STAFF REPORT
VOLUME III

REVISION OF THE CLEAN WATER ACT SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS

WATER BODY FACT SHEETS SUPPORTING THE SECTION 303(d) RECOMMENDATIONS

FEBRUARY 2003

DIVISION OF WATER QUALITY
STATE WATER RESOURCES CONTROL BOARD
CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

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STATE OF CALIFORNIA
Gray Davis, Governor

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY
Winston H. Hickox, Secretary

STATE WATER RESOURCES
CONTROL BOARD
P.O. Box 100
Sacramento, CA 95812-0100
(916) 341-5250
Homepage: http://www.swrcb.ca.gov

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STATE WATER RESOURCES CONTROL BOARD
DIVISION OF WATER QUALITY

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February 2003
FINAL

Staff Report by the
Division of Water Quality
State Water Resources Control Board

REVISION OF THE CLEAN WATER ACT SECTION 303(d) LIST OF WATER QUALITY LIMITED SEGMENTS

Water Body Fact Sheets Supporting the Section 303(d) Recommendations

Volume III

This Staff Report supporting the revision of the Clean Water Act Section 303(d) list of water quality limited segments has four parts: (1) Volume I contains the listing methodology and a summary of the additions, deletions, changes, and priorities; (2) Volume II contains summaries of the proposals for the North Coast, San Francisco Bay, Central Coast, and Los Angeles Regional Water Quality Control Boards (RWQCBs); (3) Volume III contains summaries of the proposals for the Central Valley, Lahontan, Colorado River Basin, Santa Ana, and San Diego RWQCBs, and (4) Volume IV contains the responses to comments received.

This document is Volume III of the Staff Report. Changes to the section 303(d) list are included for the following RWQCBs:

- Central Valley (Region 5)
- Lahontan (Region 6)
- Colorado River Basin (Region 7)
- Santa Ana (Region 8)
- San Diego (Region 9)

Each RWQCB section in this volume is divided into the following parts:

- Water Body Fact Sheets
- List of the data and information used

All data and information submitted after May 15, 2001 is included in the submittals presented in Volume IV.

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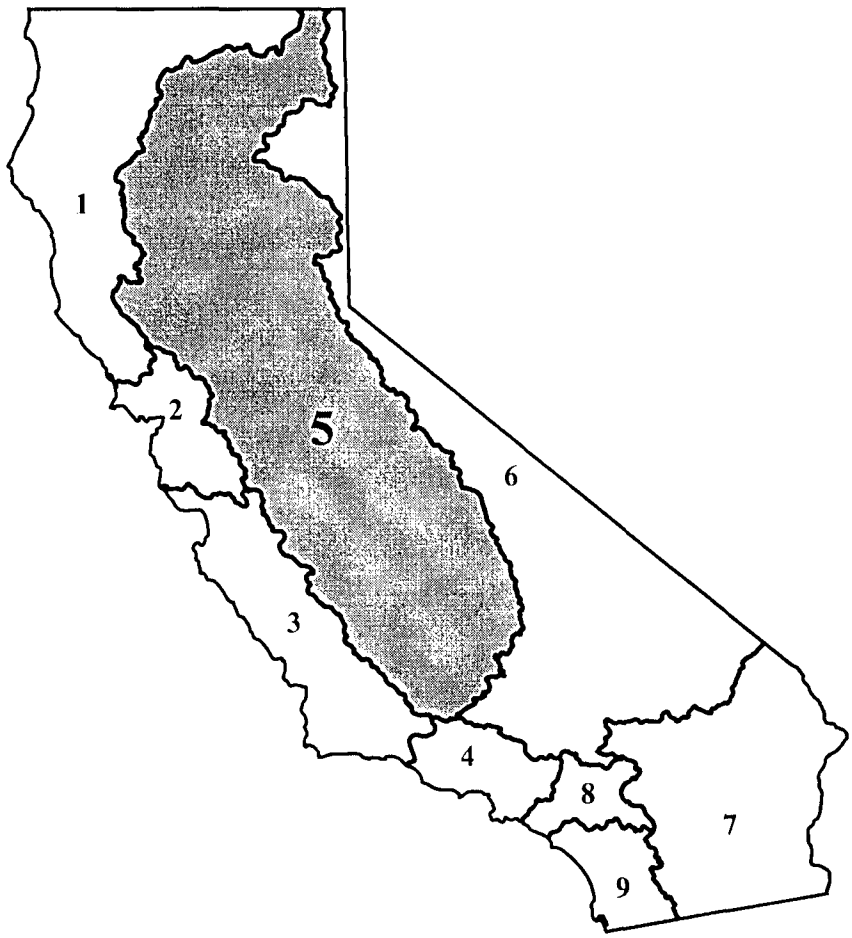
Regional Water Quality Control Board

CENTRAL VALLEY REGION (5)



SECTION 303 (d) LIST PROPOSALS

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Region 5: American River, Lower
Group A Pesticides

Water Body	American River, Lower
Stressor/Media/Beneficial Use	Group A Pesticides/Tissue/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Group A Pesticides are linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Basin Plan, WQO for pesticides and toxicity for Group A pesticides. NAS/USFDA tissue criteria.
Water Body-specific Information	Data = 11 years (1979-1990) and 2 years later (1997-1999), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	The American River was originally placed on the 303(d) List for Group A Pesticide Concentrations based on fish tissue data reported by the TSMP. The TSMP analysis included all the group A pesticide for 15 fish tissue samples. 3 out of those15 samples were above 100 ppb. The15 samples had an average concentration of 56.2 ppb. exceeding the criteria of NAS and USFDA. When only considering Dieldrin and Chlordane concentration the weighted average changes to 55.7 ppb. Therefore Dieldrin and Chlordane account for almost all of the Group A pesticides historically found in fish in the River. Recently fish tissue collected for SRWP, 7 tissue samples were examined for Dieldrin and Chlordane. None of the samples analyzed exceeded the criteria for NAS and USFDA. The WQO is being attained. A direct comparison of the earlier TSMP study and the SRWP study can be made, the recent data show the criteria are not being exceeded.
Spatial representation	In the TSMP studies, fish were collected from the River at Highway 160 and downstream of Watt Ave. In the SRWP studies the fish were collected from the river at Discovery park and J St. The spatial coverage from the two studies overlaps sufficiently so that fish tissue concentration are comparable.
Temporal representation	The data were collected for the TSMP study from 1979-1990, and the SRWP study sampled from 1997-1999.
Data type	Numerical Data.
Use of standard method	TSMP and SRWP methods.
Potential Source(s) of Pollutant	Urban Runoff/ Storm Sewers.
Alternative Enforceable Program	
RWQCB Recommendation	Delist.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the

water body should be removed from the section 303(d) list because applicable water quality standards are not exceeded.

This conclusion is based on the staff findings that:
1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses have been established.
4. Water quality standard used is applicable.
5. Data are numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the age of the data were considered.

The new data show that the NAS and USFDA criteria are not being exceeded. The WQO for Group A pesticides for toxicity and pesticides are being attained and no longer needs to be listed on the 303(d) List for Group A Pesticide, WQO exceedance. Remove the entire length of the lower American River, Nimbus Dam to the Sacramento River attains WQO for Group A pesticides.

Region 5: Arcade Creek
Copper

Water Body	Arcade Creek
Stressor/Media/Beneficial Use	Copper/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Copper linked to Aquatic Life Beneficial Use.
Utility of measure for judging if standards or uses are not attained	USEPA CTR Freshwater Aquatic Life Criteria for Dissolved Copper, WQO.
Water Body-specific Information	Data = 4 years (2/96-5/00), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Copper Concentration Data = 40 samples, 8 exceeded the CCC and 3 exceeded the CMC. They used the USEPA CTR criteria for dissolved copper.
Spatial representation	The USGS and the SWRP combined collected 40 samples from Arcade Creek.
Temporal representation	Data collected by USGS and SWRP from 2/1996 to 5/2000.
Data type	Numerical data.
Use of standard method	USGS and City of Sacramento methods.
Potential Source(s) of Pollutant	Urban Runoff/Storm Sewers.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is

high. List the entire reach of Arcade Creek from it's headwaters to the Natomas East Main drainage Canal.

Region 5: Avena Drain
Pathogens

Water Body	Avena Drain
Stressor/Media/Beneficial Use	Pathogens/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pathogens linked to REC-1 Beneficial Uses.
Utility of measure for judging if standards or uses are not attained	WQO for toxicity, USEPA Criterion.
Water Body-specific Information	Data = 4 months (10/2000-1/2001), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	E.coli Data = 14 samples collected from six locations, three locations have Geometric Means, and they all exceeded USEPA criterion for E. coli. 13 of the 14 samples collected exceed the USEPA single sample criterion for E. coli levels.
Spatial representation	Data collected from six locations on Avena Drain.
Temporal representation	Data collected on 5 dates between 10/2000 and 1/2001.
Data type	Numerical data.
Use of standard method	Delta Keeper Bacteria Data.
Potential Source(s) of Pollutant	Agriculture/Dairies (manure carried in wastewater to Avena Drain).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality

standard. The staff confidence that standards were exceeded is high. List for Pathogens, the drain begins on a dairy farm east of Brennan Ave. The upper 6.5 miles of Avena Drain has E. coli. levels in exceedance of USEPA criterion.

Region 5: Avena Drain
Ammonia

Water Body	Avena Drain
Stressor/Media/Beneficial Use	Ammonia/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Ammonia linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	CDFG criteria for ammonia levels, WQO.
Water Body-specific Information	Data =10 years (1991- 2001), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Ammonia Data = Over a period of 10 years, all of the samples contained undissociated ammonia levels above CDFG criterion, and all of the samples exceed some to most of the LC50s for various freshwater species.
Spatial representation	The Avena Drain, (at Van Allen Rd. and Brennan Avenue), 10 of the 12 Dairies located along the drain are located on the upper 6.5 miles.
Temporal representation	Data collected over a period of 10 years, during known discharges of wastewater.
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Agriculture/Dairies (manure carried in wastewater to Avena Drain).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. All of the water quality measurements exceeded the water quality standard.

Region 5: Avena Drain
Ammonia

The staff confidence that standards were exceeded is high. List for Ammonia, the drain begins on a dairy farm east of Brennan Ave. The upper 6.5 miles of Avena Drain has disassociated ammonia levels in exceedance of CDFG criterion, WQO for Toxicity is being exceeded.

Region 5: Bear Creek
Mercury

Water Body	Bear Creek
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	USEPA CTR for Mercury, WQO.
Water Body-specific Information	Data = 13 days over two years (4/96 to 2/98), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Water quality data = 19 samples total, 13 samples out of the 19 had concentrations of mercury above USEPA criterion (50 ng/L).
Spatial representation	Four separate locations were sampled along the creek.
Temporal representation	Data collected on thirteen days between April 1996 and February 1998.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Extraction/Abandoned Mines.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List

for Mercury in Bear Creek from it's confluence with the unnamed creek that flows along Rathburn Mercury Mine to it's confluence with Cache Creek.

