

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

**MEETING OF JULY 8 AND 9, 2009
South Lake Tahoe**

ITEM: 6

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

DISCUSSION: Section 303(d) of the federal Clean Water Act (CWA) requires states to identify surface waters bodies that are not attaining water quality standards, and water body-pollutant combinations that need Total Maximum Daily Loads (TMDLs). 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. 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).

The Lahontan Water Board last voted on recommendations for changes to the Section 303(d) List of impaired waters in 2002. There have been two important changes to the water quality assessment process since 2002. In 2004, the State Water Board adopted a "Listing Policy," containing specific factors to be used in listing and delisting water body-pollutant combinations. This policy and supporting documentation may be viewed on the State Water Board's website at the following web address.

http://www.waterboards.ca.gov/water_issues/programs/tmdl/303a_listing.shtml

The State Water Board and U.S. Environmental Protection Agency (USEPA) also developed a database to store assessment information and produce water body Fact Sheets and other reports.

For this assessment cycle, Lahontan Water Board staff assessed Surface Water Ambient Monitoring Program (SWAMP) data, data submitted by stakeholders in response to a formal solicitation process, and data that could change the status of water body-pollutant combinations on the existing Section 303(d) list. Database entries resulted in 1,735 "lines of evidence" and 1,266 water body fact sheets summarizing the information and data supporting staff's recommendations. The assessment process also involved assigning ratings evaluating beneficial use support. The

06-0001

database uses these ratings to place water body-pollutant combinations in one of 5 Integrated Report categories. This assessment meets the requirements of CWA Section 305(b). The database, fact sheets and summary tables are found on the Lahontan Water Board's website at the following web address. http://www.waterboards.ca.gov/lahontan/water_issues/programs/tmdl/303d_305b/index.shtml

Four water body-pollutant combinations are recommended for addition to the Section 303(d) list. Thirteen water body-pollutant combinations are recommended for delisting. Existing and proposed listings are proposed for listings that are being addressed by programs other than by adopting TMDLs. Staff identified 53 water body-pollutant combinations where standards are violated but listing is not recommended.

One set of written public comments was received. These comments and staff responses are included in the agenda packet. Written responses to public hearing testimony will also be prepared for the administrative record.

A number of minor changes to information in the assessment database have been made as a result of State Water Board staff review. They affect the information in some water body fact sheets and database category reports. A revised staff report reflecting these changes has been posted on the Internet.

RECOMMENDATION

Adoption of Resolution R6T-2009-(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.

- Enclosures:
1. Resolution R6T-2009-(PROPOSED) (with Attachments A-C)
 2. Revised Staff Report and Appendices A-C
 3. Public Comments and Responses

ENCLOSURE 1

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

RESOLUTION NO. R6T-2009-(PROPOSED)

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

WHEREAS, the California Regional Water Quality Control Board, Lahontan Region, 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 schedule 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 2006 by the State Water Resources Control Board (State Water Board). The 2006 Section 303(d) List was approved by USEPA in 2007.
5. On behalf of the Regional Water Boards, by letters dated December 4, 2006 and January 30, 2007 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. Lahontan 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 2006 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 Act Section 303(d) List (Listing Policy), as well as applicable federal guidelines and regulations.

8. Staff 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 July 8, 2009, the Water Board held a Public Hearing to consider recommendations to the State Water Board for revisions to the Section 303(d) List. Notice of the Public Hearing, dated May 15, 2009, was given to all interested persons in accordance with 40 CFR 132.20(h).
11. Water Board staff developed written responses to all 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 Integrated Report Categories 4a, 4b, and 5, as the recommended Section 303(d) List for the Lahontan Region.
2. The Water Board recommends that, after the sediment TMDL for the Middle Truckee River watershed receives all necessary approvals, the listings for the Truckee River and for Bronco and Gray Creeks should be moved from Integrated Report Category 5A to Category 4A.
3. 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.

I, Harold J. Singer, 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, on July 8, 2009.

HAROLD J. SINGER
EXECUTIVE OFFICER

06-0005

Attachments (3):

- A. Category 4A – Water Quality Limited Segments being addressed by USEPA approved TMDLS
- B. Category 4B – Water Quality Limited Segments being addressed by actions other than TMDLS
- C. Category 5 – List of Water Quality Limited Segments

PROPOSED

ATTACHMENT A

06-0007

6/24/09

**2008 CALIFORNIA LIST OF WATER QUALITY LIMITED SEGMENTS
BEING ADDRESSED BY USEPA APPROVED TMDLS**

Category 4A Criteria: 1) A water segment where ALL its 303(d) listings are being addressed; and 2) at least one of those listings is being addressed by a USEPA approved TMDL.

* USGS HUC = US Geological Survey Hydrologic Unit Code. Calwater = State Water Resources Control Board hydrological subunit area or even smaller planning watershed.

** "Addressed By" is defined as: B = Being addressed by USEPA approved TMDL and C = Being addressed by action(s) other than a TMDL

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	POLLUTANT ○ POTENTIAL SOURCES ● Relevant Notes	ESTIMATED AREA ASSESSED	FIRST YEAR LISTED	ADDRESSED BY**	USEPA TMDL APPROVAL DATE
6	Indian Creek Reservoir	Lake & Reservoir	63220010 / 1.60502e	<ul style="list-style-type: none"> ● Phosphorus <ul style="list-style-type: none"> ○ Erosion/Siltation ○ Flow Regulation/Modification ○ Internal Nutrient Cycling (primarily lakes) ○ Pasture Grazing-Riparian and/or Upland ○ Wastewater 	164 Acres	2002	B	2003
				<ul style="list-style-type: none"> ● <i>Reservoir is eutrophic. Most significant source of nutrient loading is release of phosphorus from sediment. The USEPA approved the TMDL in 2003. Reductions in internal phosphorus loading from the sediment are expected to ameliorate other problems associated with eutrophication.</i> 				

6	Squaw Creek	River & Stream	63520011 / 16050102	<ul style="list-style-type: none"> ● Sedimentation/Siltation <ul style="list-style-type: none"> ○ Construction/Land Development ○ Drainage/Filling Of Wetlands ○ Highway Maintenance and Runoff ○ Hydromodification ○ Natural Sources ○ Nonpoint Source ○ Other Urban Runoff ○ Recreational and Tourism Activities (non-boating) 	5.8 Miles	1998	B	2007
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ATTACHMENT B

06-0000

6/24/09

2008 CALIFORNIA LIST OF WATER QUALITY LIMITED SEGMENTS
BEING ADDRESSED BY ACTIONS OTHER THAN TMDLS

Category 4B Criteria: A water segment where ALL its 303(d) listings are being addressed by regulatory action(s) other than TMDL.

* USGS HUC = US Geological Survey Hydrologic Unit Code. Calwater = is the State Water Resources Control Board hydrological subunit area or even smaller area delineation.

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT ○ POTENTIAL SOURCES • Relevant Notes	ESTIMATED FIRST AREA YEAR ASSESSED LISTED	REGULATORY PROGRAM COMPLETION DATE	
6	Aspen Creek	River & Stream	63210080 / 1.60502e	<ul style="list-style-type: none"> • Metals <ul style="list-style-type: none"> ○ Acid Mine Drainage ○ Inactive Mining ○ Mine Tailings ○ Natural Sources ○ Nonpoint Source <p>• This listing is being addressed through a CERCLA remediation program and through ongoing work by Lahontan Water Board staff.</p>	0.93 Miles	1992	2019
6	Bryant Creek	River & Stream	63210080 / 1.60502e	<ul style="list-style-type: none"> • Metals <ul style="list-style-type: none"> ○ Acid Mine Drainage ○ Inactive Mining ○ Mine Tailings ○ Nonpoint Source <p>• This listing is being addressed through a CERCLA remediation program and through ongoing work by Lahontan Water Board staff.</p>	5.2 Miles	1992	2019
6	Buckeye Creek	River & Stream	63040022 / 16050301	<ul style="list-style-type: none"> • Pathogens <ul style="list-style-type: none"> ○ Grazing-Related Sources ○ Natural Sources ○ Pasture Grazing-Riparian and/or Upland ○ Range Grazing-Riparian and/or Upland ○ Recreational and Tourism Activities (non-boating) <p>• This listing is being addressed through the implementation of management practices for livestock grazing under Lahontan RWQCB Resolution R6T-2007-0019, Waiver of Waste Discharge Requirements for Grazing Operations in the East Walker River Watershed (Bridgeport Valley and Tributaries) of the Lahontan Region.</p>	17 Miles	2002	2027
6	Cold Creek River & Stream	River & Stream	63410030 / 16050101	<ul style="list-style-type: none"> • Total Nitrogen as N <ul style="list-style-type: none"> ○ Agricultural Water Diversion <p>• This listing is being addressed through a U.S. Forest Service</p>	7.1 Miles	2008	2028

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restoration project.

6	East Walker River, above Bridgeport Reservoir	River & Stream	63030050 / 16050301	<ul style="list-style-type: none"> • Pathogens <ul style="list-style-type: none"> ○ Natural Sources ○ Other Urban Runoff ○ Pasture Grazing-Riparian and/or Upland ○ Recreational and Tourism Activities (non-boating) 	7.2 Miles	2002	2027
				<ul style="list-style-type: none"> • This listing is being addressed through the implementation of management practices for livestock grazing under Lahontan RWQCB Resolution R6T-2007-0019, Waiver of Waste Discharge Requirements for Grazing Operations in the East Walker River Watershed (Bridgeport Valley and Tributaries) of the Lahontan Region. 			

6	Leviathan Creek	River & Stream	63210080 / 1.60502e	<ul style="list-style-type: none"> • Metals <ul style="list-style-type: none"> ○ Acid Mine Drainage ○ Erosion/Siltation ○ Inactive Mining ○ Mine Tailings 	3.2 Miles	1992	2019
				<ul style="list-style-type: none"> • This listing is being addressed through a CERCLA remediation program and through ongoing work by Lahontan Water Board staff. 			

6	Mono Lake	Saline Lake	60100080 / 1.80901e	<ul style="list-style-type: none"> • Salinity/TDS/Chlorides <ul style="list-style-type: none"> ○ Flow Regulation/Modification ○ Natural Sources ○ Source Unknown 	39743 Acres	1998	2019
				<ul style="list-style-type: none"> • This listing is being addressed through State Water Resources Control Board Water Rights Decision 1631. 			

6	Robinson Creek (Hwy 395 to Bridgeport Res)	River & Stream	63030050 / 16050301	<ul style="list-style-type: none"> • Pathogens <ul style="list-style-type: none"> ○ Agricultural Return Flows ○ Natural Sources ○ Onsite Wastewater Systems (Septic Tanks) ○ Pasture Grazing-Riparian and/or Upland ○ Recreational and Tourism Activities (non-boating) 	1.8 Miles	2002	2027
				<ul style="list-style-type: none"> • This listing is being addressed through the implementation of management practices for livestock grazing under Lahontan RWQCB Resolution R6T-2007-0019, Waiver of Waste Discharge Requirements for Grazing Operations in the East Walker River Watershed (Bridgeport Valley and Tributaries) of the Lahontan Region. 			

