Decision ID 31770) confirms that Bijou Park Creek is an upstream tributary of Lake Tahoe. The Lake Tahoe TMDL (adopted by the Regional Board on November 16, 2010 and approved by the USEPA on August 17, 2011) notes that the largest source of nitrogen in the Lake Tahoe (and tributary watersheds) is transportation-related emissions that lead to atmospheric nitrogen deposition. The Lake Tahoe TMDL also includes implementation measures to reduce atmospheric nitrogen sources. The Tahoe Regional Planning Agency leads efforts to improve transportation infrastructure and reduce overall vehicle miles traveled in the Lake Tahoe region to reduce emissions that lead to atmospheric nutrient loading. Public transit and vehicle fleet turnover are expected to further reduce nutrient-laden emissions in the Tahoe basin that will reduce nitrogen loading in the Bijou Park Creek watershed.<br><br> | **CSLT R3:** As stated in the Water Board conclusion and decision recommendation, Bijou Park Creek is an upstream tributary to Lake Tahoe. The Water Board agrees with the CSLT that the same implementation measures (managing urban runoff discharges through implementation of Caltrans' and CSLT's pollutant load reduction programs, street sweeping, controlling stationary sources of dust) that are prescribed in the Lake Tahoe TMDL approved by USEPA on August 16, 2011, will also address inputs of phosphorus that impact Bijou Park Creek. (See Appendix I- Fact Sheet for Bijou Park Creek – Phosphorus for more details regarding management measures to control phosphorus.) The final listing decisions for Bijou Park Creek- Phosphorus has been changed from "List on 303(d) list (TMDL required list) to "List on 303(d) list (being addressed by USEPA approved TMDL). The Water Board conclusion and decision recommendation associated with the water body-pollutant combination: Bijou Park Creek- Phosphorus have been updated to include pertinent information from the Lake Tahoe TMDL that support this approach.<br><br>**CSLT R4:** As stated in the Water Board conclusion and decision recommendation, Bijou Park Creek is an upstream tributary to Lake Tahoe. The Water Board agrees with the CSLT that the same implementation measures (reduction in transportation-related emissions) prescribed in the Lake Tahoe TMDL approved by USEPA on August 16, 2011, will also address inputs of nitrogen that impact Bijou Park Creek. (See Appendix I- Fact Sheet for Bijou Park Creek – Nitrogen for more details regarding management measures to control nitrogen.) The final listing decisions for Bijou Park Creek - Nitrogen has been changed from "List on 303(d) list (TMDL required list) to "List on 303(d) list (being addressed by USEPA approved TMDL). The Water Board conclusion and decision recommendation associated with the water body pollutant combination: Bijou Park Creek- Nitrogen has been updated to include pertinent information from the Lake Tahoe TMDL that support this approach. CSLT R4 continued on next page. |