Region 5: Bear River, Lower
Diazinon

Water Body	Bear River, Lower
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	CDFG criteria for Diazinon levels(acute and chronic), WQO.
Water Body-specific Information	Data = 2 years (1994 and 2000), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Diazinon Data = 14 samples total, 3 samples exceeded the CDFG criteria.
Spatial representation	The Data was collected from Berry Road along the River.
Temporal representation	Data was collected over 14 days, 14 times during two years (1994 and 2000).
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Agriculture (Diazinon Spray used on dormant almond and stonefruit crops).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate. List Lower Bear River, Diazinon was shown to be in exceedance

of the objectives by using CDFG criteria to determine criterion exceedance.

Region 5: Bear River, Upper
Mercury

Water Body	Bear River, Upper
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	USEPA criteria for Mercury, Human Consumption Levels.
Water Body-specific Information	Data = 3 fish in 1 day, Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Mercury Data. Three fish were collected from the River by USGS, tissue had concentrations of 0.38 to 0.43 ppm, all of them exceeding the USEPA mercury criteria of 0.3 ppm. This criteria is used to determine attainment of the narrative toxicity objective.
Spatial representation	All the trophic level 3 fish were collected in the river at Dog Bar Road.
Temporal representation	All the fish were collected on Sept. 23, 1999.
Data type	Numerical data.
Use of standard method	USGS methods.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. All of the water quality measurements exceeded the water quality standard.

Region 5: Bear River, Upper Mercury

The staff confidence that standards were exceeded is high. List for Mercury in the Upper Bear River from the Rollins reservoir to Lake Combie. Data shows the WQO is not being attained.

Region 5: Black Butte Reservoir
Mercury

Water Body	Black Butte Reservoir
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
***Data quality assessment. Extent to* which data quality requirements met.**	*Generally limited consideration to those organizations that conduct* monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish consumption.
Utility of measure for judging if standards or uses are not attained	USEPA criteria for Mercury, Human Consumption Levels.
Water Body-specific Information	Data = 3 days over 1year, Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	*Data = There were 65 fish sampled total. 38 composite samples of trophic* level 3 fish, 27 composite samples of trophic level 4 fish, all of the samples were at or above USEPA mercury criteria, this criteria is used to determine attainment of the narrative toxicity objective.
Spatial representation	Fish collected from three regions of the reservoir, Burris Creek arm, Stony Creek Arm and Angler's cove.
Temporal representation	The samples of 65 fish were collected on 11/25/97, and 12/4-5/97.
Data type	Numerical data.
Use of standard method	OEHHA methods.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Black Butte Reservoir
Mercury

List for Mercury in all of Black Butte Reservoir. All of the composite samples were at or above USEPA criterion, used to determine that the objective is not being attained.

Region 5: Butte Slough
Molinate

Water Body	Butte Slough
Stressor/Media/Beneficial Use	Molinate/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Molinate linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	CDFG criteria for Molinate levels, WQO.
Water Body-specific Information	Data = 6 years (1994-2000), Data measured at the site, Species or indicator present at site, Environmental conditions considered at the site.
Data used to assess water quality	Molinate Data = 99 samples were collected and over six years 7 samples exceeded the CDFG criterion for Molinate. The CDFG criteria was used to determine that the narrative objectives for pesticide and toxicity are not being attained. An inadequate number of samples exceeded the evaluation criteria value. All the data used in this assessment were collected during the period of application of molinate to rice (generally may and June). The data reviewed show that the evaluation values was exceeded five times in 1996 and two times in 1997. The magnitude of the observed concentrations were very close to the 13 ug/L evaluation value; in 1996 and 1997 the highest values observed were 15.7 ug/L and 16.42 ug/L. The evaluation value was not exceeded in data from 1994, 1995, 1998, 1999, and 2000. Given the circumstances in this particular situation, Butte Slough should not be listed for molinate. There is a low confidence in 5% of the samples exceeding the objective.
Spatial representation	Samples were collected at one site only, Lower pass road.
Temporal representation	99 samples were collected during 1994 to 2000 during May and June.
Data type	Numerical data.
Use of standard method	CDPR and Regional Board study method.
Potential Source(s) of Pollutant	Agriculture (Molinate Aerial Spray used on rice fields).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because an inadequate number of measurements exceed water quality standards.

Region 5: Butte Slough
Diazinon

Water Body	Butte Slough
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	CDFG criteria for Diazinon levels (acute and chronic), WQO.
Water Body-specific Information	Data = 2 years (1994 and 2000), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Diazinon Data = 38 samples total, 20 samples exceeded the chronic CDFG criteria and 18 samples exceeded the acute CDFG criteria.
Spatial representation	Samples were collected at one site only, Lower pass road.
Temporal representation	Samples were collected during two years, 1994 and 2000 during January and February.
Data type	Numerical data.
Use of standard method	Regional board and USGS study methods.
Potential Source(s) of Pollutant	Agriculture (Diazinon Spray used on dormant almond and stonefruit crops).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Butte Slough
Diazinon

Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 5: Cache Creek, Lower
Mercury and Unknown Toxicity

Water Body	Cache Creek, Lower
Stressor/Media/Beneficial Use	Mercury and Unknown Toxicity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 96 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total length of 60 miles to 81 miles. Extent of impairment to be changed from 35 miles to 81 miles. Foe and Croyle (1998) indicated that the total length of Cache creek is 81 miles.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. The area extent is from Clear Lake Dam to Cache Creek Settling basin near the Yolo Bypass. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 96 miles.

Region 5: Calaveras River, Lower
Pathogens

Water Body	Calaveras River, Lower
Stressor/Media/Beneficial Use	Pathogens/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pathogens linked to REC-1 Beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO, USEPA Criterion.
Water Body-specific Information	Data = 2 years (2000- 2001), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	E. coli Data = 37 samples collected from two locations,26 samples from an upstream location have a Geometric Mean, and they all exceeded USEPA criterion for E. coli. The 11 samples collected from the downstream location have a Geometric that doesn't exceed the USEPA criterion for E.coli. However some of the downstream samples individually exceed the CDHS 'single' sample criterion for E. coli levels. The USEPA criteria is used to translate the narrative WQO, and it has been shown that it has been exceeded.
Spatial representation	Two sampling locations exist. One Sampling location is near the mouth of the river and the other is 4 miles upstream.
Temporal representation	The upstream location samples were collected over 10 months, 2000-2001. The downstream location was sampled over 7 months in 2000.
Data type	Numerical data.
Use of standard method	Delta Keeper data.
Potential Source(s) of Pollutant	Urban Runoff/Recreation.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate.

6. Data are numerical.
7. Standard methods were used.
8. Other water body- or site-specific information including the age of the data were considered.

Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. Both sampling locations are within the urban Stockton Area. The lower 5 miles of Lower Calaveras River are in exceedance of USEPA criterion, WQO is exceeded.

Region 5: Calaveras River, Lower
Diazinon

Water Body	Calaveras River, Lower
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	CDFG criteria for Diazinon levels(acute and chronic), WQO.
Water Body-specific Information	Data = 2 years (1994 and 1996), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Available data summarized by Lee and Jones-Lee (2001) and data reported in the Department of Pesticide Regulation's Surface Water Database (SWDB-2000) were reviewed. Diazinon data summarized by Lee and Jones-Lee were taken in conjunction with toxicity testing. All four samples collected in 1994 had diazinon levels above CDFG criteria (199 ng/L to 450 ug/L). The samples collected in 1996 had a diazinon concentration of 36 ug/L. The data used from the SWDB were from a report prepared for the city of Stockton's storm water program. Three of six samples collected in 1996 had samples greater than CDFG criteria (130 ng/L, 1,300 ng/L and 1,700 ng/L). Two of the samples (1,300 ng/L and 1,700 ng/L) were taken at two different sites on the same day. Out of a total of 11 data points available, 7 are above CDFG criteria.
Spatial representation	Samples collected from Lower Calaveras River, including two sites in the Stockton urban area.
Temporal representation	11 Samples total, collected during 1994 and 1996.
Data type	Numerical Data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Urban Runoff/Storm Sewers.
Alternative Enforceable Program	N/A
RWQCB Recommendation	List the Lower Calaveras River, between the Stockton Diversion Canal and the San Joaquin River.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

Region 5: Calaveras River, Lower
Diazinon

This conclusion is based on the staff findings that:
1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses apply to the water body.
4. Water quality standard used is applicable.
5. The evaluation guideline used to interpret narrative water quality standards is adequate.
6. Data are numerical.
7. Standard methods were used.
8. Other water body- or site-specific information including the age of the data were considered.

Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List the Lower Calaveras River, between the Stockton Diversion Canal and the San Joaquin River.

Region 5: Calaveras River, Lower
Organic Enrichment-Low Dissolved Oxygen

Water Body	Calaveras River, Lower
Stressor/Media/Beneficial Use	Organic Enrichment-Low Dissolved Oxygen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Low Dissolved Oxygen linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO for Dissolved Oxygen.
Water Body-specific Information	Data = 2 Years (1996 and 1999-2000), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Dissolved Oxygen Data = 44 samples were collected, and of those samples 18 were below the Objective (5.0 mg/L), showing that the WQO is not being attained.
Spatial representation	Samples were collected at one site in the middle of the Stockton Urban area.
Temporal representation	44 samples were collected over a 2 year period. Samples were taken Oct./Nov. 1996 and from Nov. 1999 -Feb. 2000.
Data type	Numerical data.
Use of standard method	Delta Keeper data.
Potential Source(s) of Pollutant	Urban Runoff/Storm Sewers. It is likely this problem is due to pollutants such as nutrients or pollution (low flow or channel morphology of the water body).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered.

Region 5: Calaveras River, Lower
Organic Enrichment-Low Dissolved Oxygen

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List for Low Dissolved Oxygen in the Lower Calaveras River between Stockton Diversion Channel and the San Joaquin River.

Region 5: Camanche Reservoir
Aluminum

Water Body	Camanche Reservoir
Stressor/Media/Beneficial Use	Aluminum/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Aluminum linked to Aquatic Life uses.
***Utility of measure for judging if* standards or uses are not attained**	WQO, USEPA NWRAQ criteria for aluminum.
Water Body-specific Information	Data = 7 Years, Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	There were 260 samples taken over seven years. Of those samples 18 exceeded the NWRAQ criterion. The NWRAQ was used to determine the narrative objective for toxicity. In 1995 data had unusually high TSS values based on the EBMUD data set. Three of 18 the exceedances were during storm events. Since storm events that resulted in the highest observed aluminum levels it is unlikely that the aluminum criteria will be exceeded. There exists a low confidence in 5.7% of the samples exceeding the objective.
Spatial representation	Data collected from 8 locations on Camanche Reservoir.
Temporal representation	Data were collected over 7 years (1993-2000).
Data type	Numerical data.
Use of standard method	EBMUD methods for sampling.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because an inadequate number of measurements exceed water quality standards .

Region 5: Camanche Reservoir
Zinc

Water Body	Camanche Reservoir
Stressor/Media/Beneficial Use	Zinc
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Camanche Reservoir was included in the 1998 303(d) list as part of the lower Mokelumne River listing for Zinc. RB wants to list the Camanche Reservoir separate from the Mokelumne River, as a listing for Zinc.
Data used to assess water quality	The entire lake was originally listed in 1992, Camanche Reservoir is listed for Zinc as part of the Mokelumne. RB feels that it should now be listed separate from the original Mokelumne River listing because, it is more appropriate to list reservoirs separate from their downstream drainages, from a watershed management strategy perspective. Rivers and reservoirs have different management strategies.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Resource Extraction/Abandoned Mines.
Alternative Enforceable Program	
RWQCB Recommendation	Change in listing to include reservoir on list separate from the river.
SWRCB Staff Recommendation	Change in listing to include reservoir on list separate from the river.