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6	Robinson Creek (Twin Lakes to Hwy 395)	River & Stream	63030050 / 16050301	9.1 Miles	2002	2027
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- **Pathogens**
 - **Natural Sources**
 - **Onsite Wastewater Systems (Septic Tanks)**
 - **Pasture Grazing-Riparian and/or Upland**
 - **Recreational and Tourism Activities (non-boating)**

- *This listing is being addressed through the implementation of management practices for livestock grazing under Lahontan RWQCB Resolution R6T-2007-0019, Waiver of Waste Discharge Requirements for Grazing Operations in the East Walker River Watershed (Bridgeport Valley and Tributaries) of the Lahontan Region.*

6	Searles Lake	Saline Lake	62110000 / 1.80902e	30210 Acres	2006	2019
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- **Salinity/TDS/Chlorides**
 - **Source Unknown**

- *This listing is being addressed through Lahontan Water Board Cleanup and Abatement Orders 6-00-64, 6-00-64A1 and 6-00-64A2.*

- **Total Petroleum Hydrocarbons**
 - **Industrial Point Sources**

- *This listing is being addressed through Lahontan Water Board Cleanup and Abatement Orders 6-00-64, 6-00-64A1 and 6-00-64A2.*

06-0012

ATTACHMENT C

2008 CALIFORNIA 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS*

Category 5 criteria: 1) A water segment where standards are not met and a TMDL is required, but not yet completed, for at least one of the pollutants being listed for this segment.

* USGS HUC = US Geological Survey Hydrologic Unit Code. Calwater = State Water Resources Control Board hydrological subunit area or even smaller planning watershed.

** TMDL requirement status definitions for listed pollutants are: A= TMDL still required, B= being addressed by USEPA approved TMDL, C= being addressed by action other than a TMDL

*** Dates relate to the TMDL requirement status, so a date for A= TMDL scheduled completion date, B= Date USEPA approved TMDL, and C= Completion date for action other than a TMDL

REGION	WATER BODY NAME	WATER TYPE	WATERSHED* CALWATER / USGS HUC	• POLLUTANT ○ POTENTIAL SOURCES • Relevant Notes	ESTIMATED FIRST AREA ASSESSED	FIRST YEAR LISTED	TMDL REQUIREMENT STATUS**	DATE***
6	Blackwood Creek	River & Stream	63420021 / 1.60501e	<ul style="list-style-type: none"> • <u>Iron</u> <ul style="list-style-type: none"> ○ Erosion/Siltation ○ Natural Sources ○ Nonpoint Source • This listing may be addressed through revision of the water quality objective rather than a TMDL. • <u>Nitrogen</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Erosion/Siltation ○ Hydromodification ○ Natural Sources ○ Nonpoint Source ○ Resource Extraction ○ Silviculture ○ Streambank Modification/Destabilization • <u>Phosphorus</u> <ul style="list-style-type: none"> ○ Erosion/Siltation ○ Grazing-Related Sources ○ Hydromodification ○ Natural Sources ○ Nonpoint Source ○ Resource Extraction ○ Silviculture ○ Streambank Modification/Destabilization • <u>Sedimentation/Siltation</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Construction/Land Development ○ Erosion/Siltation ○ Hydromodification ○ Natural Sources ○ Nonpoint Source ○ Range Grazing-Riparian and/or Upland ○ Recreational and Tourism Activities (non-boating) ○ Resource Extraction ○ Silviculture ○ Streambank Modification/Destabilization ○ Surface Runoff 	5.9 Miles	2002	5A	2022
6	Bodie Creek	River & Stream	63020031 / 18090101	<ul style="list-style-type: none"> • <u>Mercury</u> <ul style="list-style-type: none"> ○ Source Unknown 	11 Miles	2006	5A	2019

06-0014

6	Bridgeport Reservoir	Lake & Reservoir	63030050 / 1.60503e	<ul style="list-style-type: none"> • <u>Nitrogen</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Channel Erosion ○ Erosion/Siltation ○ Flow Regulation/Modification ○ Grazing-Related Sources ○ Highway/Road/Bridge Construction ○ Internal Nutrient Cycling (primarily lakes) ○ Marinas and Recreational Boating ○ Natural Sources ○ Other Urban Runoff ○ Pasture Grazing-Riparian and/or Upland ○ Recreational and Tourism Activities (non-boating) ○ Removal of Riparian Vegetation ○ Sediment Resuspension ○ Streambank Modification/Destabilization ○ Wastewater land disposal • <u>Phosphorus</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Channel Erosion ○ Erosion/Siltation ○ Flow Regulation/Modification ○ Grazing-Related Sources ○ Highway Maintenance and Runoff ○ Internal Nutrient Cycling (primarily lakes) ○ Marinas and Recreational Boating ○ Natural Sources ○ Other Urban Runoff ○ Pasture Grazing-Riparian and/or Upland ○ Recreational and Tourism Activities (non-boating) ○ Removal of Riparian Vegetation ○ Streambank Modification/Destabilization ○ Wastewater - land disposal • <u>Sedimentation/Siltation</u> <ul style="list-style-type: none"> ○ Erosion/Siltation ○ Grazing-Related Sources ○ Sediment Resuspension ○ Streambank Modification/Destabilization 	2614 Acres	1992	5A	2006
6	Bronco Creek	River & Stream	63520053 / 1.60501e	<ul style="list-style-type: none"> • <u>Sedimentation/Siltation</u> <ul style="list-style-type: none"> ○ Natural Sources ○ Nonpoint Source ○ Silviculture 	1.3 Miles	1996	5A	2008
6	Carson River, West Fork (Headwaters to Woodfords)	River & Stream	63320014 / 1.60502e	<ul style="list-style-type: none"> • <u>Nitrate</u> <ul style="list-style-type: none"> ○ Source Unknown 	18 Miles	2008	5A	2021

06-0015

- This listing may be addressed through revision of the water quality objective rather than through a TMDL.

- **Nitrogen** 18 Miles 2002 5A 2019
 - Atmospheric Deposition
 - Channel Erosion
 - Erosion/Siltation
 - Habitat Modification
 - Highway Maintenance and Runoff
 - Natural Sources
 - Onsite Wastewater Systems (Septic Tanks)
 - Recreational and Tourism Activities (non-boating)
 - Removal of Riparian Vegetation
 - Silviculture
 - Streambank Modification/Destabilization

- This listing may be addressed through revision of the water quality objective rather than through a TMDL.

- **Phosphorus** 18 Miles 2002 5A 2019
 - Atmospheric Deposition
 - Channel Erosion
 - Erosion/Siltation
 - Habitat Modification
 - Highway Maintenance and Runoff
 - Natural Sources
 - Recreational and Tourism Activities (non-boating)
 - Removal of Riparian Vegetation
 - Silviculture
 - Streambank Modification/Destabilization

- This listing may be addressed through revision of the water quality objective rather than through a TMDL.

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|---|---|----------------|---------------------|--|
| 6 | Carson River, West Fork (Paynesville to State Line) | River & Stream | 63310013 / 16050201 | <ul style="list-style-type: none"> • Pathogens 3.3 Miles 2002 5A 2019 <ul style="list-style-type: none"> ○ Agriculture-irrigation tailwater ○ Agriculture-storm runoff ○ Pasture Grazing-Riparian and/or Upland |
|---|---|----------------|---------------------|--|

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|---|--|----------------|---------------------|---|
| 6 | Carson River, West Fork (Woodfords to Paynesville) | River & Stream | 63310012 / 16050201 | <ul style="list-style-type: none"> • Nitrogen 3.6 Miles 2002 5A 2019 <ul style="list-style-type: none"> ○ Agriculture-irrigation tailwater ○ Agriculture-storm runoff ○ Agriculture-subsurface drainage ○ Atmospheric Deposition ○ Channel Erosion ○ Erosion/Siltation ○ Habitat Modification ○ Highway Maintenance and Runoff ○ Natural Sources ○ Pasture Grazing-Riparian and/or Upland ○ Range Grazing-Riparian and/or Upland ○ Recreational and Tourism Activities (non-boating) ○ Removal of Riparian |
|---|--|----------------|---------------------|---|

06-0018

- Vegetation
 - Silviculture
 - Streambank Modification/Destabilization
 - Wastewater - land disposal

• This listing may be addressed through revision of the water quality objective rather than through a TMDL.

- Pathogens 3.6 Miles 2002 5A 2019
 - Agricultural Return Flows
 - Natural Sources
 - Pasture Grazing-Riparian and/or Upland
 - Recreational and Tourism Activities (non-boating)

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|---|------------------|----------------|---------------------|--|
| 6 | Clearwater Creek | River & Stream | 63040051 / 1.60503e | <ul style="list-style-type: none"> • <u>Sedimentation/Siltation</u> 12 Miles 1996 5A 2006 <ul style="list-style-type: none"> ○ Construction/Land Development ○ Highway Maintenance and Runoff ○ Range Grazing-Riparian and/or Upland |
|---|------------------|----------------|---------------------|--|

• Listed on basis of limited information; additional monitoring may support delisting.

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|---|--------------|------------------|---------------------|--|
| 6 | Crowley Lake | Lake & Reservoir | 60310090 / 1.80901e | <ul style="list-style-type: none"> • <u>Ammonia</u> 4861 Acres 2006 5A 2019 <ul style="list-style-type: none"> ○ Source Unknown • <u>Oxygen, Dissolved</u> 4861 Acres 2006 5A 2019 <ul style="list-style-type: none"> ○ Source Unknown |
|---|--------------|------------------|---------------------|--|

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|---|-------------|------------------|---------------------|--|
| 6 | Donner Lake | Lake & Reservoir | 63520021 / 1.60501e | <ul style="list-style-type: none"> • <u>Priority Organics</u> 819 Acres 1998 5A 2019 <ul style="list-style-type: none"> ○ Source Unknown |
|---|-------------|------------------|---------------------|--|

- | | | | | |
|---|----------------------------|------------------|---------------------|--|
| 6 | Eagle Lake (Lassen County) | Lake & Reservoir | 63732000 / 18080003 | <ul style="list-style-type: none"> • <u>Nitrogen</u> 20704 Acres 2002 5A 2019 <ul style="list-style-type: none"> ○ Agriculture ○ Atmospheric Deposition ○ Grazing-Related Sources ○ Highway Maintenance and Runoff ○ Internal Nutrient Cycling (primarily lakes) ○ Marinas and Recreational Boating ○ Natural Sources ○ Nonpoint Source ○ Onsite Wastewater Systems (Septic Tanks) ○ Other Urban Runoff ○ Recreational and Tourism Activities (non-boating) ○ Sediment Resuspension ○ Silviculture ○ Wastewater |
|---|----------------------------|------------------|---------------------|--|

- Phosphorus 20704 Acres 2002 5A 2019
 - Atmospheric Deposition
 - Grazing-Related Sources
 - Highway/Road/Bridge Runoff
 - Internal Nutrient Cycling (primarily lakes)
 - Marinas and Recreational Boating