| Comments | Responses |
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| <br><br>Pollutant load reductions within the Bijou Park Creek watershed will be tracked through implementation of detailed performance and compliance measures and assessment and reporting protocols included in the Lake Tahoe TMDL. The Lahontan Water Board and the Nevada Division of Environmental Protection are currently implementing a Lake Tahoe TMDL Management System for managing, tracking, integrating and evaluating new information generated from TMDL implementation actions, effectiveness monitoring, research efforts, and other factors such as climate change and wildfires. The Management System is currently establishing activity-based tracking and reporting requirements to assess activities that are expected to reduce pollutant loading from non-urban sources, as discussed in detail above.<br><br>The Management System is based on an adaptive management framework to (1) link load reduction effectiveness with project implementation monitoring to improve project design and to assess if actual environmental improvement is occurring as expected; (2) establish guidance and operation protocols for how new information will be incorporated into project designs and TMDL program implementation; (3) establish prioritized TMDL research needs to fill data gaps and reduce uncertainties, and (4) implement a process for updating and reporting pollutant load reduction estimates and tracking projects within the TMDL implementation timeline.<br><br>The Lake Tahoe TMDL requires implementation, effectiveness, and status and trends monitoring. Existing Lake Tahoe TMDL tributary stream status and trends monitoring will track long-term changes in water quality conditions relative to established water quality standards or goals, and project-specific monitoring will be used to assess the efficacy of various implementation measures.<br><br>Pollutant loading of Total Nitrogen as N from Bijou Park Creek (a tributary to Lake Tahoe) is currently addressed through the existing Lake Tahoe TMDL. This approach was used for related impairments in Heavenly Creek (Decision IDs 28449 and 19683), Trout Creek (Decision IDs 20459, 20304, 20460, and 19951), Upper Truckee River (Decision IDs 27228 and 20022) and Ward Creek (Decision IDs 20141, 27275 and 20142). The creation of a new TMDL for this one tributary to Lake Tahoe would create redundant and duplicative requirements currently addressed by the Lake Tahoe TMDL.<br><br>*The City requests that the Category for this new listing be revised to 5B, as this new impairment listing is already being addressed by a USEPA-approved TMDL.*<br><br>**4. Bijou Park Creek, New Listing: Turbidity (Category 5A, Completion Year 2025)**<br>Bijou Park Creek is an upstream tributary of Lake Tahoe. The Lake Tahoe TMDL (adopted by the Regional Board on November 16, 2010 and approved by the USEPA on August 17, 2011) addresses clarity (turbidity) impairments primarily caused by suspended sediment. On the ground efforts required by the Lake Tahoe TMDL that focus on (1) stabilizing disturbed areas within the forested uplands and (2) managing and treating urban uplands (e.g. street sweeping, installing and maintaining infiltration and stormwater treatment facilities) will also achieve pollutant load reductions of sediment within this waterbody segment, which is tributary to Lake Tahoe.<br><br>The Lake Tahoe TMDL identifies actions that resource management agencies, California-based Lake Tahoe municipalities (El Dorado and Placer Counties, and the City of South Lake Tahoe) and California Department of Transportation must take to reduce fine sediment and nutrient loading to the Lake. Municipal Stormwater NPDES permits require the municipalities and CalTrans to develop and implement comprehensive PLRPs to meet specified pollutant load<br><br> | **CSLT R4 continued:** The final listing decision for Bijou Park Creek has been changed from "List on 303(d) list (TMDL required list) to "List on 303(d) list (being addressed by USEPA approved TMDL). The Water Board conclusion and decision recommendation associated with the water body pollutant combination: Bijou Park Creek- Nitrogen has been updated to include pertinent information in the Lake Tahoe TMDL that support this approach.<br><br>**CSLT R5:** As stated in the Water Board conclusion and decision recommendation, Bijou Park Creek is an upstream tributary to Lake Tahoe. The material causing turbidity impairment in Bijou Park creek includes both organic and inorganic suspended and dissolved particles. Implementation of control measures prescribed in the Lake Tahoe TMDL, adopted by USEPA on August 16 2011, are intended, in part, to reduce organic and inorganic fine sediment particles that are the most dominant pollutant contributing to the impairment of the lake's clarity. Water Board staff acknowledge that many of the same control measures (stabilizing and re-vegetating road shoulders, street sweeping, installing and maintaining storm water treatment controls) being implemented to reduce fine sediment from entering Lake Tahoe and its tributaries, will also address the turbidity impairment within Bijou Park Creek. (See Appendix I- Fact Sheet for Bijou Park Creek – Turbidity for more details regarding management measures to control turbidity and suspended sediments.) CSLT R5 continued on next page. |