Region 5: Camanche Reservoir
Copper

Water Body	Camanche Reservoir
Stressor/Media/Beneficial Use	Copper
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Camanche Reservoir was included in the 1998 303(d) list as part of the lower Mokelumne River listing for Copper. RB wants to list the Camanche Reservoir separate from the Mokelumne River, as a listing for Copper.
Data used to assess water quality	The entire lake was originally listed in 1992, Camanche Reservoir is listed for Zinc as part of the Mokelumne. RB feels that it should now be listed separate from the original Mokelumne River listing because, it is more appropriate to list reservoirs separate from their downstream drainages, from a watershed management strategy perspective. Rivers and reservoirs have different management strategies.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Resource Extraction/Abandoned Mines.
Alternative Enforceable Program	
RWQCB Recommendation	Change in listing to include reservoir on list separate from the river.
SWRCB Staff Recommendation	Change in listing to include reservoir on list separate from the river.

Region 5: Camp Far West Reservoir
Mercury

Water Body	Camp Far West Reservoir
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to fish consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 12 years (1987 to 1999), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Data = 36 sampled fish from Trophic level 4. The fish had an average level of mercury of 0.69 ppm, more than double the concentration level criteria of the USEPA which is 0.3 ppm. OEHHA is in the process of developing a state advisory for Placer, Yuba and Nevada Counties, based on this USGS data.
Spatial representation	Sampled 4 targeted areas of the Reservoir.
Temporal representation	Samples were collected during twelve years, 1987 to 1999.
Data type	Numerical data.
Use of standard method	USGS and TSMP sampling methods.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the waterbody. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the

data were considered.

List all of Camp Far West Reservoir (2,002 acres) for Mercury.

Region 5: Clover Creek
Fecal Coliform

Water Body	Clover Creek
Stressor/Media/Beneficial Use	Fecal Coliform/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Fecal coliform linked to (REC-1) WQO for Bacteria.
Utility of measure for judging if standards or uses are not attained	WQO for bacteria, REC-1 objective.
Water Body-specific Information	Data = 5 months (June - October 1999), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Data was collected and the average levels were above 300 MPN/100ml, exceeding the WQO Geometric Mean levels of 200 MPN/100ml for at least 5 months. The WQO has been exceeded. Many of the samples were above the 30 day basin plan criteria of 400 MPN/100ml.
Spatial representation	Data were collected from the lower reach of Clover Creek (10.5 miles).
Temporal representation	5 Months from 6/1999- 10/1999.
Data type	Numerical data.
Use of standard method	Hannaford and North State Institute for Sustainable Communities, sampling methods.
Potential Source(s) of Pollutant	Human and/or Livestock Sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is

high. The data have shown that using the WQO criteria there exist exceedances of the WQO for bacteria for REC-1, list the lower 10.5 miles of Clover creek.

Region 5: Colusa Basin Drain
Azinphos-methyl

Water Body	Colusa Basin Drain
Stressor/Media/Beneficial Use	Azinphos-methyl/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Azinphos-methyl linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	WQO, USEPA criteria for azinphos-methyl.
Water Body-specific Information	Data = 3 years (1996-1998), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 21 samples were analyzed, out of those 6 (28%) of the samples were equal or above the USEPA criteria used to determine the narrative objectives attainment. The majority of the data (15 of 21 sample dates) occurred in 1997. The samples dates in 1997 likely spanned a more representative period than the 1996 (two sample dates) and 1998 (4 sample dates) periods and indicated a significant frequency of exceedance (40% in 1997, 28% over all three years).
Spatial representation	Data were collected at Road 99E, along the Colusa Basin Drain.
Temporal representation	Data were collected over 3 years (1996-1998), at least once a month.
Data type	Numerical data.
Use of standard method	CDPR method.
Potential Source(s) of Pollutant	Agriculture (Used to control insects on almonds, walnuts and other crops).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used.

Region 5: Colusa Basin Drain
Azinphos-methyl

8. Other water body- or site-specific information including the age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 49 miles.

Region 5: Colusa Basin Drain
Diazinon

Water Body	Colusa Basin Drain
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life.
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	WQO, CDFG criteria for Diazinon.
Water Body-specific Information	Data = 5 years (1994-2000), Data measured at the site, Species or indicator present at site, Environmental conditions considered at the site.
Data used to assess water quality	Data = 56 samples were analyzed for Diazinon, out of those 14 (25%) exceeded the chronic CDFG criterion, and 10 (18%) samples exceeded the CDFG Acute Criterion for Diazinon. The CDFG criterion was used to determine whether the WQO was being attained.
Spatial representation	Data were collected at Road 99E, along the Colusa Basin Drain.
Temporal representation	Data were collected for 5 years from 1994-2000.
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Agriculture.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is high. List the entire Colusa Basin drain. The levels of Diazinon are in exceedance of the WQO. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 49 miles.

Region 5: Colusa Basin Drain
Molinate

Water Body	Colusa Basin Drain
Stressor/Media/Beneficial Use	Molinate/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Molinate linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	CDFG criteria for Molinate levels, WQO.
Water Body-specific Information	Data = 6 years (1994-2000), Data measured at the site, Species or indicator present at site, Environmental conditions considered at the site.
Data used to assess water quality	Data = 133 samples, of those 42 (32%) samples were equal or above the CDFG criterion used to determine if the WQO was being exceeded.
Spatial representation	Data were collected in the Colusa Basin Drain.
Temporal representation	Data were collected over 6 years (1994-2000).
Data type	Numerical data.
Use of standard method	CDPR methods.
Potential Source(s) of Pollutant	Agriculture (Molinate Aerial Spray used on rice fields).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is

high. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 49 miles.

Region 5: Deer Creek (Yuba River)
pH

Water Body	Deer Creek (Yuba River)
Stressor/Media/Beneficial Use	pH/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures. Friends of Deer Creek QAPP provided adequate assurance that data were of acceptable quality.
Linkage between measurement endpoint and benefical use or standard	pH linked to Aquatic Life beneficial use.
Utility of measure for judging if standards or uses are not attained	Basin Plan Water Quality Objective. Numeric Objective for pH.
Water Body-specific Information	Data =1 year and 5 months. Data measured at site, indicator present at Site, environmental conditions considered at site.
Data used to assess water quality	pH measured monthly (up to 18 measurements) between December 2000 and May 2002. A diurnal study was performed at two sites: a control site upstream of Lake Wildwood and an experimental site downstream of Lake Wildwood. pH and other parameters were measured at 6-hour intervals during four days within a one-week period. Temperatures at the control site ranged from 9.20°C to 14.55°C and pH during the same period ranged from 6.53 to 7.13. The pH measurements at the control site generally increased or decreased as the temperature increased or decreased. Temperatures at the experimental site were generally higher than at the control site and ranged from 20.22°C to 29.88°C. pH measurements at the experimental site during the same period were generally higher and ranged more widely from 7.2 to 9.9. The pH measurements at the experimental site fluctuated more widely to temperature diurnal variations than at the control site. pH levels exceeded the Basin Plan numeric criteria (6.5 to 8.5) and were greater than 8.5 at several sites downstream from the Lake Wildwood Dam between May and October 2001.
Spatial representation	The data were collected at six sites upstream from Lake Wildwood and at four sites downstream of Lake Wildwood.
Temporal representation	Data were collected monthly between December 2000 and May 2002.
Data type	Numerical data.
Use of standard method	Standard methods are presented in the QAPP.
Potential Source(s) of Pollutant	Algal respiration and probably nutrients downstream form Lake Wildwood.
Alternative Enforceable Program	N/A
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable

water quality standards are exceeded and a pollutant contributes to or causes the problem.

This conclusion is based on the staff findings that:
1. The data exhibited sufficient spatial and temporal coverage.
2. Beneficial uses have been established.
3. Water quality standard used is applicable.
4. Data are numerical.
5. Standard methods were used.
6. Other water body- or site-specific information including the effects of season and age of the data were considered.

Most of the water quality measurements exceeded the water quality standard. Data has shown that the pH values exceeded the WQO for pH. The staff confidence that standards were exceeded is high. List for high pH for approximately four miles of Deer Creek, from below the Lake Wildwood Dam to the confluence with the Yuba River.

Region 5: Del Puerto Creek
Diazinon

Water Body	Del Puerto Creek
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Narrative WQO for Toxicity and pesticides, CDFG criterion for Diazinon.
Water Body-specific Information	Data = 3 Years (1991-1993), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 30 Samples, of those 10 samples (33%) exceeded the chronic criteria, and 9 of those samples (30%) exceeded the acute criteria of the CDFG. These criteria were used to show exceedance of the WQO.
Spatial representation	Data were collected for the lower section (5 miles) of the creek.
Temporal representation	Data were collected for 3 years from 1991-1993.
Data type	Numerical data.
Use of standard method	CDPR methods.
Potential Source(s) of Pollutant	Agriculture.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Del Puerto Creek
Diazinon

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List the lower 5 miles between I-5 and the San Joaquin River.

Region 5: Del Puerto Creek
Chlorpyrifos

Water Body	Del Puerto Creek
Stressor/Media/Beneficial Use	Chlorpyrifos/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Chlorpyrifos linked to Aquatic life.
Utility of measure for judging if standards or uses are not attained	CDFG criterion Chlorpyrifos levels, WQO.
Water Body-specific Information	Data = 3 Years (1991-1993), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 30 Samples, of those 10 samples (33%) exceeded the chronic criterion, and 10 of those samples (33%) exceeded the acute criterion of CDFG. These criterion were used to show exceedance of the WQO.
Spatial representation	Data were collected for the lower section (5 miles) of the creek.
Temporal representation	Data were collected for 3 years from 1991-1993.
Data type	Numerical data.
Use of standard method	CDPR methods.
Potential Source(s) of Pollutant	Agriculture (application on orchards and field crops).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Del Puerto Creek
Chlorpyrifos

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List for Chlorpyrifos, the lower 5 miles between I-5 and the San Joaquin River.

Region 5: Delta Waterways (Eastern Portion)
Chlorpyrifos, DDT, Diazinon, Group A pesticides, Mercury, Unknown Toxi +

Water Body	Delta Waterways (Eastern Portion)
Stressor/Media/Beneficial Use	Chlorpyrifos, DDT, Diazinon, Group A pesticides, Mercury, Unknown Toxicity.
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 22,904 acres. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total size of 480,000 acres to 48,000 acres. The total size of the Delta is 48,000 acres, a misprint occurred in the final 1998 303(d) list. The size should be changed from 480,000 acres to 48,000 acres for Chlorpyrifos, DDT, Diazinon, Group A pesticides, Mercury, and Unknown Toxicity. Electrical Conductivity is impaired for 16,000 acres.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 22,904 acres. A distinct "water only" eastern portion of the Delta has been created and the name has been revised to reflect this change.