06-0017

- Natural Sources
- Nonpoint Source
- Onsite Wastewater Systems (Septic Tanks)
- Other Urban Runoff
- Recreational and Tourism Activities (non-boating)
- Sediment Resuspension
- Silviculture
- Wastewater

6	East Walker River, below Bridgeport Reservoir	River & Stream	63030050 / 16050301	<ul style="list-style-type: none"> ● <u>Sedimentation/Siltation</u> <ul style="list-style-type: none"> ○ Erosion/Siltation ○ Grazing-Related Sources ○ Highway Maintenance and Runoff ○ Upstream Impoundment ○ Urban Runoff--Erosion and Sedimentation 	8 Miles	2002	5A	2019
6	General Creek	River & Stream	63420030 / 1.60501e	<ul style="list-style-type: none"> ● <u>Iron</u> <ul style="list-style-type: none"> ○ Natural Sources ○ Silviculture ● <i>This listing may be addressed through revision of the water quality objective rather than through a TMDL.</i> ● <u>Phosphorus</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Erosion/Siltation ○ Natural Sources 	9.1 Miles	2002	5A	2019
6	Gray Creek (Nevada County)	River & Stream	63520052 / 16050102	<ul style="list-style-type: none"> ● <u>Sedimentation/Siltation</u> <ul style="list-style-type: none"> ○ Natural Sources ○ Nonpoint Source ○ Silviculture 	2.8 Miles	1996	5A	2008
6	Haiwee Reservoir	Lake & Reservoir	62410071 / 1.80901e	<ul style="list-style-type: none"> ● <u>Copper</u> <ul style="list-style-type: none"> ○ Other 	1703 Acres	1998	5A	2004
6	Heavenly Valley Creek (USFS boundary to Trout Creek)	River & Stream	63410031 / 16050101	<ul style="list-style-type: none"> ● <u>Chloride</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Highway/Road/Bridge Runoff ○ Natural Sources ○ Source Unknown ● <i>This listing may be addressed by revision of the water quality objective rather than through a TMDL.</i> ● <u>Sedimentation/Siltation</u> <ul style="list-style-type: none"> ○ Construction/Land Development ○ Habitat Modification ○ Hydromodification ○ Land Development ○ Nonpoint Source ○ Recreational and Tourism Activities (non-boating) 	1.4 Miles	2002	5A	2019
6	Heavenly Valley Creek (source to	River & Stream	63410031 / 16050101	<ul style="list-style-type: none"> ● <u>Chloride</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Highway Maintenance and 	2 Miles	2002	5A	2019

06-0010

USFS
boundary)

Runoff

- Natural Sources
- Source Unknown

- *This listing may be addressed through revision of the water quality objective rather than through a TMDL.*

- **Phosphorus** 2 Miles 2002 5A 2019
 - Atmospheric Deposition
 - Erosion/Siltation
 - Natural Sources
 - Recreational and Tourism Activities (non-boating)
- **Sedimentation/Siltation** 2 Miles 2006 5B 2002
 - Source Unknown

- | | | | | |
|---|------------|-------------|------------------------|---|
| 6 | Honey Lake | Saline Lake | 63710060 /
1.808e+0 | <ul style="list-style-type: none"> ● Arsenic 57756 Acres 1998 5A 2019 <ul style="list-style-type: none"> ○ Flow Regulation/Modification ○ Geothermal Development ○ Natural Sources ○ Nonpoint Source |
|---|------------|-------------|------------------------|---|

- *Arsenic in Honey Lake is ultimately from natural sources, but the lake is affected by geothermal discharges. Further study is needed to determine whether a TMDL is needed.*

- **Salinity/TDS/Chlorides** 57756 Acres 1998 5A 2019
 - Agricultural Return Flows
 - Agricultural Water Diversion
 - Agriculture
 - Geothermal Development
 - Natural Sources
 - Nonpoint Source
 - Sediment Resuspension

- *Honey Lake has naturally high salinity but is affected by low flows and geothermal discharges. Further study is needed to verify whether impairment occurs and whether a TMDL is needed.*

- | | | | | |
|---|--------------------------|---------------------|------------------------|---|
| 6 | Honey Lake Area Wetlands | Wetland, Freshwater | 63710060 /
1.808e+0 | <ul style="list-style-type: none"> ● Metals 62590 Acres 2002 5A 2019 <ul style="list-style-type: none"> ○ Agriculture ○ Geothermal Development ○ Natural Sources ○ Nonpoint Source |
|---|--------------------------|---------------------|------------------------|---|

- *The wetlands adjacent to Honey Lake are affected by salts and trace elements from natural sources, which may be concentrated by evaporation during dry years. Additional study is needed to verify whether impairment exists and whether a TMDL is needed.*

- | | | | | |
|---|--------------------------------------|-------------|------------------------|--|
| 6 | Honey Lake Wildfowl Management Ponds | Saline Lake | 63720095 /
1.808e+0 | <ul style="list-style-type: none"> ● Metals 665 Acres 1998 5A 2019 <ul style="list-style-type: none"> ○ Agriculture ○ Geothermal Development ○ Natural Sources |
|---|--------------------------------------|-------------|------------------------|--|

- *The ponds are affected by salts and trace elements from natural sources, which may be concentrated by evaporation during dry years. Additional study is needed to verify whether impairment exists and whether a TMDL is needed.*

- **Salinity/TDS/Chlorides** 665 Acres 1998 5A 2019
 - Agriculture
 - Geothermal Development
 - Natural Sources

06-0019

- *The ponds are affected by salts and trace elements from natural sources, which may be concentrated by evaporation during dry years. Additional study is needed to verify whether impairment exists and whether a TMDL is needed.*

- **Trace Elements** 665 Acres 1998 5A 2019
 - Geothermal Development
 - Nurseries

-
- | | | | | | | | | |
|---|------------------------------|----------------|---------------------|---|----------|------|----|------|
| 6 | Indian Creek (Alpine County) | River & Stream | 63220010 / 16050201 | <ul style="list-style-type: none"> • Pathogens <ul style="list-style-type: none"> ○ Grazing-Related Sources ○ Pasture Grazing-Riparian and/or Upland | 13 Miles | 2002 | 5A | 2019 |
|---|------------------------------|----------------|---------------------|---|----------|------|----|------|
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- | | | | | | | | | |
|---|---|----------------|---------------------|---|---------|--|----|------|
| 6 | Mammoth Creek (Old Mammoth Road to Highway 395) | River & Stream | 60310053 / 18090102 | <ul style="list-style-type: none"> • Mercury <ul style="list-style-type: none"> ○ Natural Sources | 6 Miles | | 5A | 2019 |
|---|---|----------------|---------------------|---|---------|--|----|------|
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- | | | | | | | | | |
|---|---|----------------|---------------------|---|-----------|--|----|------|
| 6 | Mammoth Creek (Twin Lakes outlet to Old Mammoth Road) | River & Stream | 60310051 / 18090102 | <ul style="list-style-type: none"> • Mercury <ul style="list-style-type: none"> ○ Natural Sources | 1.9 Miles | | 5A | 2019 |
|---|---|----------------|---------------------|---|-----------|--|----|------|
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- | | | | | | | | | |
|---|--------------------------------|---------------------|---------------------|---|------------|------|----|------|
| 6 | Mesquite Springs (Inyo County) | Wetland, Freshwater | 60911000 / 18090203 | <ul style="list-style-type: none"> • Arsenic <ul style="list-style-type: none"> ○ Natural Sources | 0.17 Acres | 2008 | 5A | 2021 |
| | | | | <ul style="list-style-type: none"> • Boron <ul style="list-style-type: none"> ○ Natural Sources | 0.17 Acres | 2008 | 5A | 2021 |
-

- | | | | | | | | | |
|---|---------------|----------------|---------------------|--|---------|------|----|------|
| 6 | Monitor Creek | River & Stream | 63210070 / 1.60502e | <ul style="list-style-type: none"> • Aluminum <ul style="list-style-type: none"> ○ Acid Mine Drainage ○ Inactive Mining ○ Mill Tailings ○ Mine Tailings ○ Natural Sources ○ Nonpoint Source ○ Point Source | 4 Miles | 2002 | 5A | 2019 |
|---|---------------|----------------|---------------------|--|---------|------|----|------|

- *This listing is expected to be addressed through the CERCLA remediation process.*

- | | | | | | | | | |
|---|---------------|----------------|---------------------|--|---------|------|----|------|
| 6 | Monitor Creek | River & Stream | 63210070 / 1.60502e | <ul style="list-style-type: none"> • Iron <ul style="list-style-type: none"> ○ Acid Mine Drainage ○ Inactive Mining ○ Mill Tailings ○ Mine Tailings ○ Natural Sources ○ Nonpoint Source ○ Point Source | 4 Miles | 2002 | 5A | 2019 |
|---|---------------|----------------|---------------------|--|---------|------|----|------|

- *This listing is expected to be addressed through the CERCLA remediation process..*

- | | | | | | | | | |
|---|---------------|----------------|---------------------|--|---------|------|----|------|
| 6 | Monitor Creek | River & Stream | 63210070 / 1.60502e | <ul style="list-style-type: none"> • Manganese <ul style="list-style-type: none"> ○ Acid Mine Drainage ○ Inactive Mining ○ Mill Tailings ○ Mine Tailings ○ Natural Sources | 4 Miles | 2002 | 5A | 2019 |
|---|---------------|----------------|---------------------|--|---------|------|----|------|

06-0020

- Nonpoint Source
- Point Source

• This listing is expected to be addressed through the CERCLA remediation process.

- **Silver** 4 Miles 2002 5A 2019
 - Acid Mine Drainage
 - Inactive Mining
 - Mill Tailings
 - Mine Tailings
 - Natural Sources
 - Nonpoint Source

• This listing is expected to be addressed through the CERCLA remediation process.

- **Sulfates** 4 Miles 2002 5A 2019
 - Acid Mine Drainage
 - Inactive Mining
 - Mill Tailings
 - Mine Tailings
 - Nonpoint Source
 - Point Source

• This listing is expected to be addressed through the CERCLA remediation process.

- **Total Dissolved Solids** 4 Miles 2002 5A 2019
 - Acid Mine Drainage
 - Inactive Mining
 - Mill Tailings
 - Mine Tailings
 - Natural Sources
 - Nonpoint Source
 - Point Source

• This listing is expected to be addressed through the CERCLA remediation process.