| Comments | Responses |
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| City of South Lake Tahoe<br>May 19, 2014<br>Page **5** of **6**<br>Draft 305(d)/303(d) List Comments<br><br>reduction requirements. Expected implementation measures include a variety of alternative treatment options, roadway operation practices, and local ordinances to reduce average annual pollutant loads. These Lake Tahoe TMDL implementation efforts will also reduce inputs of sediment to this impaired segment of Bijou Park Creek.<br><br>Additionally, the Lake Tahoe TMDL requires that the USFS-Lake Tahoe Basin Management Unit undertake restoration actions to reduce erosion and treat urban storm water runoff from paved and unpaved roadways, campgrounds, and recreational trails within the Lake Tahoe watershed. Storm water collection, conveyance, and treatment facilities coupled with revegetation of previously disturbed lands and stabilizing areas designated for recreational use are expected to reduce erosion and help control sediment discharges resulting in elevated turbidity levels in Bijou Park Creek.<br><br>Finally, the Lake Tahoe TMDL requires implementation of measures to control stationary sources of dust, which help reduce pollutant loads of fine sediments. Implementation of these measures helps address the sedimentation/siltation loading that impairs Bijou Park Creek from dust sources.<br><br>Pollutant load reductions within Bijou Park Creek tributary watershed will be tracked through implementation of detailed performance and compliance measures and assessment and reporting protocols included in the Lake Tahoe TMDL. As discussed above, the TMDL Management System is establishing activity-based tracking and reporting requirements to assess activities that are expected to reduce pollutant loading from non-urban sources.<br><br>The Lake Tahoe TMDL requires implementation, effectiveness, and status and trends monitoring. Tributary stream status and trends monitoring will track long-term changes in water quality conditions relative to established water quality standards or goals, and project-specific monitoring will be used to assess the efficacy of various implementation measures.<br><br>Long-term water quality trends and pollutant load reduction tracking in Bijou Park Creek will be captured through the ongoing efforts of the LTIMP, whose primary objective is to monitor discharge, nutrient load, and sediment loads from representative streams that flow into Lake Tahoe.<br><br>Pollutant loading of turbidity, sediment and siltation from Bijou Park Creek (a tributary to Lake Tahoe) is currently addressed through the existing Lake Tahoe TMDL. This approach was used for related impairments for Heavenly Creek (Decision IDs 28449 and 19683), Trout Creek (Decision IDs 20459, 20304, 20460, and 19951), Upper Truckee River (Decision IDs 27228 and 20022) and Ward Creek (Decision IDs 20141, 27275 and 20142).<br><br>The creation of a new TMDL for this one tributary to Lake Tahoe would create redundant and duplicative requirements currently addressed by the Lake Tahoe TMDL.<br><br>*The City requests that the Category for this new listing be revised to 5B, as this new impairment listing is already being addressed by a USEPA-approved TMDL.*<br><br>**5. Tallac Creek: Pathogens (Category 5A, Completion Year 2019)**<br>The supporting information for this listing (Decision ID 30390) notes that the Line of Evidence are based on unspecified data, and the LOE is a placeholder to support a 303(d) listing decision made prior to 2006. Is should be recognized that historic grazing is the most likely source.<br><br>Engineering Department, Services Center • 1052 Tata Lane • South Lake Tahoe, CA 96150-6323 • (530) 542-7415 • (530) 541-3051 **FAX** | **CSLT R5 continued**: The final listing decisions for Bijou Park Creek – Turbidity has been changed from "List on 303(d) list (TMDL required list) to "List on 303(d) list (being addressed by USEPA approved TMDL). The Water Board conclusion and decision recommendation associated with the water body pollutant combination: Bijou Park Creek- Turbidity has been updated to include pertinent information from the Lake Tahoe TMDL that support this approach.<br><br>**CSLT R6:** Water Board staff has been evaluating bacteria levels in Tallac Creek at Highway 89 and Baldwin Beach since 2010 for both E. coli and fecal coliform. This data has been inputted into CEDEN. This data is available to the public (www.ceden.org) and will be assessed next listing cycle to determine if it is meeting the bacteria standard of the Basin Plan and is no longer impaired. Without new data for evaluation, this water body cannot be taken off the 303(d) list until sufficient data is presented to show that it meets the bacteria standard as per the Listing Policy requirements. |