Region 5: Delta Waterways (Stockton Ship Channel)
Low Dissolved Oxygen, Organic Enrichment

Water Body	Delta Waterways (Stockton Ship Channel)
Stressor/Media/Beneficial Use	Low Dissolved Oxygen, Organic Enrichment/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 952 acres. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	It is likely this problem is due to pollutants such as nutrients or pollution (low flow or channel morphology of the water body).
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total size of 480,000 acres to 48,000 acres. Extent of affected area to be changed from a size affected of 75 acres to 1,461 acres. The total size of the Delta is 48,000 acres, a misprint occurred in the final 1998 303(d) list. The size should be changed to the true size. The area of the Delta affected by Low Dissolved Oxygen is an area of 1,461 acres. Therefore the total size of the Delta should be changed for Low D.O listing.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 952 acres. A distinct "water only" Stockton Ship Channel portion of the Delta has been created and the name has been revised to reflect this change.

Region 5: Delta Waterways (Western Portion)
Chlorpyrifos, DDT, Diazinon, Group A pesticides, Mercury, and EC , Unk +

Water Body	Delta Waterways (Western Portion)
Stressor/Media/Beneficial Use	Chlorpyrifos, DDT, Diazinon, Group A pesticides, Mercury, and EC, Unknown Toxicity.
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is for Electrical Conductivity is 22,904 acres. The extent impacted for the other pollutants was agreed to be 22,904 Acres. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total size of 480,000 acres to 48,000 acres. The total size of the Delta is 48,000 acres, a misprint occurred in the final 1998 303(d) list. The size should be changed from 480,000 acres to 48,000 acres for Chlorpyrifos, DDT, Diazinon, Group A pesticides, Mercury, and Unknown Toxicity. Electrical Conductivity is impaired for 16,000 acres.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted for Electrical Conductivity is 22,904 acres. The extent impacted for the other pollutants was agreed to be 22,904 Acres. A distinct " water only" western portion of the Delta has been created and the name has been revised to reflect this change.

Region 5: Delta-Mendota Canal (DMC)
Selenium

Water Body	Delta-Mendota Canal (DMC)
Stressor/Media/Beneficial Use	Selenium/Water/Aquatic life
Data quality assessment. Extent to which data quality requirements met.	Limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Selenium linked to WARM (warm fresh water habitat) beneficial use.
Utility of measure for judging if standards or uses are not attained	Selenium California Toxics Rule criterion of 5 ppb as a four-day average applies to waters of the U.S. with aquatic life beneficial uses.
Water Body-specific Information	Four years of data from two sites.
Data used to assess water quality	92 data points from sites in the DMC upstream and downstream of agricultural tile drainage sumps. 19 samples were above the criterion.
Spatial representation	Data collected upstream of tile drainage sumps represents DMC from O'Neil Forebay to mile post 100.85. Downstream site represents reach to Mendota Pool.
Temporal representation	Four years of data reviewed.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Ground water inflow and tile drainage discharge.
Alternative Enforceable Program	N/A
RWQCB Recommendation	List.
SWRCB Staff Recommendation	On February 4, 2003 the SWRCB removed the Delta Mendota Canal from the 303(d) List and placed it onto the Monitoring List in response to comments about the recent acheivement of the water quality standard.

Region 5: Don Pedro Lake
Mercury

Water Body	Don Pedro Lake
Stressor/Media/Beneficial Use	Mercury/Water/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 6 Years (1981-1987), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 32 Trophic Level 4 fish, the fish sampled had an average 0.54ppm concentration of mercury, clearly exceeding the USEPA criteria of 0.3 ppm. The USEPA criterion was used to determine that the narrative WQO was being exceeded.
Spatial representation	Data were collected from the northern most arms of Don Pedro Lake, (12,960 acres).
Temporal representation	Data were collected from 1981-1987 (6 years).
Data type	Numerical data.
Use of standard method	TSMP methods.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Don Pedro Lake
Mercury

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 5: Dunn Creek
Mercury and Metals

Water Body	Dunn Creek
Stressor/Media/Beneficial Use	Mercury and Metals/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 0.7 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Resource Extraction/Abandoned Mines.
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total length of 9 miles to 3 miles. Extent of affected area to be changed from 9 miles to 1 mile. The impaired extent is from below Mt. Diablo Mine to Marsh Creek. Stotton et al. (1996a) and Lovenitti et al. (1989) indicate that the total length of the creek is 3 miles.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 0.7 miles. The extent is below Mt. Diablo Mine to Marsh Creek.

Region 5: Englebright Lake
Mercury

Water Body	Englebright Lake
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO for Toxicity for Mercury, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 4 Years (1996-1999), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	USGS and UC Davis Data = 21 trophic level 4 fish and 9 trophic level 3 fish. The level 4 and level 3 fish had an average mercury concentration of 0.55 ppm and 0.51ppm respectively, exceeding the 0.3 ppm USEPA criteria. OEHHA is in the process of developing a state advisory for Nevada County based on this Data.
Spatial representation	Data was collected for fish tissue at three locations on the lake.
Temporal representation	Data was collected between 1994 and 2000.
Data type	Numerical data.
Use of standard method	USGS and UC Davis methods.
Potential Source(s) of Pollutant	Resource Extraction (all from abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Englebright Lake Mercury

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 5: Fall River
Sedimentation and Siltation

Water Body	Fall River
Stressor/Media/Beneficial Use	Sedimentation and Siltation/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 9.5 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in size affected. Change listing from the impaired length of 25 miles to 9.5 miles. Evidence suggests that the upper Fall River is impaired relative to lower Fall River. CRWQCB-CVR 1982, CDWR 1998, NSR and T. Holmes 1997, Tetra Tech 1998, USDA 1983.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 9.5 miles.

Region 5: Feather River, Lower
Diazinon, Group A pesticides, mercury, unknown toxicity

Water Body	Feather River, Lower
Stressor/Media/Beneficial Use	Diazinon, Group A pesticides, mercury, unknown toxicity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 42 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is from Lake Orville Dam to the confluence with the Sacramento River. The mapped impaired extent was changed from 86 miles to 42 miles.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 42 miles.

Region 5: Five Mile Slough
Pathogens

Water Body	Five Mile Slough
Stressor/Media/Beneficial Use	Pathogens/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pathogens linked to REC-1 Beneficial uses.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO.
Water Body-specific Information	Data = 10 Months (2000-2001), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 29 samples were collected and the average levels were above the USEPA bacterial criteria, exceeding the WQO. Some of the Geometric Mean levels also exceeded the single day USEPA criterion.
Spatial representation	Data were collected at two locations, one upstream and one downstream. A total of 29 samples were collected.
Temporal representation	The samples were collected during 10 months, 2000-2001. The upstream location was sampled once each month in April, August 2000 and February 2001.
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Recreation.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Five Mile Slough
Pathogens

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. The bacteria data have shown exceedance for the USEPA criterion and the WQO has been exceeded. List the Five Mile Slough from Alexandria Place to the confluence with Fourteen Mile Slough. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 1.6 miles.

Region 5: Five Mile Slough
Organic Enrichment-Low Dissolved Oxygen

Water Body	Five Mile Slough
Stressor/Media/Beneficial Use	Organic Enrichment-Low Dissolved Oxygen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Dissolved Oxygen linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO for Dissolved Oxygen.
Water Body-specific Information	Data = 2 Years (1999-2000 and 1996), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 41 samples of Dissolved Oxygen values, with 24 of those samples falling below the WQO of 5 mg/L .
Spatial representation	Data were collected in the Five Mile Slough.
Temporal representation	The Data were collected over 2 years, from 11/99-2/00 and also from 10/96- 11/96.
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Storm Sewers. It is likely this problem is due to pollutants such as nutrients or pollution (low flow or channel morphology of the water body).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List

for dissolved oxygen in Five Mile Slough from Alexandria Place to the confluence with Fourteen Mile Slough. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 1.6 miles.

Region 5: French Ravine
Bacteria

Water Body	French Ravine
Stressor/Media/Beneficial Use	Bacteria
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 4 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total length of 1 mile to 4 miles. French Revine has a length of 4 miles from it's headwaters to it's confluence with Wolf Creek. Horizons Technology, Inc. 1997.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 4 miles.

Region 5: Harding Drain
Ammonia, chlorpyrifos, diazinon, unknown toxicity

Water Body	Harding Drain
Stressor/Media/Beneficial Use	Ammonia, chlorpyrifos, diazinon, unknown toxicity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Spelled out the abbreviated words in the water body name to read Harding Drain (Turlock Irrigation District Lateral #5). Size change: The mapped impaired extent was changed from 16 miles to 8.3 miles.
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 8.3 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 8.3 miles.

Region 5: Horse Creek
All metals (Cadmium, Copper, Lead, Zinc)

Water Body	Horse Creek
Stressor/Media/Beneficial Use	All metals (Cadmium, Copper, Lead, Zinc)
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 0.52 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in size affected. Change listing from the impaired length of 2 miles to 1 mile. Water Quality data indicate that metals affect Horse Creek downstream from rising star mine, which is located 1 mile downstream of the headwater. Montoya and Pan (1992) indicate that Horse creek is 2 miles. The listing should start at the mine which is 1 mile downstream. Total size of listing for metals should be 1 mile, not 2.
SWRCB Staff Recommendation	Change in size affected. RWQCB staff worked with SWRCB staff and this area was remapped. The extent is from Rising Star Mine to Shasta Lake. It was agreed that the new extent impacted is 0.52 miles.

Region 5: Humbug Creek
Sedimentation and Siltation, Mercury, Copper, and Zinc.

Water Body	Humbug Creek
Stressor/Media/Beneficial Use	Sedimentation and Siltation, Mercury, Copper, and Zinc.
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 3 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Resource Extraction/Abandoned mines.
Alternative Enforceable Program	
RWQCB Recommendation	Change in size affected. Change listing extent of impairment from 9 miles to 3 miles. Montoya and Pan (1992) indicate that Humbug creek is 9 miles. The listing should start at the Malakoff Diggins mine which is 3 miles upstream of the confluence with the Yuba River. Total size of listing for metals should be in Humbug creek downstream of Malakoff Diggins mine 3 miles, not 9.
SWRCB Staff Recommendation	Change in size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 3 miles.

Region 5: Ingram/Hospital Creek
Diazinon

Water Body	Ingram/Hospital Creek
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	WQO, CDFG criteria for Diazinon.
Water Body-specific Information	Data = 3 years (1991-1993), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 32 samples, out of those 16 samples exceeded the chronic criterion and 11 samples exceeded the acute criteria. The criterion used are the CDFG criterion used to determine if the WQO has been exceeded.
Spatial representation	The samples were collected from the Ingram/Hospital Creek.
Temporal representation	The samples were collected over 3 years, with 32 samples total.
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Agriculture.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is

high. The data have shown exceedance for the CDFG criterion and the WQO has been exceeded. List the Ingram/Hospital Creek from their confluence east of Diary Rd. to the San Joaquin River.