6	Pleasant Valley Reservoir	Lake & Reservoir	60320000 / 1.80901e	<ul style="list-style-type: none"> • Organic Enrichment/Low Dissolved Oxygen <ul style="list-style-type: none"> ○ Flow Regulation/Modification ○ Nonpoint Source 	99 Acres	1996	5A	2019
6	Susan River (Headwaters to Susanville)	River & Stream	63720010 / 18080003	<ul style="list-style-type: none"> • Mercury <ul style="list-style-type: none"> ○ Natural Sources • Unknown Toxicity <ul style="list-style-type: none"> ○ Source Unknown 	36 Miles		5A	2019
6	Susan River (Litchfield to Honey Lake)	River & Stream	63720050 / 18080003	<ul style="list-style-type: none"> • Mercury <ul style="list-style-type: none"> ○ Source Unknown • Unknown Toxicity <ul style="list-style-type: none"> ○ Source Unknown 			5A	2019
6	Susan River (Susanville to Litchfield)	River & Stream	63720050 / 18080003	<ul style="list-style-type: none"> • Mercury <ul style="list-style-type: none"> ○ Natural Sources • Unknown Toxicity <ul style="list-style-type: none"> ○ Source Unknown 	16 Miles		5A	2019

06-0021

6	Swauger Creek	River & Stream	63040012 / 1.60503e	<ul style="list-style-type: none"> • <u>Pathogens</u> <ul style="list-style-type: none"> ○ Natural Sources ○ Onsite Wastewater Systems (Septic Tanks) ○ Pasture Grazing-Riparian and/or Upland ○ Range Grazing-Riparian and/or Upland ○ Recreational and Tourism Activities (non-boating) • <i>This listing is being addressed through the implementation of management practices for livestock grazing under Lahontan RWQCB Resolution R6T-2007-0019, Waiver of Waste Discharge Requirements for Grazing Operations in the East Walker River Watershed (Bridgeport Valley and Tributaries) of the Lahontan Region.</i> • <u>Phosphorus</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Erosion/Siltation ○ Highway/Road/Bridge Runoff ○ Natural Sources ○ Nonpoint Source ○ Pasture Grazing-Riparian and/or Upland ○ Range Grazing-Riparian and/or Upland ○ Streambank Modification/Destabilization ○ Surface Runoff 	14 Miles	2002	5C	
6	Tahoe, Lake	Lake & Reservoir	63430010 / 1.60501e	<ul style="list-style-type: none"> • <u>Nitrogen</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Channel Erosion ○ Construction/Land Development ○ Drainage/Filling Of Wetlands ○ Erosion/Siltation ○ Golf course activities ○ Grazing-Related Sources ○ Groundwater Loadings ○ Habitat Modification ○ Highway/Road/Bridge Runoff ○ Hydromodification ○ Internal Nutrient Cycling (primarily lakes) ○ Land Development ○ Marinas and Recreational Boating ○ Natural Sources ○ Other Urban Runoff ○ Recreational and Tourism Activities (non-boating) ○ Removal of Riparian Vegetation ○ Silviculture ○ Streambank Modification/Destabilization ○ Surface Runoff ○ Urban Runoff--Erosion and Sedimentation ○ Urban Runoff--Non-industrial Permitted ○ Urban Runoff/Storm Sewers • <u>Phosphorus</u> <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Channel Erosion 	85364 Acres	2002	5A	2010

06-0022

- Erosion/Siltation
- Grazing-Related Sources
- Highway Maintenance and Runoff
- Highway/Road/Bridge Construction
- Highway/Road/Bridge Runoff
- Internal Nutrient Cycling (primarily lakes)
- Land Development
- Natural Sources
- Nonpoint Source
- Other Urban Runoff
- Recreational and Tourism Activities (non-boating)
- Sediment Resuspension
- Silviculture
- Streambank Modification/Destabilization
- Urban Runoff--Erosion and Sedimentation
- Urban Runoff--Non-industrial Permitted
- Urban Runoff/Storm Sewers

- **Sedimentation/Siltation** 85364 Acres 2006 5A 2010
 - Atmospheric Deposition
 - Channel Erosion
 - Channelization
 - Erosion/Siltation
 - Grazing-Related Sources
 - Highway/Road/Bridge Construction
 - Highway/Road/Bridge Runoff
 - Hydromodification
 - Land Development
 - Natural Sources
 - Nonpoint Source
 - Other Urban Runoff
 - Recreational and Tourism Activities (non-boating)
 - Removal of Riparian Vegetation
 - Sediment Resuspension
 - Silviculture
 - Streambank Modification/Destabilization
 - Urban Runoff--Erosion and Sedimentation
 - Urban Runoff/Storm Sewers

6	Tallac Creek (below Hwy 89)	River & Stream	63410041 / 16050101	<ul style="list-style-type: none"> ● Pathogens <ul style="list-style-type: none"> ○ Grazing-Related Sources ○ Pasture Grazing-Riparian and/or Upland 	1.3 Miles	2002	5A	2019
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6	Trout Creek (above Hwy 50)	River & Stream	63410020 / 1.60501e	<ul style="list-style-type: none"> ● Iron <ul style="list-style-type: none"> ○ Erosion/Siltation ○ Natural Sources ○ Urban Runoff--Non-industrial Permitted 	10 Miles	2002	5A	2019
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- *This issue may be addressed through revision of the water quality objective rather than through a TMDL.*

- **Nitrogen** 10 Miles 2002 5A 2019
 - Atmospheric Deposition

06-0023

- Erosion/Siltation
- Pasture Grazing-Riparian and/or Upland
- Urban Runoff--Non-industrial Permitted

● **Pathogens** 10 Miles 2002 5A 2019

- Source Unknown

● **Phosphorus** 10 Miles 2002 5A 2019

- Atmospheric Deposition
- Erosion/Siltation
- Pasture Grazing-Riparian and/or Upland
- Urban Runoff--Non-industrial Permitted

6 Trout Creek (below Hwy 50) River & Stream 63410042 / 1.60501e ● **Iron** 0.78 Miles 2002 5A 2019

- Erosion/Siltation
- Natural Sources
- Urban Runoff--Non-industrial Permitted

● *This listing may be addressed through revision of the water quality objective rather than through a TMDL.*

● **Nitrogen** 0.78 Miles 2002 5A 2019

- Atmospheric Deposition
- Erosion/Siltation
- Urban Runoff--Non-industrial Permitted

● **Pathogens** 0.78 Miles 2002 5A 2019

- Grazing-Related Sources

● **Phosphorus** 0.78 Miles 2002 5A 2019

- Atmospheric Deposition
- Erosion/Siltation
- Urban Runoff--Non-industrial Permitted

6 Truckee River River & Stream 63510010 / 16050101 ● **Sedimentation/Siltation** 39 Miles 1996 5A 2008

- Channel Erosion
- Construction/Land Development
- Erosion/Siltation
- Highway/Road/Bridge Construction
- Natural Sources
- Nonpoint Source
- Range Grazing-Riparian and/or Upland
- Recreational and Tourism Activities (non-boating)
- Silviculture
- Snow skiing activities
- Streambank Modification/Destabilization

6 Truckee River, Upper (above Christmas Valley) River & Stream 63410010 / 16050101 ● **Iron** 4.5 Miles 2002 5A 2019

- Natural Sources

● *This listing may be addressed through revision of the water quality objective rather than through a TMDL.*

06-0024

				<ul style="list-style-type: none"> • Phosphorus <ul style="list-style-type: none"> ○ Grazing-Related Sources ○ Natural Sources ○ Silviculture 	4.5 Miles	2002	5A	2019
6	Truckee River, Upper (below Christmas Valley)	River & Stream	63410042 / 1.60501e	<ul style="list-style-type: none"> • Iron <ul style="list-style-type: none"> ○ Erosion/Siltation ○ Natural Sources ○ Nonpoint Source 	11 Miles	2002	5A	2019
				<ul style="list-style-type: none"> • <i>This listing may be addressed through revision of the water quality objective rather than through a TMDL.</i> 				
				<ul style="list-style-type: none"> • Phosphorus <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Channelization ○ Construction/Land Development ○ Erosion/Siltation ○ Highway Maintenance and Runoff ○ Hydromodification ○ Natural Sources ○ Nonpoint Source ○ Removal of Riparian Vegetation ○ Silviculture ○ Streambank Modification/Destabilization ○ Unknown Nonpoint Source 	11 Miles	2002	5A	2019
6	Ward Creek	River & Stream	63420020 / 1.60501e	<ul style="list-style-type: none"> • Iron <ul style="list-style-type: none"> ○ Channel Erosion ○ Erosion/Siltation ○ Highway Maintenance and Runoff ○ Natural Sources ○ Other Urban Runoff ○ Silviculture 	5.7 Miles	2002	5A	2015
				<ul style="list-style-type: none"> • <i>This listing may be addressed through revision of the water quality objective rather than through a TMDL.</i> 				
				<ul style="list-style-type: none"> • Nitrogen <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Channel Erosion ○ Erosion/Siltation ○ Highway/Road/Bridge Runoff ○ Natural Sources ○ Other Urban Runoff ○ Silviculture 	5.7 Miles	2002	5A	2008
				<ul style="list-style-type: none"> • Phosphorus <ul style="list-style-type: none"> ○ Atmospheric Deposition ○ Channel Erosion ○ Erosion/Siltation ○ Highway/Road/Bridge Runoff ○ Natural Sources ○ Other Urban Runoff ○ Silviculture ○ Urban Runoff--Erosion and Sedimentation 	5.7 Miles	2002	5A	2008
				<ul style="list-style-type: none"> • Sedimentation/Siltation <ul style="list-style-type: none"> ○ Channel Erosion 	5.7 Miles	2002	5A	2008

06-0025

- Highway/Road/Bridge
Runoff
- Land Development
- Nonpoint Source
- Silviculture
- Urban Runoff/Storm
Sewers

6	Wolf Creek (Alpine County)	River & Stream	63210031 / 16050201	• <u>Sedimentation/Siltation</u> <ul style="list-style-type: none">○ Nonpoint Source○ Range Grazing-Riparian and/or Upland○ Silviculture	12 Miles	1998	5A	2019
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06-0026

ENCLOSURE 2

06-0027

LAHONTAN REGIONAL
WATER QUALITY CONTROL BOARD

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

REVISED PUBLIC REVIEW DRAFT

June 2009

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

06-0028

EXECUTIVE SUMMARY

This Integrated Report provides the draft recommendations of the staff of the California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board) for changes to the federal Clean Water Act (CWA) Section 303(d) list of impaired surface water bodies, and for evaluation of beneficial use support pursuant to CWA Section 305(b). The water quality assessment affects surface waters of the United States within the Lahontan Region.

Following a public participation process, the Lahontan 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 of non-impaired water bodies, 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 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 (2006) Section 303(d) listings. Additional information and data were available, but time and resource limitations precluded a broader assessment. Even with these limitations, this assessment process was more intensive than the Lahontan Water Board's previous Section 303d list updates. Over 1250 fact sheets, each assessing a unique water body-pollutant combination, were developed during this evaluation. These fact sheets contain over 1700 lines of evidence. There are 4 proposed new 303(d) listings and 13 proposed delistings. Two of the proposed new listings, for arsenic and boron, are for Mesquite Springs (Inyo County). These springs provide drinking water for a campground in Death Valley National Park. The third proposed listing is for total nitrogen (as N) in Cold Creek in the Lake Tahoe Basin. This listing is being addressed by a U.S. Forest Service restoration project. The fourth proposed listing is for nitrate in the Headwaters to Woodfords segment of the West Fork Carson River. 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 proposed separate listing. The recommended Section 303(d) list for the Lahontan Region includes 41 water bodies and 92 water body-pollutant combinations.