| Comments | Responses |
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| City of South Lake Tahoe<br>May 19, 2014<br>Page 6 of 6<br>Draft 305(d)/303(d) List Comments<br><br>*Is should be recognized that historic grazing is the most likely source of contamination, and the City believes this impaired can be addressed by regulatory actions other than TMDL, such as restrictions on grazing allotments. The City requests a Category 4B designation for this impairment.*<br><br>6. **Trout Creek (above HWY 50): Pathogens (Category 5A, Completion Year 2013)**<br>The Trout Creek (above HWY 50) segment is listed for completion "2013", which appears to be a typo, as the other portions of the Upper Truckee River and surrounding pathogen impaired waterbodies are designated for completion in 2019. Decision ID 28339 (Trout Creek, above HWY 50) notes the expected Fecal Coliform TMDL Completion Date is 2019. not 2013.<br><br>*Is should be recognized that historic grazing is the most likely source of contamination, and the City believes this impaired can be addressed by regulatory actions other than TMDLs. As such, the City requests a Category 4B designation for this impairment, and the Completion Year be listed as 2019.*<br><br>7. **Trout Creek (below HWY 50): Pathogens (Category 5A, Completion Year 2019)**<br>The supporting information for this listing (Decision ID 30194, LOE ID 27160) includes information in the Environmental Conditions that livestock grazing formerly occurred in the meadow near the confluence where samples were collected. LOE 27160 noted that 3 of the 19 collected samples exceeded the water quality objective for fecal coliform.<br><br>*Is should be recognized that historic grazing is the most likely source of contamination, and the City believes this impaired can be addressed by regulatory actions other than TMDL, such as restrictions on grazing allotments. The City requests a Category 4B designation for this impairment.*<br><br>Thank you for the opportunity to provide comments on the Lahontan Regional Water Quality Control Board's Clean Water Act Section 305(b) and 303(d) Assessment and Draft Integrated Report. The City is dedicated to improving water quality in all receiving waters within the Lake Tahoe basin, and supports policies that effectively utilize existing efforts and prioritize feasible solutions to meet water quality objectives within the basin. Please contact the City's Stormwater Program Coordinator, Jason Burke, at (530) 542-6038 if you have any questions or need additional information.<br><br>Sincerely,<br><br>Ray Jarvis, P.E.<br>Public Works Director<br><br>Attachment 1 – Highlighted portions of Bijou Park Creek Supporting Information<br><br>Cc: Nancy Kerry, City Manager<br>Sarah Hussong-Johnson, P.E., Deputy Public Works Director/ City Engineer<br>Robert Larsen, Lahontan Regional Quality Control Board<br>Jason Burke, Stormwater Program Coordinator<br><br>Engineering Department, Services Center • 1052 Tata Lane • South Lake Tahoe, CA 96150-6323 • (530) 542-7415 • (530) 541-3051 FAX | **CSLT R7:** Water Board staff has been evaluating bacteria levels in Trout Creek at Highway 50 and at the confluence with the Upper Truckee River since 2010 for both E. coli and fecal coliform. This data has been inputted into CEDEN. This data is available to the public (www.ceden.org) and will be assessed next listing cycle to determine if it is meeting the bacteria standard of the Basin Plan and is no longer impaired. Without new data for evaluation, this water body cannot be taken off the 303(d) list until sufficient data is presented to show that it meets the bacteria standard as per the Listing Policy requirements.<br><br>**CSLT R8: See response CSLT R7.** |

| Comments | Responses |
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| The CSLT included 13 pages of attachments that are referred to in the first 3 comments. These pages are not reflected in the responses as this documentation is included as part of the Staff Report. | |

## Nilson, Carly@Waterboards

**From:** Austin, Carrie@Waterboards
**Sent:** Monday, April 07, 2014 1:57 PM
**To:** Martorano, Nicholas@Waterboards; Carter, Karen@CDCR; Carter, Katharine@Waterboards; Fitzgerald, Rebecca@Waterboards; Lim, Jeong-Hee@Waterboards; Shukry-Zeywar, Nadim@Waterboards; Nilson, Carly@Waterboards; Booth, Richard@Waterboards
**Cc:** Cooke, Janis@Waterboards; Morris, Patrick@Waterboards; Wood, Michelle@Waterboards; Louie, Stephen@Waterboards; Palumbo, Amanda@Waterboards; Poulson, Zane@Waterboards; Lichten, Keith@Waterboards; Looker, Richard@Waterboards; Gillespie, Stacy@Waterboards
**Subject:** Mercury and draft 2012 Integrated Report

Hello colleagues,

This e-mail is to let you know that those of us working on the statewide mercury control program for reservoirs plan to recommend that R1 & R6 include several more reservoirs in our program than are proposed for the 2012 303(d) list. We think that you might want to share this information at the integrated report roundtable tomorrow, because it applies to nearly all of the other regions, too.

Importantly, placement on the 303(d) list for any reason does not automatically trigger any regulatory action, according to OCC. (It may trigger need for a TMDL, but then the TMDL carries out the regulatory action–the 303(d) is not itself a regulatory action.)