Region 5: Ingram/Hospital Creek
Chlorpyrifos

Water Body	Ingram/Hospital Creek
Stressor/Media/Beneficial Use	Chlorpyrifos/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Chlorpyrifos linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	CDFG criteria Chlorpyrifos levels, WQO.
Water Body-specific Information	Data = 3 years (1991-93), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 26 samples, out of those 7 samples exceeded the chronic criteria and 7 samples exceeded the acute criterion. The criteria used are the CDFG criterion used to determine if the WQO has been exceeded.
Spatial representation	The samples were collected from the Ingram/Hospital Creek.
Temporal representation	The samples were collected from December to June, for three years.
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Agriculture.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is

high. The data have shown exceedance for the CDFG criterion and hence the WQO has been exceeded. List the Ingram/Hospital Creek from their confluence east of Diary Rd. to the San Joaquin River.

Region 5: Jack Slough
Diazinon

Water Body	Jack Slough
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	WQO, CDFG criteria for Diazinon.
Water Body-specific Information	Data = 2 years (1994 and 2000), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 19 samples, out of those 19 samples exceeded the chronic criterion and the acute criterion, 19 total of 19 (100%). The criterion used are the CDFG criterion used to determine if the WQO has been exceeded. Some of the samples were 16 times the chronic levels of CDFG water quality criterion.
Spatial representation	The samples were collected from the slough during rain events.
Temporal representation	The samples were collected over 2 years (1994 and 2000), during January and February.
Data type	Numerical data.
Use of standard method	Regional board and USGS study methods.
Potential Source(s) of Pollutant	Agriculture (application on orchards and field crops).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the effects of

season and age of the data were considered.

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 5: James Creek
Nickel and Mercury

Water Body	James Creek
Stressor/Media/Beneficial Use	Nickel and Mercury
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 8.5 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Resource Extraction/Abandoned mines.
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total length of 6 miles to 9 miles. Extent of affected area to be changed from 6 miles to 8.5 mile. Buer et al. (1979), Montoya and Pan (1992), USGS (1980, 1987a, 1987b, 1997), indicate that the total length of James Creek is 9 miles. The inflow mine drainage starts 0.5 miles downstream, hence 8.5 miles affected size.
SWRCB Staff Recommendation	Change in total size and size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 8.5 miles. Total length is 9 miles.

Region 5: Keswick Reservoir
Cadmium, copper, zinc

Water Body	Keswick Reservoir
Stressor/Media/Beneficial Use	Cadmium, copper, zinc
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 135 acres. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is the portion downstream from Spring Creek. Size change: The mapped impaired extent changed from 555 acres to 135 acres.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 135 acres.

Region 5: Kings River, Lower
Electrical conductivity, molybdenum, toxaphene

Water Body	Kings River, Lower
Stressor/Media/Beneficial Use	Electrical conductivity, molybdenum, toxaphene
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 36 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is from Island Weir to Stinson and Empire Weirs. Size change: The mapped impaired extent changed from 52 to 36 miles
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 36 miles.

Region 5: Lake Combie
Mercury

Water Body	Lake Combie
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 1 Year (1999), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	USGS Data = 9 trophic level 4 fish. They had an average mercury concentration of 0.91ppm, exceeding the 0.3 ppm USEPA criteria. OEHHA is in the process of developing a state advisory for Nevada County based on this data.
Spatial representation	Data was collected from Lake Combie (360 acres).
Temporal representation	The data was collected during one year, 1999.
Data type	Numerical data.
Use of standard method	USGS methods.
Potential Source(s) of Pollutant	Resource Extraction (Abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Lake Combie
Mercury

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 5: Little Cow Creek
Cadmium, copper, zinc

Water Body	Little Cow Creek
Stressor/Media/Beneficial Use	Cadmium, copper, zinc
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 1.1 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is downstream from the Afterthought Mine. Size change: The mapped impaired extent changed from 2.7 miles to 1.1 miles.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 1.1 miles.

Region 5: Little Deer Creek
Mercury

Water Body	Little Deer Creek
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO for Toxicity for Mercury, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 1 Year (1999), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	USGS and UC Davis Data = 6 trophic level 3 fish. They had an average mercury concentration of 0.32 ppm, exceeding the 0.3 ppm USEPA criterion. OEHHA is in the process of developing a state advisory for Nevada County based on this data.
Spatial representation	Samples collected in Little Deer Creek at Pioneer Park.
Temporal representation	Samples were collected on October 6th, 1999.
Data type	Numerical data.
Use of standard method	USGS methods.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Little Deer Creek
Mercury

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 5: Lone Tree Creek
Ammonia, BOD, Electrical Conductivity

Water Body	Lone Tree Creek
Stressor/Media/Beneficial Use	Ammonia, BOD, Electrical Conductivity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 15 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The mapped impaired extent changed from 25 miles to 15 miles.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 15 miles.

Region 5: Marsh Creek
Metals

Water Body	Marsh Creek
Stressor/Media/Beneficial Use	Metals
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is10 mile section and a second 11 mile section. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total length of 24 miles to 8.5 miles. Extent of affected area to be changed from all of Marsh Creek to Marsh Creek from Dunn Creek to Marsh Creek Reservoir. The affected length of Marsh Creek for this listing is only the 8.5 miles from Dunn Creek to the Marsh Creek Reservoir.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. RWQCB staff worked with SWRCB staff and this area was remapped. This area was split into a ten mile section from Marsh Creek Reservoir to the San Joaquin River for mercury and metals and a second 11 mile section from Dunn Creek to Marsh Creek Reservoir for metals only.

Region 5: Marsh Creek
Mercury

Water Body	Marsh Creek
Stressor/Media/Beneficial Use	Mercury
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is10 mile section and a second 11 mile section. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total length of 24 miles to 16.5 miles. Extent of affected area to be changed from all of Marsh Creek, to Marsh Creek from Dunn Creek to Marsh Creek Reservoir. The affected length of Marsh Creek for this listing is only the 16.5 miles from Dunn Creek to the Marsh Creek Reservoir.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. RWQCB staff worked with SWRCB staff and this area was remapped. This area was split into a ten mile section from Marsh Creek Reservoir to the San Joaquin River for mercury and metals and a second 11 mile section from Dunn Creek to Marsh Creek Reservoir for metals only. The new extent impacted for Marsh Creek Reservoir for mercury is 728 acres.

Region 5: Mendota Pool
Selenium

Water Body	Mendota Pool
Stressor/Media/Beneficial Use	Selenium/Water/WILD
Data quality assessment. Extent to which data quality requirements met.	Limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Selenium linked to WILD (wildlife) beneficial use.
Utility of measure for judging if standards or uses are not attained	Selenium objective (2 ppb monthly mean) applicable to nearby wetlands used to evaluate impact to wetland habitat associated with Mendota Pool.
Water Body-specific Information	The Mendota Pool includes the San Joaquin River 3 miles upstream of the Mendota Dam and Fresno Slough 8 miles upstream of the Mendota Dam.
Data used to assess water quality	Data from 3 years from the Mendota Pool and 2 years just downstream of the Mendota Pool. Seven of 26 samples from the Mendota Pool and 4 of 20 just downstream of the Pool were greater than 2 ppb.
Spatial representation	Data analyzed is from one site within the Mendota Pool and one site just downstream of the Mendota Pool.
Temporal representation	Samples were collected over a several year period.
Data type	Numeric water column concentration data.
Use of standard method	RWQCB sample collection and analytical protocols for selenium were used.
Potential Source(s) of Pollutant	Ground water pumping into the pool and the source water (Delta-Mendota Canal).
Alternative Enforceable Program	N/A
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered.

Region 5: Mendota Pool
Selenium

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 5: Merced River, Lower
Chlorpyrifos, diazinon, Group A pesticides

Water Body	Merced River, Lower
Stressor/Media/Beneficial Use	Chlorpyrifos, diazinon, Group A pesticides
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 50 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is from McSwain Reservoir to the San Joaquin River. Size change: The mapped impaired extent was changed from 51 miles to 50 miles.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 50 miles.

Region 5: Middle River
Low Dissolved Oxygen

Water Body	Middle River
Stressor/Media/Beneficial Use	Low Dissolved Oxygen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Data comes from real-time sensors operated by the California Department of Water Resources as part of the Interagency Ecological Program.
Linkage between measurement endpoint and benefical use or standard	Dissolved oxygen linked to various aquatic life uses (WARM/COLD/MIGR/SPWN).
Utility of measure for judging if standards or uses are not attained	RWQCB dissolved oxygen water quality objective.
Water Body-specific Information	10 months of data from one site. (January 2001-October 2001).
Data used to assess water quality	22,000 data points. DO analyzed about every 15 minutes. Range 2.7 mg/L to saturation. 4.5 % of samples below 5.0 mg/L. More frequent violations in June & July.
Spatial representation	Data collected from the approximate mid-point of the identified impaired reach. No major inflows in the reach identified.
Temporal representation	One year of 15-minute interval data available for the critical time period (June/July).
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Unknown. It is likely this problem is due to pollutants such as nutrients or pollution (low flow or channel morphology of the water body).
Alternative Enforceable Program	N/A
RWQCB Recommendation	List Middle River from the San Joaquin River to the Victoria Canal.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season and age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is high. List Middle River from the San Joaquin River to the Victoria Canal.

Region 5: Mokelume River, Lower Aluminum

Water Body	Mokelume River, Lower
Stressor/Media/Beneficial Use	Aluminum/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Aluminum linked to WQO for Toxicity and chemical constituents.
Utility of measure for judging if standards or uses are not attained	WQO , USEPA NWRAQ and MCL criteria for aluminum.
Water Body-specific Information	The older U.S. Fish and Wildlife Service Data = 257 samples collected between 1988 and 1992. 35 samples exceeded the NRWAQ Maximum Criterion, and 24 exceeded the MCL criterion. Regional Board staff evaluated this data in lieu of the older U.S. Fish and Wildlife Service data that was collected prior to the remediation at Penn Mine. Two of the 76 samples were above USEPA national acute criteria for the protection of aquatic life (750 ug/L). The two samples were also above the MCL (1,000 ug/L). The two samples were collected in January 1997 and February 1997 respectively. No samples taken from 1994 to that time or after have been above the aquatic life or MCL criteria. The average concentration of all samples taken since 1994 is 250 ug/L (see EBMUD comment letter).
Data used to assess water quality	The issue addressed is whether the two samples collected were truly outliers (unlikely to occur) or whether the two samples were representative of conditions that may occur again. The significant rainfall that fell during December and January likely triggered the high aluminum levels observed in January and February of 1997. The high and frequent rainfall likely resulted in higher than normal amounts of erosion. In addition, the retention time for water in upstream reservoirs would have been decreased, since higher than normal releases would have been required. The decreased retention time would give less time for suspended sediment, which would be the source of most of the aluminum, to settle. Precipitation data from Camp Pardee, which is located upstream of the Camanche reservoir and the lower Mokelumne River were reviewed. The highest rainfall recorded at Camp Pardee in the last 50 years occurred on January 2, 1997. The frequency of rain-days in December and January 1997 was higher than average (it rained over 51% of the days versus a historic average of 32%) (UC IPM, 2002). Flow records for the Mokelumne River below Camanche Dam were reviewed. The U.S. Geological Survey's historic monthly mean daily flow records (USGS, 2002) indicate that the monthly mean daily flow in January and February 1997 were the highest and third highest, respectively, on record. (97 years). Since the storm events that resulted in the high observed aluminum levels are the most severe on record, it is unlikely that the aluminum criteria will be exceeded. The data set consists of 76 samples from the Camanche

	reservoir, just downstream of the Camanche reservoir since 1994.
Spatial representation	The samples were collected at three locations along the river.
Temporal representation	The samples were collected over 4 years (1988-1992).
Data type	Numerical data.
Use of standard method	EBMUD methods for sampling.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	Exclude from Listing.
SWRCB Staff Recommendation	Exclude from listing. In the review of the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because applicable water quality standards are not exceeded.