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 on the degree of support of core beneficial uses. One of the five categories identifies water body-pollutant combinations with insufficient information for assessment. Most of the data

assessed by Lahontan Water Board staff are in the "insufficient information" category due to problems with data quality and/or data quantity.

When adopting recommendations for updated Section 303(d) Lists, Regional Water Boards are required to identify schedules 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 TMDLs.

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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) are 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) which are protective of 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 those surface water body segments that are "impaired or threatened"- meaning not meeting, or not expected to meet, water quality standards. 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, or through revisions in 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 Control 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 2006 assessment cycle.

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. For the 2008 cycle, the State Water Board will prepare an Integrated Report addressing both sections of the CWA.

The Section 303(d)/305(b) assessment process is not regulatory and does not require environmental analysis under the California Environmental Quality Act (CEQA). 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 Lahontan Water Board staff's recommendations and provides background on the assessment process. The appendices to this report include more detailed "fact sheets" with recommendations for specific water body-pollutant combinations.

DATA AND INFORMATION USED FOR ASSESSMENT

Because of time and resource constraints, not all of the available data could be used in this assessment cycle. The following is a summary of the sources of information and data that were assessed with the resources available.

Solicited information and data. In December 2006 the State and Regional Water Boards solicited data from the public through a formal notification process. Information and data for the Lahontan Region were received through five submittals. Copies of stakeholder-submitted data are included in the electronic administrative record of the assessment process. They include:

- Data for streams and reservoirs in eastern Modoc and eastern Lassen Counties, submitted by the U.S. Bureau of Land Management.
- Data associated with a proposed restoration project in the High Meadows area of the Cold Creek watershed in the Lake Tahoe Basin, submitted by the U.S. Forest Service, Lake Tahoe Basin Management Unit (LTBMU).
- Data for two pools in Keough Hot Ditch, in the Owens River watershed, submitted by the Owens Valley Indian Water Commission.
- Data from the California Department of Pesticide Regulation's online pesticide database for two stations on the West Fork Carson and Upper Truckee Rivers.
- Data for Squaw Creek submitted by the Squaw Valley Public Services District.

The Lahontan Water Board also received a letter from the California Forestry Association (CFA) requesting that action on the assessment (then planned for late 2007) be postponed pending completion of a CFA-sponsored report on the habitat requirements of anadromous fish. The assessment process was subsequently delayed due to time needs for development of an electronic database. The CFA report has not been provided to Lahontan Water Board assessment staff. (Anadromous fish, by definition, migrate between marine and fresh waters, and there are technically no anadromous fish in the Lahontan Region.)

SWAMP data. State Water Board staff directed the Regional Water Boards to assess all Surface Water Ambient Monitoring Program (SWAMP) data for their regions. Lahontan Region SWAMP data for 36 water bodies or water body segments, collected between 2000 and 2005, were assessed. Other available SWAMP data have not yet undergone

- complete quality assurance/quality control verification, and are not included in the assessment.

Several other sources of information and data were used to supplement the data above, or to provide justification for delisting certain water body-pollutant combinations or changing their status regarding the need for TMDLs.

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.

WATER QUALITY STANDARDS AND CRITERIA USED FOR ASSESSMENT

Lahontan Water Board staff assessed data using regulatory limits (when available) in preference to non-regulatory water quality criteria. Regulatory limits used include water quality objectives in the Water Quality Control Plan for the Lahontan Basin (Basin Plan), and standards for toxic chemicals 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 Health Services (and now maintained 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 Lahontan Basin Plan. The direction to assess all SWAMP data led to preparation of fact sheets for some constituents such as caffeine that do not have any state or federal standards or criteria.

Most of the Lahontan Region is 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 Lahontan Basin Plan are based on protection of natural background water 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, chloride, nitrogen, phosphorus, and sulfate. 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. Violations of antidegradation-based SSOs do not necessarily indicate that beneficial uses are impaired.

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 interannual variability in constituent concentrations. Due to this limitation, some Section 303(d) listings for violations 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 can be viewed through a link on the Lahontan Water Board's web page. The Policy was developed through a stakeholder process and reflects political compromises in addition to statistical and scientific considerations. The Listing Policy mandates listing for toxicants if water quality standards or criteria are violated more than 3 percent of the time, and mandates listing for "conventional" and other pollutants if standards or criteria are violated more than 10 percent of the time. The Policy includes tables (based on a "binomial model") that summarize the numbers of allowable violations associated with specific ranges of sample numbers. The number of violations 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 violations are needed to list for toxicants (defined to include nutrients), and 5 samples with 5 violations are needed to list for "conventional" pollutants. The Listing Policy is structured so as to make it more difficult to delist a water body-pollutant combination than to list it. More samples and fewer violations 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. Lahontan 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 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 violations in relation to numbers of samples. Most of the SSOs in the Lahontan Basin Plan are expressed as annual means.

The Listing Policy allows data to be rejected for use 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 of the Lahontan Region datasets assessed for 2008 had inadequate documentation of QA/QC. Some of the datasets were not temporally representative; see the discussion of temporal representation below.

The Regional Water Boards first took action on Section 303(d) list recommendations 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 or segment in relation to a specific beneficial use, and "decisions" including staff recommendations regarding listing and beneficial use support.

Database. All of the fact sheet information and beneficial use support ratings for assessed California water bodies are stored in the Water Boards' California Water Quality Assessment (CaWQA) database. The CaWQA database was developed to store detailed water quality assessment information and to help produce the Integrated Report. The database is designed so that this information can be exported to the USEPA's Assessment Database at the end of each assessment cycle. The assessment fact sheets (contained in Appendix I), as well as the lists of water body segments in each Integrated Report category (contained in Appendices D through H), were produced directly from the CaWQA database's report functions. The electronic versions of the CaWQA fact sheets contain Internet links to the reference documents for water quality objectives and criteria and to the original water quality data being assessed.

The database has limitations which lead to some inconsistencies between the electronic data assessed and the fact sheets. For example, the chemical names in reference files may be different from those in the fact sheets. This arises from the use of chemical synonyms in database picklists.

REGION-SPECIFIC ASSESSMENT ISSUES

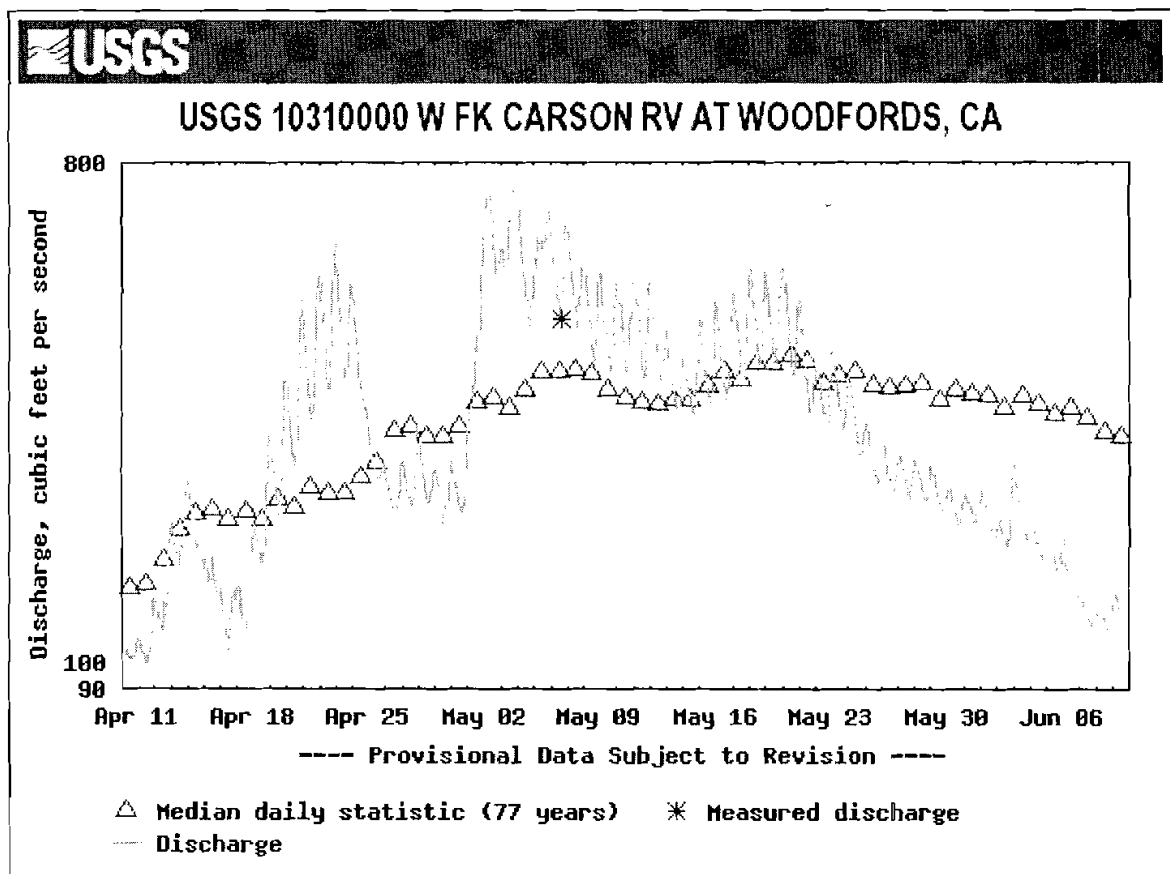
Temporal Representation. Most of the data assessed for the 2008 Integrated Report cycle come from the SWAMP program. The 2000-2005 SWAMP samples were collected quarterly due to funding limitations, with the recognition that this sampling frequency was inadequate for full characterization of ambient water quality. Budget constraints and other factors (such dry streams due to drought in the upper Mojave River watershed) resulted in collection of fewer than four SWAMP samples per year per station in many cases. Because most of the Lahontan Region's SSOs are expressed as annual means, the low sampling frequency results 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 variation in pollutant concentrations and the environmental conditions (including streamflows) that 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 hydrologic 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 and the dates when summer livestock grazing begins and ends can have significant effects on pollutant concentrations.

The following graph of "real time" data from the West Fork Carson River at Woodfords for a 60 day period during the 2009 snowmelt season shows diel variations in discharge (based on gage height) and significant differences in 2009 discharge in comparison to long term "average" conditions. A quarterly sample collected in late April would have represented quite different flow-weighted constituent concentrations than a sample collected in early May. The data are from the U.S. Geological Survey NWIS database at: <http://ca.water.usgs.gov/>



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).

Evaluation of ten years of data for ten streams in the Lake Tahoe Basin showed that most of the nitrate transport occurred early in the snowmelt season or during large winter rainstorms. The variation in annual runoff explained most of the interannual and interwatershed variation in total nitrogen loads. See <http://www.hydroikos.com/CoatsGoldman0201.pdf>.

Long term and short term variations in flows also affect water quality and biological processes in desert streams, and this variability is even less predictable than that associated with snowmelt. A case study of Arizona streams in a USEPA guidance document for the development of nutrient criteria states: "The characterization of ambient conditions with a few grab samples is inappropriate, if not reckless." See: <http://www.epa.gov/waterscience/criteria/nutrient/guidance/rivers/rivers-streams-full.pdf>.