Accordingly, placement of a reservoir on the list for elevated fish methylmercury levels does not automatically trigger inclusion in the statewide mercury control program for reservoirs. We plan for it to be a separate action to be undertaken by each Regional Water Board.

Initially, 74 reservoirs already listed on the *2010* 303(d) list are included in the statewide Reservoir Mercury Control Program. In the future, after State Water Board adoption of this program, when Water Board reviews result in reservoirs being identified as having fish with elevated methylmercury, these additional reservoirs will be included in this Reservoir Mercury Control Program.

We understand that for the 2012 list, the following regions recommend the following additional mercury listings for reservoirs:

- R1 recommends listing of Copco Lake (Copco 1), Iron Gate Reservoir, Tule Lake, and Ruth Lake (from Table 6)
- R6 recommends listing of Little Rock Reservoir (from Appendix A, new listings for mercury)
- R7 none – 2012 list already adopted (from Attachment Four)

Here is an example of the reservoirs in R1 & R6 that we expect to recommend in the future be added to the statewide mercury control program for reservoirs. This example is based on average fish mercury > 0.2 mg/kg, our current definition of a reservoir, and a weight of evidence approach. (Note that there are lots of ongoing discussions about the statewide fish tissue objective and the listing policy, so this is only an example.)

- R1: Copco Lake, Iron Gate Reservoir, Ruth Lake, Spring Lake, and Dead Lake
- R6: Little Rock Reservoir, Lake Gregory, Lake Arrowhead, Silverwood Lake, Upper Twin Lake
- R7: none

That was the quick list. Here's the details on R1 and R6:

R1: Copco Lake, Iron Gate Reservoir, Ruth Lake, Spring Lake, and Dead Lake

- Tule Lake is not a reservoir and so would not be included in the reservoir mercury control program.
- Dead Lake is a former lumber mill pond in the Tolowa Dunes State Park. We recommend that it be considered for inclusion in the program because it is a manmade feature that we think exceeds 20 acre-feet in capacity, and, even though the SWAMP Lake Study data set has only one sampling location, 13 of 16 fish samples exceed 0.2 mg/kg. Per aerial photo, the lake is ~27 acres. Assuming it has a depth of at least 1 foot, it exceeds the current reservoir definition of minimum 20 acre-feet capacity.
- Spring Lake (aka Santa Rosa Creek Reservoir) is formed by a dam and has a capacity of 3550 acre-feet. We recommend that it be included in the program because it is a reservoir with capacity greater than 20 acre-feet and, even though the SWAMP Lake Study data set has only one sampling location, 8 of 11 fish samples exceed 0.2 mg/kg.

R6: Little Rock Reservoir, Lake Gregory, Lake Arrowhead, Silverwood Lake, Upper Twin Lake

- The SWAMP Lake Study data set has only one sampling location for Gregory, Arrowhead, Silverwood, and Upper Twin.
- However:
    - 5 of 13 samples in Lake Gregory exceed 0.2 mg/kg.
    - 12 of 16 samples in Lake Arrowhead exceed 0.2 mg/kg.
    - 15 of 16 samples in Silverwood Lake exceed 0.2 mg/kg.
    - 2 of 3 samples in Upper Twin Lake exceed 0.2 mg/kg.
- All five of these are formed by dams with capacities between 2,000 and 78,000 acre-feet, and therefore meet our definition of a reservoir.

Here's definition of reservoir from staff report we're currently circulating for internal review (Section 1.6.1)

For this program, reservoirs are defined as natural or artificial impoundments of at least 20 acre-feet water storage capacity that contain fish and have constructed control structures such as dams, levees, or berms to contain or otherwise manage water, and/or were excavated. Names are often misleading; many reservoirs are called lakes on local and U.S. Geological Survey topographic maps even though they are created by structures and excavations.

Artificial impoundments are places where water ponds behind engineered structures (e.g., dams, levees, berms) and anthropogenic landscape alterations. Some of these constructed changes were made purposefully to create artificial lakes, while others were made for other reasons like dredging or quarrying but subsequently created artificial lakes. Many artificial lakes were formed by flood control and stormwater facilities. Barriers which impound 15 acre-feet or less of water are not dams according to the Porter-Cologne Water Quality Control Act (California Water Code, Division 3, section 6003). Only a few California dams provide less than 20 acre-feet water storage capacity (DWR 2010a and 2010b).