Region 5: Mokelumne River, Lower
Zinc

Water Body	Mokelumne River, Lower
Stressor/Media/Beneficial Use	Zinc
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Mokelumne River was included in the 1998 303(d) list as all of the lower Mokelumne River listing for Zinc. RB wants to list the Mokelumne from the Camanche Dam to the Delta, as a listing for Zinc.
Data used to assess water quality	The original listing was in 1992, all of lower Mokelumne River was listed for Zinc as part of the Mokelumne. RB feels that it should now be listed as Lower Mokelumne River listing from Camanche Dam to Delta because, it is more appropriate to list reservoirs separate from their downstream drainages, from a watershed management strategy perspective. Rivers and reservoirs have different management strategies.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Resource Extraction/Abandoned mines.
Alternative Enforceable Program	
RWQCB Recommendation	Change in areal extent.
SWRCB Staff Recommendation	Change in areal extent.

Region 5: Mokelumne River, Lower Copper

Water Body	Mokelumne River, Lower
Stressor/Media/Beneficial Use	Copper
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
***Utility of measure for judging if* standards or uses are not attained**	N/A
Water Body-specific Information	Mokelumne River was included in the 1998 303(d) list as all of the lower Mokelumne River listing for Copper. RB wants to list the Mokelumne from the Camanche Dam to the Delta, as a listing for Copper.
Data used to assess water quality	The original listing was in 1992, all of lower Mokelumne River was listed for Copper as part of the Mokelumne. RB feels that it should now be listed as Lower Mokelumne River listing from Camanche Dam to Delta because, it is more appropriate to list reservoirs separate from their downstream drainages, from a watershed management strategy perspective. Rivers and reservoirs have different management strategies.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Resource Extraction/Abandoned mines.
Alternative Enforceable Program	
RWQCB Recommendation	Change in areal extent.
SWRCB Staff Recommendation	Change in areal extent.

Region 5: Mormon Slough
Organic Enrichment-Low Dissolved Oxygen

Water Body	Mormon Slough
Stressor/Media/Beneficial Use	Organic Enrichment-Low Dissolved Oxygen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Low Dissolved Oxygen linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO for Dissolved Oxygen.
Water Body-specific Information	Data = 2 Years (1999- 2000), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Data = 30 samples with 27 of those samples falling below the WQO of 5 mg/L.
Spatial representation	The data were collected from Mormon Slough.
Temporal representation	The data were collected over 2 years, from 11/99-2/00.
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Storm Sewers. It is likely this problem is due to pollutants such as nutrients or pollution (low flow or channel morphology of the water body).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. RWQCB staff worked with SWRCB staff and this area was remapped. It

was agreed to split Mormon Slough into a 0.93 mile section from Commerce Street to Stockton Deep Water Channel for organic enrichment/low dissolved oxygen and pathogens and a second 5.2 mile section from Stockton Diverting Canal to Commerce Street for pathogens only.

Region 5: Mormon Slough
Pathogens

Water Body	Mormon Slough
Stressor/Media/Beneficial Use	Pathogens/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pathogens linked to REC-1 beneficial uses.
Utility of measure for judging if standards or uses are not attained	CDHS and USEPA criteria.
Water Body-specific Information	Data = 10 Months (2000-2001), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data =31 samples with a calculated Geometric mean. The Geometric mean = 1,272 MPN per 100ml, exceeding the 126 per 100 ml USEPA criterion. The WQO has been exceeded.
Spatial representation	The data were collected from Mormon Slough at one sampling location.
Temporal representation	The data were sampled from one location over a ten month period of time (2000-2001).
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Recreation.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. All of the water quality measurements exceeded the water quality standard.

The staff confidence that standards were exceeded is high. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed to split Mormon Slough into a 0.93 mile section from Commerce Street to Stockton Deep Water Channel for organic enrichment/low dissolved oxygen and pathogens and a second 5.2 mile section from Stockton Diverting Canal to Commerce Street for pathogens only.

Region 5: Mosher Slough
Diazinon and Chlorpyrifos

Water Body	Mosher Slough
Stressor/Media/Beneficial Use	Diazinon and Chlorpyrifos
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is a 1.3 mile section and a second 3.5 mile section. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total size affected. Change listing from the total length of 3 miles to 5 miles. Mosher Slough is 5 miles in length. Horizons Technology, Inc. 1997, DeLorme 1998.
SWRCB Staff Recommendation	Change in Total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed to split Mosher Slough into a 1.3 mile section downstream of I-5 for chlorpyrifos, diazinon, organic enrichment/low dissolved oxygen impacts and a second 3.5 mile section upstream of I-5 for pathogen impacts.

Region 5: Mosher Slough
Pathogens

Water Body	Mosher Slough
Stressor/Media/Beneficial Use	Pathogens/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pathogens linked to REC-1 Beneficial uses.
Utility of measure for judging if standards or uses are not attained	CDHS and USEPA Bacteria criteria.
Water Body-specific Information	Data = 10 months (in 2000- 2001), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 31 samples, 29 of which exceeded the CDHS 30 day criterion for E. coli.
Spatial representation	The date were collected in Mosher Slough.
Temporal representation	The data were collected from May 2000 - February 2001.
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Storm Sewers.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality

standard. The staff confidence that standards were exceeded is high. The bacterial data show the WQO is exceeded (REC-1). RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed to split Mosher Slough into a 1.3 mile section downstream of I-5 for chlorpyrifos, diazinon, organic enrichment/low dissolved oxygen impacts and a second 3.5 mile section upstream of I-5 for pathogen impacts.

Region 5: Mosher Slough
Low Dissolved Oxygen

Water Body	Mosher Slough
Stressor/Media/Beneficial Use	Low Dissolved Oxygen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Low Dissolved Oxygen linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO for Dissolved Oxygen.
Water Body-specific Information	Data = 2 Years (1996 and 1999- 2000), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Data = 43 samples of Dissolved Oxygen values, with 19 (44%) of those samples falling below the WQO of 5 mg/L.
Spatial representation	The Dissolved Oxygen data were collected in Mosher Slough.
Temporal representation	The data were collected 11/99 and 2/00, and also in 11/96 and 10/96.
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Storm Drains. It is likely this problem is due to pollutants such as nutrients or pollution (low flow or channel morphology of the water body).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is high. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed to split Mosher Slough into a 1.3 mile section downstream of I-5 for chlorpyrifos, diazinon, organic enrichment/low dissolved oxygen impacts and a second 3.5 mile section upstream of I-5 for pathogen impacts.

Region 5: Natomas East Main Drainage Canal, Upper Diazinon, PCBs

Water Body	Natomas East Main Drainage Canal, Upper
Stressor/Media/Beneficial Use	Diazinon, PCBs
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is a 3.5 mile section and a second 12 mile section. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. Split Natomas East Main Drainage Canal into a 3.5 mile section downstream of the confluence with Arcade Creek for Diazinon and PCBs and a second 12 mile section upstream of the confluence with Arcade Creek for PCBs.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was split into 3.5 mile downstream and 12 mile upstream sections.

Region 5: Newman Wasteway
Chlorpyrifos

Water Body	Newman Wasteway
Stressor/Media/Beneficial Use	Chlorpyrifos/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Chlorpyrifos linked to Aquatic life.
Utility of measure for judging if standards or uses are not attained	CDFG criteria Chlorpyrifos levels, WQO.
Water Body-specific Information	Data = 3 years (1991-1993), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data =10 samples, out of those, 2 samples exceeded the chronic criteria and 2 samples exceeded the acute criteria. Data ranged to up to 15 times the criteria levels.
Spatial representation	The data were collected from the Newman Wasteway.
Temporal representation	Data were collected for 3 years from 1991-1993. Sampling between January and April.
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Agriculture.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is moderate. List the entire Wasteway. The data have shown exceedance of the WQO, using CDFG criteria.

Region 5: Newman Wasteway
Diazinon

Water Body	Newman Wasteway
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	WQO for Toxicity and Pesticides, CDFG criteria for Diazinon.
Water Body-specific Information	Data = 3 years (1991-1993), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data =10 samples, out of those, 4 samples exceeded the chronic criteria and 3 samples exceeded the acute criteria. Data ranged to up to 700 times the criteria levels.
Spatial representation	The data were collected from the Newman Wasteway.
Temporal representation	Data were collected for 3 years (1991-93).
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Agriculture (Used on nut and fruit orchards in winter months).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is

high. List the entire Wasteway. The data have shown exceedance of the WQO, using CDFG criteria.

Region 5: Oak Run Creek
Fecal Coliform

Water Body	Oak Run Creek
Stressor/Media/Beneficial Use	Fecal Coliform/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Fecal coliform linked to REC-1 WQO for Bacteria.
Utility of measure for judging if standards or uses are not attained	WQO for bacteria, REC-1.
Water Body-specific Information	Data = 5 months (June - October 1999), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Data was collected and the average levels were 400 MPN/100ml, exceeding the WQO Geometric Mean levels of 200 MPN/100ml for at least 5 months. The WQO has been exceeded. Many of the samples were above the 30 day basin plan criteria of 400 MPN/100ml.
Spatial representation	Data were collected from the middle reach of Oak Creek.
Temporal representation	Data were collected between June and October of 1999.
Data type	Numerical data.
Use of standard method	Hannaford and North State Institute for Sustainable Communities, sampling methods.
Potential Source(s) of Pollutant	Human and/or Livestock Sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered.

Region 5: Oak Run Creek
Fecal Coliform

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List the middle reach, 4.5 miles of Oak run creek. From 16.5 miles before the confluence to 12 miles from the confluence.

Region 5: Old River
Low Dissolved Oxygen

Water Body	Old River
Stressor/Media/Beneficial Use	Low Dissolved Oxygen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Data comes from real-time sensors operated by the California Department of Water Resources as part of the Interagency Ecological Program.
Linkage between measurement endpoint and benefical use or standard	Dissolved oxygen linked to various aquatic life uses (WARM/COLD/MIGR/SPWN).
Utility of measure for judging if standards or uses are not attained	RWQCB dissolved oxygen water quality objective.
Water Body-specific Information	10 months of data from three sites. (January 2001-October 2001).
Data used to assess water quality	55,000 data points. DO analyzed about every 15 minutes. Range 1.0 mg/L to saturation. 13 % of samples below 5.0 mg/L. More frequent violations during June-September.
Spatial representation	Data collected from the near to San Joaquin River to near the Delta-Mendota Canal and midway between.
Temporal representation	Two years of data available for the critical time period (June-September).
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Unknown. It is likely this problem is due to pollutants such as nutrients or pollution (low flow or channel morphology of the water body).
Alternative Enforceable Program	N/A
RWQCB Recommendation	List Old River from the San Joaquin River to the Delta-Mendota Canal.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered.