Natural Sources of Pollutants. The geology and climate of the Lahontan Region lead to locally 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 from 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 violations of standards in geothermally influenced and inland saline waters are due entirely to natural sources.

In 1989, the Lahontan 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 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 Lahontan 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.

The USEPA's aquatic life criteria and California Toxics Rule (CTR) standards do not necessarily reflect the tolerance ranges of aquatic life native to the Lahontan Region. For example, the Total Dissolved Solids concentrations measured in the Amargosa River are high enough to qualify it as a saline water body under USEPA criteria. State Water Board staff directed that the CTR's saltwater aquatic life standards be used to assess the SWAMP data for the Amargosa River. The aquatic life criteria and CTR standards for salt water were developed using toxicity tests with marine and estuarine organisms. They are probably not appropriate for the aquatic life of inland saline waters. However, unless the Lahontan Water Board adopts water-body specific standards, it must use the most relevant (freshwater or saltwater) CTR aquatic life standards in assessment of "naturally impaired" waters.

In past assessment cycles, Lahontan Water Board staff justified delisting or not listing waters with standards violations due entirely to natural sources of pollutants. The 2004 Listing Policy is silent on natural sources. For the 2008 assessment cycle, State Water Board staff's direction is that natural sources cannot be used to justify delisting or not listing. Many of the standards violations noted in the fact sheets are due to natural source pollutants, and these are included in the descriptions of environmental conditions in the Lines of Evidence. However, the staff recommendations for not listing rely on factors other than natural sources.

PROPOSED CHANGES TO THE SECTION 303(D) LIST

Appendices A through C show the proposed changes to the Section 303(d) list for the 2008 assessment cycle. The rationales for all 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 name from north to south in the Lahontan Region. Appendices D through I, produced by the CalWQA database, list water bodies alphabetically by name.

There are four proposed new 303(d) listings (new water body segment-pollutant combinations) and there are 13 de-listings proposed. The proposed new listings are for Mesquite Springs in Death Valley National Park (for arsenic and boron from natural sources), for Cold Creek in the Lake Tahoe Basin (for total nitrogen as N), and for the Headwaters to Woodfords segment of the West Fork Carson River (for nitrate). The proposed changes to the 303(d) list also include category designations to show that TMDLs have been completed since the 303(d) list was last updated in 2006, and that certain listings are being addressed by programs other than TMDLs. Three water bodies have been divided into geographic segments as shown in the "Miscellaneous Changes" list in Appendix J.

The Lahontan Water Board has adopted a sediment TMDL for the Truckee River and two of its tributaries, Bronco Creek and Gray Creek (Nevada County). This TMDL has been approved by the State Water Board. The three listings are shown in Appendix A as listings still needing TMDLs (Integrated Report Category 5A). If the TMDL is approved by the USEPA before the Lahontan Water Board takes action on the Integrated Report recommendations, staff will recommend that the Truckee River and Bronco and Gray Creeks be moved to the Integrated Report category of waters with all listings addressed by USEPA-approved TMDLs (Category 4A).

New listings are not recommended for 53 water body-pollutant combinations where standards are violated according to the statistical provisions of the Listing Policy's binomial model, but where the data are in Lahontan Water Board staff's opinion, not temporally representative. Additional reasons for not listing apply in some cases. These water body-pollutant combinations are shown in Appendix C.

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TMDL SCHEDULING

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

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 Lahontan 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 listings on the current (2006) 303(d) list are projected to be completed no later than 2019. TMDLs for proposed new listings in the Lahontan Region are projected to be completed no later than 2021.

Short term priorities for Regional Water Board work on TMDLs are set through five-year 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 unlikely to result in 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 WATERBODY CATEGORIES

The 2008 assessment of beneficial use support under CWA Section 305(b) 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 line of evidence in the CalWQA database, Regional Water Board staff must enter a beneficial use rating of “Fully Supporting”, “Not Supporting” or “Insufficient Information.” The database does not allow the use of the “partially supporting” or “threatened” ratings used in past assessment cycles.

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 make use 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. (This 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 in the CWA.
- Category 5. Evidence shows at least one use is not supported (and a TMDL is needed). There are subcategories of Category 5 to recognize water bodies with some, but not all listings addressed by USEPA-approved TMDLs or alternative regulatory programs.

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 violations of water quality standards or criteria with non-support of beneficial uses. For water-pollutant combinations where standards or criteria are not violated, Regional Water Boards may use professional judgment to determine whether the available data are adequate for evaluation of use support. 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 lines of evidence, 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 of the recommended beneficial use category classifications. There are no water bodies recommended for Category 1 or Category 4C.

APPENDIX A. EXISTING AND POTENTIAL NEW SECTION 303(D) LISTINGS

This table summarizes the proposed 2008 Section 303(d) List for the Lahontan Region. It includes listings with approved TMDLs and listings being addressed by programs other than TMDLs.

Water Body	New Listing?	Pollutant	Completion Year ¹	Category ²
Susanville HU				
Susan River (Headwaters to Susanville)	No ³	Unknown Toxicity	2019	5A
Susan River (Headwaters to Susanville)	No ³	Mercury	2019	5A
Susan River (Susanville to Litchfield)	No ³	Unknown Toxicity	2019	5A
Susan River (Susanville to Litchfield)	No ³	Mercury	2019	5A
Susan River (Litchfield to Honey Lake)	No ³	Unknown Toxicity	2019	5A
Susan River (Litchfield to Honey Lake)	No ³	Mercury	2019	5A
Eagle Lake	No	Nitrogen	2011	5A
Eagle Lake	No	Phosphorus	2011	5A
Honey Lake	No	Arsenic	2019	5A
Honey Lake	No	Salinity/TDS/Chlorides	2019	5A
Honey Lake Area Wetlands	No	Metals	2019	5A
Honey Lake Wildfowl Management Ponds	No	Metals	2019	5A
Honey Lake Wildfowl Management Ponds	No	Salinity/TDS/Chlorides	2019	5A
Honey Lake Wildfowl Management Ponds	No	Trace Elements	2019	5A
Truckee River H				
Truckee River	No	Sedimentation/Siltation	2008	5A
Bronco Creek	No	Sedimentation/Siltation	2008	5A
Gray Creek (Nevada County)	No	Sedimentation/Siltation	2008	5A
Donner Lake	No	Priority Organics	2019	5A
Squaw Creek	No	Sedimentation/Siltation	2007	4A
Lake Tahoe HU				
Lake Tahoe	No	Sedimentation/Siltation	2010	5A
Lake Tahoe	No	Nitrogen	2010	5A
Lake Tahoe	No	Phosphorus	2010	5A
Blackwood Creek	No	Sedimentation/Siltation	2008	5B
Blackwood Creek	No	Iron	2019	5A
Blackwood Creek	No	Nitrogen	2012	5A
Blackwood Creek	No	Phosphorus	2012	5A
Cold Creek	Yes	Total Nitrogen as N	2021	4B

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Water Body	New Listing?	Pollutant	Completion Year ¹	Category ²
General Creek	No	Iron	2019	5A
General Creek	No	Phosphorus	2012	5A
Heavenly Valley Creek (source to USFS boundary)	No	Chloride	2019	5A
Heavenly Valley Creek (source to USFS boundary)	No	Phosphorus	2019	5A
Heavenly Valley Creek (source to USFS boundary)	No	Sedimentation/Siltation	2002	5B
Heavenly Valley Creek (USFS boundary to Trout Creek)	No	Chloride	2019	5A
Heavenly Valley Creek (USFS boundary to Trout Creek).	No	Sedimentation/Siltation	2019	5A
Tallac Creek	No	Pathogens	2019	5A
Trout Creek (above Hwy 50)	No	Iron	2019	5A
Trout Creek (above Hwy 50)	No	Nitrogen	2012	5A
Trout Creek (above Hwy 50)	No	Pathogens	2013	5A
Trout Creek (above Hwy 50)	No	Phosphorus	2012	5A
Trout Creek (below Hwy 50)	No	Iron	2019	5A
Trout Creek (below Hwy 50)	No	Nitrogen	2012	5A
Trout Creek (below Hwy 50)	No	Pathogens	2019	5A
Trout Creek (below Hwy 50)	No	Phosphorus	2012	5A
Truckee River, Upper (above Christmas Valley)	No	Iron	2019	5A
Truckee River, Upper (above Christmas Valley)	No	Phosphorus	2019	5A
Truckee River, Upper (below Christmas Valley)	No	Iron	2019	5A
Truckee River, Upper (below Christmas Valley)	No	Phosphorus	2012	5A
Ward Creek	No	Iron	2019	5A
Ward Creek	No	Nitrogen	2012	5A
Ward Creek	No	Phosphorus	2012	5A
Ward Creek	No	Sedimentation/Siltation	2019	5A
West Fork Carson River HU				
Carson River, West Fork (Headwaters to Woodfords)	No	Nitrogen	2019	5A
Carson River, West Fork (Headwaters to Woodfords)	No ⁴	Nitrate	2019	5A
Carson River, West Fork (Headwaters to Woodfords)	No	Phosphorus	2019	5A
Carson River, West Fork (Woodfords to Paynesville)	No	Nitrogen	2019	5A
Carson River, West Fork (Woodfords to Paynesville)	No	Pathogens	2013	5A
Carson River, West Fork (Paynesville to State Line)	No	Pathogens	2013	5A
East Fork Carson River. HU				
Wolf Creek (Alpine County)	No	Sedimentation/Siltation	2019	5A
Indian Creek (Alpine County)	No	Pathogens	2013	5A

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Water Body	New Listing?	Pollutant	Completion Year	Category ²
Indian Creek Reservoir	No	Phosphorus	2003	4A
Aspen Creek	No	Metals	2019	4B
Bryant Creek	No	Metals	2019	4B
Leviathan Creek	No	Metals	2019	4B
Monitor Creek	No	Aluminum	2019	4B
Monitor Creek	No	Iron	2019	5A
Monitor Creek	No	Manganese	2019	5A
Monitor Creek	No	Silver	2019	5A
Monitor Creek	No	Sulfate	2019	5A
Monitor Creek	No	Total Dissolved Solids	2019	5A
East Walker River HU				
East Walker River, above Bridgeport Reservoir	No	Pathogens	2027	4B
East Walker River, below Bridgeport Reservoir	No	Sedimentation/Siltation	2019	5A
Bridgeport Reservoir	No	Nitrogen	2019	5A
Bridgeport Reservoir	No	Phosphorus	2019	5A
Bridgeport Reservoir	No	Sedimentation/Siltation	2019	5A
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	5C
Swauger Creek	No	Phosphorus	2010	5A
Bodie Creek	No	Mercury	2027	5A
Clearwater Creek	No	Sedimentation/Siltation	2019	5A
Mono HU				
Mono Lake	No	Salinity/TDS/Chlorides	2019	4B
Owens HU				
Mammoth Creek (Twin Lakes outlet to Old Mammoth Road)	No ³	Mercury	2019	5A
Mammoth Creek, (Old Mammoth Road to Highway 395)	No ³	Mercury	2021	5A
Crowley Lake	No	Ammonia	2019	5A
Crowley Lake	No	Dissolved Oxygen	2019	5A
Pleasant Valley Reservoir	No	Organic Enrichment/ Low DO	2019	5A
Indian Wells HU				
Haiwee Reservoir	No	Copper	2019	5A

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Water Body	New Listing?	Pollutant	Completion Year ¹	Category ²
Amargosa HU				
Mesquite Springs (Inyo County)	Yes	Arsenic	2021	5A
Mesquite Springs (Inyo County)	Yes	Boron	2021	5A
Trona HU				
Searles Lake	No	Salinity/TDS/Chlorides	2019	4B
Searles Lake	No	Total Petroleum Hydrocarbons	2019	4B

¹**Completion Year.** For listings with USEPA-approved TMDLs (Categories 4A and 5B), this refers to the USEPA approval year. For listings still needing TMDLs (Category 5A), the completion year is the projected Lahontan Water Board action date. For listings being addressed by actions other than TMDLs (Categories 4B and 5C), the completion year is the projected attainment date for water quality standards.