Don't hesitate to contact me with any questions. If you would like to discuss this further, we can set up a teleconference to include Stephen Louie and Michelle Wood in R5 who are much, much more knowledgeable about the reservoir fish data than I am. Carrie

| Comment | Response |
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| **Nilson, Carly@Waterboards**<br><br>**From:** Austin, Carrie@Waterboards<br>**Sent:** Monday, April 07, 2014 1:57 PM<br>**To:** Martorano, Nicholas@Waterboards; Carter, Karen@CDCR; Carter, Katharine@Waterboards; Fitzgerald, Rebecca@Waterboards; Lim, Jeong-Hee@Waterboards; Shukry-Zeywar, Nadim@Waterboards; Nilson, Carly@Waterboards; Booth, Richard@Waterboards<br>**Cc:** Cooke, Janis@Waterboards; Morris, Patrick@Waterboards; Wood, Michelle@Waterboards; Louie, Stephen@Waterboards; Palumbo, Amanda@Waterboards; Poulson, Zane@Waterboards; Lichten, Keith@Waterboards; Looker, Richard@Waterboards; Gillespie, Stacy@Waterboards<br>**Subject:** Mercury and draft 2012 Integrated Report<br><br>Hello colleagues,<br><br>This e-mail is to let you know that those of us working on the statewide mercury control program for reservoirs plan to recommend that R1 & R6 include several more reservoirs in our program than are proposed for the 2012 303(d) list. We think that you might want to share this information at the integrated report roundtable tomorrow, because it applies to nearly all of the other regions, too.<br><br>Importantly, placement on the 303(d) list for any reason does not automatically trigger any regulatory action, according to OCC. (It may trigger need for a TMDL, but then the TMDL carries out the regulatory action–the 303(d) is not itself a regulatory action.)<br><br>Accordingly, placement of a reservoir on the list for elevated fish methylmercury levels does not automatically trigger inclusion in the statewide mercury control program for reservoirs. We plan for it to be a separate action to be undertaken by each Regional Water Board.<br><br>Initially, 74 reservoirs already listed on the *2010* 303(d) list are included in the statewide Reservoir Mercury Control Program. In the future, after State Water Board adoption of this program, when Water Board reviews result in reservoirs being identified as having fish with elevated methylmercury, these additional reservoirs will be included in this Reservoir Mercury Control Program.<br><br>We understand that for the 2012 list, the following regions recommend the following additional mercury listings for reservoirs:<br>• R1 recommends listing of Copco Lake (Copco 1), Iron Gate Reservoir, Tule Lake, and Ruth Lake (from Table 6)<br>• R6 recommends listing of Little Rock Reservoir (from Appendix A, new listings for mercury)<br>• R7 none – 2012 list already adopted (from Attachment Four)<br><br>Here is an example of the reservoirs in R1 & R6 that we expect to recommend in the future be added to the statewide mercury control program for reservoirs. This example is based on average fish mercury > 0.2 mg/kg, our current definition of a reservoir, and a weight of evidence approach. (Note that there are lots of ongoing discussions about the statewide fish tissue objective and the listing policy, so this is only an example.)<br>• R1: Copco Lake, Iron Gate Reservoir, Ruth Lake, Spring Lake, and Dead Lake<br>• R6: Little Rock Reservoir, Lake Gregory, Lake Arrowhead, Silverwood Lake, Upper Twin Lake<br>• R7: none<br><br>That was the quick list. Here's the details on R1 and R6: | **Region 2-R1**: In agreement with new direction from Water Board staff, Regional Board staff has changed the assessment of mercury in fish tissue. Originally, the data for mercury in fish tissue was evaluated using composite samples. Individual fish that were collected on the same day were composited based on fish species. Though the samples were collected from a single location on a single day, fish move throughout a lake and accumulate mercury in tissue over time. Therefore, spatial and temporal independence does not apply and it is more appropriate to evaluate fish tissue samples individually and not combining individual fish tissue samples into a composite sample. This approach is consistent with State Board guidance and for protection of human health.<br><br>It is important to include the reservoirs on the 303(d) list when the data show the fish tissue contains elevated mercury levels and to inform the public about these conditions. |