Region 5: Old River
Low Dissolved Oxygen

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List Old River from the San Joaquin River to the Delta-Mendota Canal.

Region 5: Orestimba Creek
Azinphos-methyl

Water Body	Orestimba Creek
Stressor/Media/Beneficial Use	Azinphos-methyl/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Azinphos-methyl linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	WQO, USEPA criteria for azinphos-methyl.
Water Body-specific Information	Data = 2 years (1992-1993), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 46 samples, 9 of which are above the USEPA criteria levels.
Spatial representation	Data were collected from the Creek at River Road.
Temporal representation	Data were collected from 1992-1993 from Feb. 1992- November 1993.
Data type	Numerical data.
Use of standard method	USEPA methods.
Potential Source(s) of Pollutant	Agriculture (Used to control insects on almonds, walnuts and other crops).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed to split Orestimba Creek into a 9.1 mile section

above Kilburn Road for azinphos-methyl, chlorpyrifos, DDE, and diazinon impacts and a second 2.7 mile section below Kilburn Road for azinphos-methyl, chlorpyrifos, DDE, diazinon, and unknown toxicity.

Region 5: Orestimba Creek
DDE

Water Body	Orestimba Creek
Stressor/Media/Beneficial Use	DDE/Tissue & Water/Fish Consumption and Drinking Water
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	DDE linked to Fish Consumption and Drinking Water for the protection of Human health.
Utility of measure for judging if standards or uses are not attained	USEPA - CTR for DDE, WQO.
Water Body-specific Information	Data = 1 year (1993), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data =40 samples, 15 of which exceed the USEPA criterion for DDE, exceeding the WQO.
Spatial representation	Data were collected by USGS from the Creek at River Road.
Temporal representation	Data were collected in 1993, primarily in Jan. and March, with additional sampling May- June, and minimal sampling during the rest of the year.
Data type	Numerical data.
Use of standard method	USGS methods.
Potential Source(s) of Pollutant	Historical Agriculture (prior to being banned in 1972).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is high. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed to split Orestimba Creek into a 9.1 mile section above Kilburn Road for azinphos-methyl, chlorpyrifos, DDE, and diazinon impacts and a second 2.7 mile section below Kilburn Road for azinphos-methyl, chlorpyrifos, DDE, diazinon, and unknown toxicity.

Region 5: Panoche Creek
Mercury, sedimentation/siltation, selenium

Water Body	Panoche Creek
Stressor/Media/Beneficial Use	Mercury, sedimentation/siltation, selenium
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 18 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is from Silver Creek to Belmont Avenue. Size change: The mapped impaired extent changed form 46 miles to 18 miles.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 18 miles.

Region 5: Putah Creek, Lower Mercury

Water Body	Putah Creek, Lower
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 2 Years (1997-1998), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	USDHHS-ATSDR and UC Davis Data = 67 trophic level 4 fish and 204 trophic level 3 fish. The level 4 fish had 39 fish in exceedance of the criteria levels above 0.3 ppm. Four of Seven Trophic Level 4 fish species had mean mercury concentrations exceeding the 0.3 ppm USEPA criteria.
Spatial representation	Data was collected from Lower Putah creek between Lake Berryesa and Putah Creek.
Temporal representation	Data was collected in 1997 and 1998.
Data type	Numerical data.
Use of standard method	USDHHS-ATSDR and UCD methods.
Potential Source(s) of Pollutant	Mining, unknown source.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Putah Creek, Lower Mercury

Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List the Lower Putah Creek from Lake Solano to Putah Creek for Mercury. The data show exceedance of the WQO using USEPA criteria for mercury.

Region 5: Putah Creek, Lower
Unknown Toxicity

Water Body	Putah Creek, Lower
Stressor/Media/Beneficial Use	Unknown Toxicity/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Toxicity linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Basin plan WQO for toxicity and comparing toxicity data results to Lab control results.
Water Body-specific Information	Data = 2 Years (1998-1999), Data measured at the site, Environmental conditions considered at site.
Data used to assess water quality	Toxicity Data was collected monthly and during rain events as well (at least 24 samples). 16 of the samples resulted in impaired growth, impaired reproduction and/or mortality. Further TIE test were run and the tests failed to pinpoint the cause while ammonia and pathogenicity were eliminated as causes because no toxicity was observed.
Spatial representation	Routine monthly samples and samples during rain events were collected. Water quality analysis, toxicity tests and TIEs were conducted on water samples collected in lower Putah Creek.
Temporal representation	The water samples were collected during 1998 and 1999, routine monthly sampling and sampling rain events.
Data type	Toxicity, TIE, and Numerical data for diuron, ammonia, and pathogens.
Use of standard method	Laboratory Methods conducting TIEs.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List for unknown toxicity, the toxicity is transient and because a pollutant or pollution that contributes or causes any standards exceedance has not been identified.

Region 5: Putah Creek, Upper
Unknown Toxicity

Water Body	Putah Creek, Upper
Stressor/Media/Beneficial Use	Unknown Toxicity/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Toxicity linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Basin plan WQO for toxicity and comparing toxicity data results to Lab control results.
Water Body-specific Information	Data = 2 Years (1998-1999), Data measured at the site, Environmental conditions considered at site.
Data used to assess water quality	On four of the sampling dates the water caused reproductive impairments to Ceriodaphnia They were analyzed using TIE. The results indicate an unknown toxicant that suggests that a non-polar, organic chemical caused the impairments. A July 1999 sample showed impairment to growth to Selenastrum, toxicity unknown. Overall 5 out of 12 (42%) of the samples resulted in toxicity. Follow-up toxicity tests showed not toxicity. Studies did show that non-polar chemicals when increased to three times the concentration ambient waters did cause toxicity. These higher concentrations do not represent ambient water concentrations and could not be linked tot he originally observed toxicity.
Spatial representation	Data were collected just upstream from Lake Berryesa on Upper Putah Creek.
Temporal representation	Data were collected from the Upper Putah Creek between 1998-1999 and were collected once a month.
Data type	Toxicity, TIE data, and Numerical Data for metals.
Use of standard method	Laboratory Methods conducting TIEs.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List for unknown toxicity because of the transient observed toxicity and because a pollutant that contributes or causes any standards exceedance has not been identified.

Region 5: Rollins Reservoir
Mercury

Water Body	Rollins Reservoir
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 15 Years (1984-1999), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	USGS and TSMP Data = 50 trophic level 4 fish. The level 4 fish had an average mercury concentration of 0.32 ppm exceeding the 0.3 ppm USEPA criteria used to determine attainment of the WQO. The WQO has been exceeded. OEHHA is in the process of developing a state advisory for Nevada County based on this Data.
Spatial representation	50 Fish were collected from Rollins Reservoir from the midsection, Bear River Arm and the Greenhorn Creek Arm.
Temporal representation	50 fish were collected from Rollins reservoir between 1984 and 1999, over 15 years.
Data type	Numerical data.
Use of standard method	USGS and TSMP sampling methods.
Potential Source(s) of Pollutant	Resource Extraction.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used.

Region 5: Rollins Reservoir
Mercury

8. Other water body- or site-specific information including the age of the data were considered.

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List all of Rollins Reservoir for Mercury. The data show exceedance of the WQO using USEPA criteria for mercury.

Region 5: Sacramento River (Red Bluff to Delta)
Diazinon, mercury, unknown toxicity

Water Body	Sacramento River (Red Bluff to Delta)
Stressor/Media/Beneficial Use	Diazinon, mercury, unknown toxicity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is an 82 mile section and a second 16 mile section. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. Split Sacramento River (Red Bluff to Delta) into an 82 mile section from Red Bluff to Knights Landing for unknown toxicity and a second 16 mile section from Knights Landing to the Delta for diazinon, mercury, and unknown toxicity.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was split into two sections, an 82 mile section and a second 16 mile section.

Region 5: Sacramento River (Shasta Dam to Red Bluff)
Zinc

Water Body	Sacramento River (Shasta Dam to Red Bluff)
Stressor/Media/Beneficial Use	Zinc/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	TMDL Completed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA.

Region 5: Sacramento River (Shasta Dam to Red Bluff)
Unknown toxicity

Water Body	Sacramento River (Shasta Dam to Red Bluff)
Stressor/Media/Beneficial Use	Unknown toxicity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is a 15 mile section and a 16 mile section. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. Split Sacramento River (Shasta Dam to Red Bluff) into a 16 mile section from Cottonwood Creek to Red Bluff for unknown toxicity and a second 15 mile section from Keswick Dam to Cottonwood for unknown toxicity and cadmium, copper, and zinc on the TMDL Completed List.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was split into two sections, a 15 mile section and a second 16 mile section.

Region 5: Sacramento River (Shasta Dam to Red Bluff) Copper

Water Body	Sacramento River (Shasta Dam to Red Bluff)
Stressor/Media/Beneficial Use	Copper/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	TMDL Completed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA.

Region 5: Sacramento River (Shasta Dam to Red Bluff)
Cadmium

Water Body	Sacramento River (Shasta Dam to Red Bluff)
Stressor/Media/Beneficial Use	Cadmium/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	TMDL Completed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA.

Region 5: Salt Slough
Boron, chlorpyrifos, diazinon, Electrical Conductivity, unknown toxici +

Water Body	Salt Slough
Stressor/Media/Beneficial Use	Boron, chlorpyrifos, diazinon, EC, unknown toxicity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 17 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is upstream from the confluence with the San Joaquin River. Size change: The mapped impaired extent changed from 33 miles to 17 miles
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 17miles.

Region 5: Salt Slough
Selenium

Water Body	Salt Slough
Stressor/Media/Beneficial Use	Selenium/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	TMDL Completed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA.

Region 5: San Carlos Creek
Mercury

Water Body	San Carlos Creek
Stressor/Media/Beneficial Use	Mercury
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 5.1 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Add a new pollutant source: Acid Mine Drainage.
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected. Change listing from the total length of 1 mile to 9 miles. Extent of affected area to be changed from 1 mile to 4 miles. San Carlos Creek has a length of 9 miles, from its headwaters at San Benito Mountain to its confluence with Silver Creek. CRWQCB-CVR 1995, USGS 1958-2000.
SWRCB Staff Recommendation	Change in Total Size and Size Affected and add "Acid Mine Drainage" as a pollutant source. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 5.1 miles. The impaired extent is downstream from the New Idria Mine. The mapped impacted extent was changed from 8.5 miles to 5.1 miles. Acid mine drainage has been added to the pollutant source, along with Resource Extraction.

Region 5: San Joaquin River, Lower
Mercury

Water Body	San Joaquin River, Lower
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to fish consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 20 Years (1979-1999), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	TSMP and SFEI Data = 264 trophic level 4 fish. The level 4 fish had an average mercury concentration of 0.45 ppm exceeding the 0.3 ppm USEPA criteria used to determine attainment of the WQO. The WQO has been exceeded.
Spatial representation	Data were collected in the San Joaquin River.
Temporal representation	Fish were collected in the San Joaquin River between 1979 and 1999, over a 20 year period.
Data type	Numerical data.
Use of standard method	TSMP and SFEI methods.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: San Joaquin River, Lower Mercury

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List Lower San Joaquin River for Mercury from its confluence with Bear Creek to Vernalis. The data show exceedance of the WQO using USEPA criteria for mercury.