²**Category.** The Integrated Report includes two categories and 5 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.”

5A. This listing still needs a TMDL.

5B. This listing is being addressed by a USEPA-approved TMDL but other listings for the same water body still need TMDLs.

5C. This listing is being addressed by a regulatory action other than a TMDL but other listings for the same water body still need TMDLs.

³**Listings for new water body segments.** Existing listings are being carried over to new segments created for the Susan River and Mammoth Creek.

⁴This 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 THE 2008 ASSESSMENT CYCLE

Water Body Name	Pollutant	Comments
Lake Tahoe HU		
Big Meadow Creek	Pathogens	Monitoring shows that water quality objective is attained.
Truckee River, Upper (above Christmas Valley)	Pathogens	Monitoring shows that water quality objective is attained.
West Fork Carson River HU		
Carson River, West Fork (Headwaters to Woodfords)	Sodium	Water quality objective was revised and new objective is attained.
Carson River, West Fork (Woodfords to Paynesville)	Sodium	Water quality objective was revised and new objective is attained.
East Walker River HU		
East Walker River, below Bridgeport Reservoir	Nitrogen	Original listing was flawed due to incorrect interpretation of standard.
East Walker River, below Bridgeport Reservoir	Phosphorus	Original listing was flawed due to incorrect interpretation of standard.
Hot Springs Canyon Creek	Sedimentation/Siltation	Lahontan RWQCB/USBLM study indicates lack of impairment.
Owens River HU		
Mammoth Creek (Headwaters to Twin Lakes outlet)	Mercury	Entire creek was originally listed for mercury on the basis of tissue data. Tissue samples were collected in a downstream segment below a dam. The listing should not apply to this segment.
Mammoth Creek (Headwaters to Twin Lakes outlet)	Metals	Entire creek was originally listed for metals on the basis of tissue data. Tissue samples were collected in a downstream segment below a dam. The listing should not apply to this segment.
Mammoth Creek (Twin Lakes outlet to Old Mammoth Road)	Metals	Specific listing for mercury replaces general listing for "metals."
Mammoth Creek (Old Mammoth Road to Highway 395)	Metals	Specific listing for mercury replaces general listing for "metals."
Twin Lakes (Owens HU)	Nitrogen	Original listing was flawed and would not meet current Listing Policy requirements.
Twin Lakes (Owens HU)	Phosphorus	Original listing was flawed and would not meet current Listing Policy requirements.

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APPENDIX C. STANDARDS VIOLATIONS THAT ARE NOT RECOMMENDED FOR LISTING

The following water body-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).

Water Body or Segment	Pollutant	Type of Standard Violated	Reason That Listing is Not Recommended
Surprise Valley HU			
Bidwell Creek	Total Dissolved Solids	SSO ¹	Data are not temporally representative (Listing Policy Section 6.1.5.3). ²
Mill Creek (Modoc County)	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Smoke Creek HU			
Smoke Creek	Turbidity	MCL ³	Data are not temporally representative (Listing Policy Section 6.1.5.3). No quality assurance information was provided (Listing Policy Section 6.1.4).
Susanville HU			
Susan River (Headwaters to Susanville)	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Susan River (Headwaters to Susanville)	Total Nitrogen as N	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Susan River (Susanville to Litchfield)	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Susan River (Susanville to Litchfield)	Turbidity	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
East Fork Carson River. HU			
Carson River, East Fork	Phosphorus	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Carson River, East Fork	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Carson River, East Fork	Boron	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
West Walker River HU			
West Walker River	Phosphorus	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
West Walker River	Total Nitrogen as N	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
West Walker River	Boron	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).

¹SSO = Site-specific water quality objective from the Lahontan Basin Plan

² Statements in this column that data are not temporally representative indicate that samples were collected quarterly or less frequently

³ MCL= California Maximum Contaminant Level, applicable under water quality objective for "Chemical Constituents"

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Water Body or Segment	Pollutant	Type of Standard Violated	Reason That Listing is Not Recommended
East Walker River HU			
East Walker River below Bridgeport Reservoir	Manganese	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
East Walker River below Bridgeport Reservoir	Turbidity	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Owens River HU			
Mammoth Creek, unnamed tributary	Arsenic	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek, unnamed tributary	Mercury	CTR ⁴	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Headwaters to Twin Lakes outlet)	Iron	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Headwaters to Twin Lakes outlet)	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Twin Lakes outlet to Old Mammoth Road)	Iron	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Twin Lakes outlet to Old Mammoth Road)	Manganese	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Twin Lakes outlet to Old Mammoth Road)	Phosphorus	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Old Mammoth Road to Highway 395)	Phosphate	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Old Mammoth Road to Highway 395)	Manganese	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Old Mammoth Road to Highway 395)	Iron	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mammoth Creek (Old Mammoth Rd. to Highway 395)	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Rock Creek	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).

⁴ CTR= California Toxics Rule

Water Body or Segment	Pollutant	Type of Standard Violated	Reason That Listing is Not Recommended
Amargosa HU			
Amargosa River, Nevada border to Tecopa	Arsenic	CTR	Data are not temporally representative (Listing Policy Section 6.1.5.3). Only one sample per year is available. CTR saltwater aquatic life standards were developed for marine/estuarine organisms and are not appropriate for inland saline waters.
Amargosa River, Nevada border to Tecopa	Copper	CTR	Data are not temporally representative (Listing Policy Section 6.1.5.3). Only one sample per year is available. CTR saltwater aquatic life standards were developed for marine/estuarine organisms and are not appropriate for inland saline waters.
Amargosa River, Tecopa to Upper Canyon	Arsenic	CTR	Data are not temporally representative (Listing Policy Section 6.1.5.3). Only one sample per year is available. CTR saltwater aquatic life standards were developed for marine/estuarine organisms and are not appropriate for inland saline waters.
Amargosa River, Upper Canyon to Willow Creek confluence	Arsenic	CTR	Data are not temporally representative (Listing Policy Section 6.1.5.3). Only one sample per year is available. CTR saltwater aquatic life standards were developed for marine/estuarine organisms and are not appropriate for inland saline waters.
Amargosa River, Upper Canyon to Willow Creek confluence	Copper	CTR	Data are not temporally representative (Listing Policy Section 6.1.5.3). Only one sample per year is available. CTR saltwater aquatic life standards were developed for marine/estuarine organisms and are not appropriate for inland saline waters.
Antelope HU			
Littlerock Reservoir	Manganese	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Littlerock Reservoir	Boron	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mojave River HU			
Mojave River (Mojave Forks Reservoir outlet to Upper Narrows)	Fluoride	MCL	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mojave River (Mojave Forks Reservoir outlet to Upper Narrows)	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mojave River (Upper Narrows to Lower Narrows)	Sulfates	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).

05-0043

Water Body or Segment	Pollutant	Type of Standard Violated	Reason That Listing is Not Recommended
Mojave River (Upper Narrows to Lower Narrows)	Fluoride	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Mojave River (Upper Narrows to Lower Narrows)	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Crab Creek	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Holcomb Creek	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Sheep Creek	Total Dissolved Solids	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).
Sheep Creek	Nitrate	SSO	Data are not temporally representative (Listing Policy Section 6.1.5.3).

05-0050

ENCLOSURE 3

06-0051

From: "Denise Kirchner" <kirchner@svminerals.com>
To: "Judith Unsicker" <junsicker@waterboards.ca.gov>
CC: "Arzell Hale" <Hale@svminerals.com>, "Ross May" <May@svminerals.com>
Date: 6/12/2009 11:22 AM
Subject: Section 303(d)/305(b) Assessment Comments
Attachments: SVM comments_2008_303(d) listing.pdf

Dear Ms. Unsicker:

I appreciate the opportunity to submit comments regarding the draft Section 305(b) and 303(d) Integrated Report for the Lahontan Region. On behalf of Searles Valley Minerals in Trona, California, I respectfully submit the attached two-page document with comments and questions.

Thank you for considering this submittal.

Sincerely,
Denise Kirchner

Denise Kirchner
Searles Valley Minerals
Environmental/Responsible Care
Office 760.372.2118
Fax 760.372.2130
Cell 760.301.4355

06-0052

To: Judith Unsicker, CRWQCB Lahontan Region
From: Denise Kirchner, Searles Valley Minerals
Date: June 11, 2009

Re: Water Quality Data and Information for 2008 Integrated Report – List of Impaired Waters and Surface Water Quality Assessment [303(d)/305(b)]

Having reviewed the “Clean Water Act Section 305(b) and 303(d) Integrated Report for the Lahontan Region, April 2009”, Searles Valley Minerals submits the following comments and urges the following actions:

Searles Lake is listed in Appendix G as a Category 4B water body segment for the following pollutants:

Salinity/TDS/Chlorides – Source unknown. This listing is being addressed through Lahontan Water Board CAO 6-00-64 and 6-00-64A1 (also *6-00-64A2*), and

Total Petroleum Hydrocarbons – Industrial Point Sources. This listing is being addressed through Lahontan Water Board CAO 6-00-64 and 6-00-64A1 (also *6-00-64A2*).

Comments:

1. While the fact sheet retains the comment that “a determination of whether or not this water body is a ‘water of the United States’ will be made by the Regional Water Quality Control Board”, Searles Valley Minerals requests at a minimum and as a temporary alternative to de-listing, that the Category 4B listing for Searles Lake retain an asterisk noting the ambiguity, so the information is carried forward to the State Water Resources Control Board document.
2. A second amendment to the Cleanup and Abatement Order No. 6-00-64A2, dated October 11, 2001, is not referenced in the fact sheet at Appendix I. In Section 4 of 6-00-64A2, Regional Board directed staff to evaluate the appropriateness of current beneficial use designations for Searles Lake and to prepare information as part of a proposed Basin Plan amendment process to consider establishing site-specific beneficial uses for Searles Lake. The Regional Board staff has delayed complying with the directive, purportedly due to budgetary constraints for some eight and going on nine years. It is highly unlikely that budgetary relief will be occurring any time soon.