| Comment | Response |
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| R1: Copco Lake, Iron Gate Reservoir, Ruth Lake, Spring Lake, and Dead Lake<br>• Tule Lake is not a reservoir and so would not be included in the reservoir mercury control program.<br>• Dead Lake is a former lumber mill pond in the Tolowa Dunes State Park. We recommend that it be considered for inclusion in the program because it is a manmade feature that we think exceeds 20 acre-feet in capacity, and, even though the SWAMP Lake Study data set has only one sampling location, 13 of 16 fish samples exceed 0.2 mg/kg. Per aerial photo, the lake is ~27 acres. Assuming it has a depth of at least 1 foot, it exceeds the current reservoir definition of minimum 20 acre-feet capacity.<br>• Spring Lake (aka Santa Rosa Creek Reservoir) is formed by a dam and has a capacity of 3550 acre-feet. We recommend that it be included in the program because it is a reservoir with capacity greater than 20 acre-feet and, even though the SWAMP Lake Study data set has only one sampling location, 8 of 11 fish samples exceed 0.2 mg/kg.<br><br>R6: Little Rock Reservoir, Lake Gregory, Lake Arrowhead, Silverwood Lake, Upper Twin Lake<br>• The SWAMP Lake Study data set has only one sampling location for Gregory, Arrowhead, Silverwood, and Upper Twin.<br>• However:<br>  ○ 5 of 13 samples in Lake Gregory exceed 0.2 mg/kg.<br>  ○ 12 of 16 samples in Lake Arrowhead exceed 0.2 mg/kg.<br>  ○ 15 of 16 samples in Silverwood Lake exceed 0.2 mg/kg.<br>  ○ 2 of 3 samples in Upper Twin Lake exceed 0.2 mg/kg.<br>• All five of these are formed by dams with capacities between 2,000 and 78,000 acre-feet, and therefore meet our definition of a reservoir.<br><br>Here's definition of reservoir from staff report we're currently circulating for internal review (Section 1.6.1)<br><br>For this program, reservoirs are defined as natural or artificial impoundments of at least 20 acre-feet water storage capacity that contain fish and have constructed control structures such as dams, levees, or berms to contain or otherwise manage water, and/or were excavated. Names are often misleading; many reservoirs are called lakes on local and U.S. Geological Survey topographic maps even though they are created by structures and excavations.<br><br>Artificial impoundments are places where water ponds behind engineered structures (e.g., dams, levees, berms) and anthropogenic landscape alterations. Some of these constructed changes were made purposefully to create artificial lakes, while others were made for other reasons like dredging or quarrying but subsequently created artificial lakes. Many artificial lakes were formed by flood control and stormwater facilities. Barriers which impound 15 acre-feet or less of water are not dams according to the Porter-Cologne Water Quality Control Act (California Water Code, Division 3, section 6003). Only a few California dams provide less than 20 acre-feet water storage capacity (DWR 2010a and 2010b).<br><br>Don't hesitate to contact me with any questions. If you would like to discuss this further, we can set up a teleconference to include Stephen Louie and Michelle Wood in R5 who are much, much more knowledgeable about the reservoir fish data than I am. Carrie | **Region 2-R2**: Though the samples were collected from a single location on a single day, fish move throughout a lake and accumulate mercury in tissue over time. Therefore, spatial and temporal independence does not apply and it is more appropriate to evaluate fish tissue samples individually. This approach is consistent with State Board guidance and for protection of human health.<br><br>Changes to staff recommendations include the addition of Lake Gregory and Lake Arrowhead to the proposed 2012 303(d) list of impaired water bodies. Based on the evaluation of individual fish samples, the number of exceedances in Lake Gregory and Lake Arrowhead supports listing on the 303(d) list in accordance with the Listing Policy. Upper Twin Lake was not recommended for listing by staff because of the limited data set in determining impairment. More data is necessary to confidently evaluate Upper Twin Lake for impairment.<br><br>The mercury threshold of 0.2 mg/kg is the USEPA 304(a) recommended water quality criterion for concentrations of methylmercury in fish tissue of a certain size and length. |