The CAO and subsequent amendments do not reference Salinity/TDS/Chlorides as “pollutants” in Searles Lake. In fact, at the direction of Regional Board staff, Searles Valley Minerals (then IMC Chemicals) conducted a study to evaluate the hydrologic resources within the Searles Valley Hydrologic Basin and the conclusion is that “a comparison of the ephemeral waters to the process brine effluent indicates that both are brines. The TDS concentrations for five ephemeral ponds were shown to be higher than the concentrations found in the process brine effluent.” (IMC Chemicals Inc. Evaluating Hydrologic Resources Within the Searles Valley Hydrologic Basin, March 2002, page 17, submitted to California Regional Water Quality Control Board Lahontan Region.) These constituents are naturally occurring, as rain and mountain stream runoff come in contact with the salt surface of Searles Dry Lakebed, that water instantly becomes brine with well over an average of 86,000 mg/L sodium, 350,000 mg/L TDS, and 145,000 mg/L Chlorides for the five ephemeral ponds tested. The presence of naturally occurring Salinity/TDS/Chlorides may require a change in

06-0053

water quality standards because Searles Lake cannot be made drinkable or fishable. Note that brackish water on the surface at the south edge of Searles Lake resulting from a secondary industrial discharge (Westend North discharge) provides shorebird nesting; however, the minor discharge stream is not characteristic of the Searles Lake current and potential future mining resource brines.

3. USEPA expects TMDLs to be completed within 13 years after the list update cycle when the water body-pollutant combination was first listed. There is no doubt that the CAO addresses Total Petroleum Hydrocarbons at Searles Lake. Searles Valley Minerals has achieved compliance with Waste Discharge Requirements discharge limits and continues to work with Board staff to address historic cleanup sites as required in the CAO.
4. The fact sheet at Appendix G retains a reference to CDFG documentation of “hundreds of bird deaths, primarily from salt toxicosis and salt encrustation in the water body.” Searles Valley Minerals implemented its wildlife hazing and rehabilitation efforts, and DFG approved the Section 3005 Mitigation Plan of June 13, 2005. DFG agrees that SVM is doing all that it can to minimize bird loss due to contact with Searles Lake Brines, where do we go from here with regard to the 303(d) listing? In the absence of jeopardy from Total Petroleum Hydrocarbons and the protections being afforded migratory birds from naturally occurring Salinity/TDS/Chlorides what beneficial uses are being protected by the Regional Board?

I am not an expert in the world of TMDLs and water quality management, so I look to Regional Board staff to help me understand the process going forward. For almost a decade, a determination of the actual site-specific beneficial uses of Searles Dry Lakebed has not been addressed by the Regional Board. Searles Valley Minerals has no regulatory recourse in spite of submittal of overwhelming technical evidence. Further, over the past 10 years, Searles Valley Minerals has accumulated a great deal of analytical data for WDR reporting that was not available when the CAO was issued. Searles Valley Minerals previously submitted documents that I believe support removing Searles Lake from the 303(d) list of impaired water bodies. The process brines are not water as defined by scientific sources, are not waters of the state and are not waters of the United States. Searles Valley Minerals continues to respectfully petition and urge a formal amendment to the Basin Plan properly finding no beneficial uses other than brines for resource mining and a de-listing from the proposed 303(d) listing.

Denise Kirchner
Searles Valley Minerals
760.372.2118

RESPONSES TO COMMENTS FROM SEARLES VALLEY MINERALS

Denise Kirchner of Searles Valley Minerals submitted comments dated June 11, 2009 by email. Staff responses are shown in bold italic font following specific comments below. Several comments address proposed changes to the Water Quality Plan for the Lahontan Region (Basin Plan). While the staff report recognizes that many of the Lahontan Region's Section 303(d) listings may be addressed through revision of water quality standards rather than through Total Maximum Daily Loads (TMDLs), the appropriate forum for discussion of specific planning issues and priorities is the Triennial Review of the Basin Plan. A Water Board hearing for Triennial Review of the Basin Plan is tentatively scheduled for the October 2009 meeting.

Comments and Responses

General Comments:

Having reviewed the "Clean Water Act Section 305(b) and 303(d) Integrated Report for the Lahontan Region, April 2009", Searles Valley Minerals submits the following comments and urges the following actions:

Searles Lake is listed in Appendix G as a Category 4B water body segment for the following pollutants: Salinity/TDS/Chlorides – Source unknown. This listing is being addressed through Lahontan Water Board CAO 6-00-64 and 6-00-64A1 (also 6-00-64A2), and Total Petroleum Hydrocarbons – Industrial Point Sources. This listing is being addressed through Lahontan Water Board CAO 6-00-64 and 6-00-64A1 (also 6-00-64A2).

Specific Comments:

1. While the fact sheet retains the comment that "a determination of whether or not this water body is a 'water of the United States' will be made by the Regional Water Quality Control Board", Searles Valley Minerals requests at a minimum and as a temporary alternative to de-listing, that the Category 4B listing for Searles Lake retain an asterisk noting the ambiguity, so the information is carried forward to the State Water Resources Control Board document.

Response: As a state agency, the Lahontan Water Board does not have the authority to determine whether or not a water body is a water of the United States. Such determinations are made by the U.S. Army Corps of Engineers and the U.S. Environmental Protection Agency (USEPA) under the federal Clean Water Act. The statement referenced in the comment is being deleted from the water body fact sheets for the two Section 303(d) listings for Searles Lake.

2. A second amendment to the Cleanup and Abatement Order No. 6-00-64A2, dated October 11, 2001, is not referenced in the fact sheet at Appendix I. In Section 4 of 6-00-64A2, Regional Board directed staff to evaluate the appropriateness of current beneficial use designations for Searles Lake and to prepare information as part of a proposed Basin

Plan amendment process to consider establishing site-specific beneficial uses for Searles Lake. The Regional Board staff has delayed complying with the directive, purportedly due to budgetary constraints for some eight and going on nine years. It is highly unlikely that budgetary relief will be occurring any time soon.

Response: The amendment to the order will be cited in the final fact sheets for Searles Lake. Triennial Review is the appropriate forum for discussion of Basin Planning priorities.

3. The CAO and subsequent amendments do not reference Salinity/TDS/Chlorides as "pollutants" in Searles Lake. In fact, at the direction of Regional Board staff, Searles Valley Minerals (then IMC Chemicals) conducted a study to evaluate the hydrologic resources within the Searles Valley Hydrologic Basin and the conclusion is that "a comparison of the ephemeral waters to the process brine effluent indicates that both are brines. The TDS concentrations for five ephemeral ponds were shown to be higher than the concentrations found in the process brine effluent." (IMC Chemicals Inc. Evaluating Hydrologic Resources Within the Searles Valley Hydrologic Basin, March 2002, page 17, submitted to California Regional Water Quality Control Board Lahontan Region.) These constituents are naturally occurring, as rain and mountain stream runoff come in contact with the salt surface of Searles Dry Lakebed, that water instantly becomes brine with well over an average of 86,000 mg/L sodium, 350,000 mg/L TDS, and 145,000 mg/L Chlorides for the five ephemeral ponds tested. The presence of naturally occurring Salinity/TDS/Chlorides may require a change in water quality standards because Searles Lake cannot be made drinkable or fishable. Note that brackish water on the surface at the south edge of Searles Lake resulting from a secondary industrial discharge (Westend North discharge) provides shorebird nesting; however, the minor discharge stream is not characteristic of the Searles Lake current and potential future mining resource brines.

Response: Pollutants are defined in the Clean Water Act to include: "dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal and agricultural waste discharged into water" (Section 502(6), 33 U.S.C. 1362). As interpreted by State Water Resources Control Board and USEPA staff for purposes of California's water quality assessment process, the term "pollutant" includes all chemicals regardless of whether they come from natural or human sources. The State Water Board's 2004 "Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List" (Listing Policy) is silent on the issue of pollutants from natural sources. State Water Board assessment staff's direction is that waters with standards violations due entirely to natural sources must be listed.

4. USEPA expects TMDLs to be completed within 13 years after the list update cycle when the water body-pollutant combination was first listed. There is no doubt that the CAO addresses Total Petroleum Hydrocarbons at Searles Lake. Searles Valley Minerals has achieved compliance with Waste Discharge Requirements discharge limits and continues to work with Board staff to address historic cleanup sites as required in the CAO.

Response: In approving the 2006 Section 303(d) list, the USEPA approved TMDL completion dates no later than 2019 for all water bodies identified as needing TMDLs. Placement of a water body-pollutant combination in Category 4b means that a TMDL is not necessary. The State Water Board put Searles Lake in the 2006 category of water bodies being addressed by actions other than TMDLs (now called Category 4b when all listings for a given water body are "being addressed"). For the current assessment process, Regional Water Boards have been directed to identify estimated standards attainment dates for Category 4b listings in lieu of TMDL completion dates. For consistency with the 2019 TMDL completion dates, attainment dates of 2019 are recommended for listings placed in the "being addressed" category in 2006. These dates should be regarded as estimates and are subject to change in future assessment cycles.

5. The fact sheet at Appendix G retains a reference to CDFG documentation of "hundreds of bird deaths, primarily from salt toxicosis and salt encrustation in the water body." Searles Valley Minerals implemented its wildlife hazing and rehabilitation efforts, and DFG approved the Section 3005 Mitigation Plan of June 13, 2005. DFG agrees that SVM is doing all that it can to minimize bird loss due to contact with Searles Lake Brines, where do we go from here with regard to the 303(d) listing? In the absence of jeopardy from Total Petroleum Hydrocarbons and the protections being afforded migratory birds from naturally occurring Salinity/TDS/Chlorides what beneficial uses are being protected by the Regional Board? I am not an expert in the world of TMDLs and water quality management, so I look to Regional Board staff to help me understand the process going forward. For almost a decade, a determination of the actual site-specific beneficial uses of Searles Dry Lakebed has not been addressed by the Regional Board. Searles Valley Minerals has no regulatory recourse in spite of submittal of overwhelming technical evidence. Further, over the past 10 years, Searles Valley Minerals has accumulated a great deal of analytical data for WDR reporting that was not available when the CAO was issued. Searles Valley Minerals previously submitted documents that I believe support removing Searles Lake from the 303(d) list of impaired water bodies. The process brines are not water as defined by scientific sources, are not waters of the state and are not waters of the United States. Searles Valley Minerals continues to respectfully petition and urge a formal amendment to the Basin Plan properly finding no beneficial uses other than brines for resource mining and a de-listing from the proposed 303(d) listing.

Response: During the current assessment process, the highest priority was given to Regional Board SWAMP data, data submitted by stakeholders in response to a 2006-2007 solicitation process, and data that would justify changes in the 2006 listings for pathogens. Water Board assessment staff did not review any new data for Searles Lake. Delisting for Salinity/TDS/Chlorides is not feasible at this time because of the natural sources issue discussed above. Delisting for Total Petroleum Hydrocarbons (TPH) is not recommended while the provisions of the Cleanup and Abatement Order that deal with TPH are in effect. The appropriate forum for discussion of priorities for changes in designated beneficial uses is Triennial Review.