Region 5: San Joaquin River, Merced River to the South Delta Boundary Selenium

Water Body	San Joaquin River, Merced River to the South Delta Boundary
Stressor/Media/Beneficial Use	Selenium/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	TMDL Completed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA. The San Joaquin River from Mud Slough to the confluence with the Merced River should continue to be listed as not attaining water quality standards for selenium. This reach is approximately 3 river miles long.

Region 5: Scotts Flat Reservoir
Mercury

Water Body	Scotts Flat Reservoir
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to fish consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 2 Days (9/1999), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	USGS Data = 7 trophic level 4 fish. The level 4 fish had an average mercury concentration of 0.38 ppm exceeding the 0.3 ppm USEPA criteria used to determine attainment of the WQO. The WQO has been exceeded.
Spatial representation	Data were collected from Scotts reservoir.
Temporal representation	7 fish were collected on September 7 and 8th, 1999.
Data type	Numerical data.
Use of standard method	USGS sampling methods.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Scotts Flat Reservoir
Mercury

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List all of Scotts Flat Reservoir for Mercury. The data show exceedance of the WQO using USEPA criteria for mercury.

Region 5: Shasta Lake
Cadmium, copper, zinc

Water Body	Shasta Lake
Stressor/Media/Beneficial Use	Cadmium, copper, zinc
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 20 acres. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is only approximately 20 acres of the lake, where West Squaw Creek enters. Size change: The mapped impaired extent changed from 27,335 acres to 20 acres.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. It was agreed that the new extent impacted is 20 acres.

Region 5: Smith Canal
Pathogens

Water Body	Smith Canal
Stressor/Media/Beneficial Use	Pathogens/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pathogens linked to narrative WQO for toxicity.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO for toxicity.
Water Body-specific Information	Data = 10 months (May 2000- Feb. 2001), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = A Geometric Mean has been calculated for samples at three separate locations along the canal. Two of the three locations all exceeded the USEPA criteria for E. coli. Two of the locations exceeded the criteria up to 50 times the criteria level, and the other location has exceeded the USEPA single sample bacterial criterion. Using the USEPA criteria the WQO is exceeded.
Spatial representation	The data were collected at three separate locations. Yosemite Lake canal, one quarter mile downstream in the canal, and near the mouth of the canal.
Temporal representation	The data were collected during 10 months (May 2000 to Feb. 2001).
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Recreation.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used.

Region 5: Smith Canal
Pathogens

8. Other water body- or site-specific information including the age of the data were considered.

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List Smith Canal from Yosemite Lake to the confluence with the San Joaquin River for Pathogens. The data show an exceedance of the WQO.

Region 5: Smith Canal
Organophosphorus Pesticides

Water Body	Smith Canal
Stressor/Media/Beneficial Use	Organophosphorus Pesticides/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pesticides linked to WQO for pesticides.
Utility of measure for judging if standards or uses are not attained	WQO, USEPA criteria for Organophosphorus Pesticides.
Water Body-specific Information	Data = 5 Years (1994 - 98), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Data = OP pesticides were tested from 8 water samples between 1994-98. TIE , toxicity tests and TUs of the OP pesticides were run and calculated. 4/8 samples showed survival impairment as indicated by 100% mortality to Ceriodaphnia within 7 days. Data indicate that the OP pesticide caused the toxicity, Diazinon and Chlorpyrifos were present but did not account for all organo-phosphorus pesticide toxicity. The OP concentrations are all above the chronic and acute CDFG criteria. Using the CDFG criteria the WQO has been exceeded.
Spatial representation	Data were collected from one location in the Smith Canal.
Temporal representation	Data were collected between 1994 and 1998.
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Urban Runoff.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used.

Region 5: Smith Canal
Organophosphorus Pesticides

8. Other water body- or site-specific information including the age of the data were considered.

Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List the Smith Canal from the Yosemite Lake to the confluence with the San Joaquin River for OP pesticides. The data show exceedance of the WQO.

Region 5: Smith Canal
Low Dissolved Oxygen

Water Body	Smith Canal
Stressor/Media/Beneficial Use	Low Dissolved Oxygen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Low Dissolved Oxygen linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO for Dissolved Oxygen.
Water Body-specific Information	Data = 5 Years (1994 - 98), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	RB/Delta Keeper Data = 41 samples of Dissolved Oxygen values, with 31 (75%) of those samples falling below the WQO of 5 mg/L. Other data was considered from resident observation of fish kills in 1994 to DeltaKeeper Data collected over the years. The WQO for Dissolved Oxygen has not been attained.
Spatial representation	Data were collected from Smith Canal by the RB and others.
Temporal representation	The data were collected from Smith Canal over a period of 5 years, during dry seasons and rain seasons, yearly.
Data type	Numerical data.
Use of standard method	RWQCB, DeltaKeeper, City of Stockton methods.
Potential Source(s) of Pollutant	Urban Runoff/Storm Sewers. It is likely this problem is due to pollutants such as nutrients or pollution (low flow or channel morphology of the water body).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered.

Region 5: Smith Canal
Low Dissolved Oxygen

Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List Smith Canal from Yosemite lake to the confluence with the San Joaquin River for Dissolved Oxygen. The data have shown that the WQO for Dissolved Oxygen is not being attained.

Region 5: South Cow Creek
Fecal Coliform

Water Body	South Cow Creek
Stressor/Media/Beneficial Use	Fecal Coliform/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Fecal coliform linked to REC-1 Beneficial Use and WQO for Bacteria.
Utility of measure for judging if standards or uses are not attained	WQO for bacteria, REC-1.
Water Body-specific Information	Data = 5 months (June - October 1999), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Data was collected and the average levels were approx. 800 MPN/100ml, exceeding the WQO Geometric Mean levels of 200 MPN/100ml, at this level for at least 5 months in 1999. The WQO has been exceeded. Many of the samples were above the 30 day basin plan criteria of 400 MPN/100ml.
Spatial representation	Waters were sampled from the middle reach of the creek.
Temporal representation	The samples were taken over 5 months, between June and October of 1999.
Data type	Numerical data.
Use of standard method	Hannaford and North State Institute for Sustainable Communities, sampling methods.
Potential Source(s) of Pollutant	Human and/or Livestock Sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. All of the water quality measurements exceeded the water quality standard. The data show an average that is clearly in exceedance of the WQO for

Region 5: South Cow Creek
Fecal Coliform

Bacteria, REC-1.The staff confidence that standards were exceeded is high. The RWQCB recommendation was to list South Cow Creek 14 miles from the confluence to 7 miles before the confluence for Fecal Coliform. The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the new revised extent impacted is from 3.8 miles to 7.9 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.

Region 5: Spring Creek, Lower
Acid mine drainage, cadmium, copper, zinc

Water Body	Spring Creek, Lower
Stressor/Media/Beneficial Use	Acid mine drainage, cadmium, copper, zinc
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	The impaired extent is from Iron Mountain Mine to Keswick Reservoir. Comment change: Removed comments describing impaired extent because they are now part of the water body name.
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. The impaired extent is from Iron Mountain Mine to Keswick Reservoir.

Region 5: Stanislaus River, Lower
Diazinon, Group A Pesticides, Unknown toxicity

Water Body	Stanislaus River, Lower
Stressor/Media/Beneficial Use	Diazinon, Group A Pesticides, Unknown toxicity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Change listing from the total length of 48 miles to 58 miles. Extent of affected area to be changed from 48 miles to 58 miles.
Data used to assess water quality	USGS topographic maps indicate that the total length of the River is 58 miles. (USGS 1958-2000)
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected.
SWRCB Staff Recommendation	Change in Total Size and Size Affected.

Region 5: Stanislaus River, Lower
Mercury

Water Body	Stanislaus River, Lower
Stressor/Media/Beneficial Use	Mercury/Tissue/Fish Consumption
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Mercury linked to Fish Consumption.
Utility of measure for judging if standards or uses are not attained	Basin Plan WQO, USEPA criterion for human health consumption levels of mercury.
Water Body-specific Information	Data = 20 Years (1978-1998), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	TSMP and SFEI Data = 45 trophic level 4 fish. The level 4 fish had an average mercury concentration of 0.53 ppm exceeding the 0.3 ppm USEPA criteria used to determine attainment of the WQO. The WQO has been exceeded.
Spatial representation	The data were collected from the Lower Stanislaus River.
Temporal representation	The data were collected over 20 years from 1978-1998.
Data type	Numerical data.
Use of standard method	TSMP and SFEI methods.
Potential Source(s) of Pollutant	Resource Extraction (abandoned mines).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered.

Region 5: Stanislaus River, Lower
Mercury

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 5: Stockton Deep Water Channel
Pathogens

Water Body	Stockton Deep Water Channel
Stressor/Media/Beneficial Use	Pathogens/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pathogens linked REC-1 beneficial uses.
Utility of measure for judging if standards or uses are not attained	Basin Plan for WQO for bacteria (REC-1).
Water Body-specific Information	Data = 6 months (2000), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = A Geometric Mean has been calculated for 28 samples at 14 each at two separate locations along the canal. Both the locations have exceeded the USEPA criteria for E. coli. Using the USEPA bacterial criteria the WQO is exceeded.
Spatial representation	The data were collected from two separate sampling, locations. One at McLeod Lake and the other one mile upstream at Morelli Park.
Temporal representation	The data were collected over six months in 2000, with 14 samples at two different locations, 28 samples total.
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Recreation.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. All of the water quality measurements exceeded the water quality standard.

Region 5: Stockton Deep Water Channel
Pathogens

The staff confidence that standards were exceeded is high. List all of the Stockton Deep Water Channel for Pathogens. The WQO has been exceeded.

Region 5: Sulphur Creek
Mercury

Water Body	Sulphur Creek
Stressor/Media/Beneficial Use	Mercury
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	The wrong Sulphur Creek (different county) had been mapped. The creek was re-mapped to be the Sulphur Creek in Colusa County. Size change: Re-mapping the water body created a size change. The mapped impaired extent was changed from 2.1 miles to 14 miles.
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 14 miles . The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. The extent of the impacted area is 14 miles.

Region 5: Sutter Bypass
Diazinon

Water Body	Sutter Bypass
Stressor/Media/Beneficial Use	Diazinon/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Diazinon linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	WQO, CDFG criteria for Diazinon.
Water Body-specific Information	Data = 4 years (1996-2000), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = 78 samples, out of those, 18 samples exceeded the chronic criteria and 6 samples exceeded the acute criteria. The criteria used are the CDFG criteria used to determine if the WQO has been exceeded.
Spatial representation	The data were collected from the Sutter Bypass.
Temporal representation	The data were sampled 78 times between December and March, the winter orchard dormant season.
Data type	Numerical data.
Use of standard method	CDFG methods.
Potential Source(s) of Pollutant	Agriculture.
Alternative Enforceable Program	
RWQCB Recommendation	List
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the

water quality standard. The staff confidence that standards were exceeded is high. List the entire length of Sutter Bypass for Diazinon. The data show an exceedance of the WQO.

Region 5: Tuolumne River, Lower
Group A Pesticides, Unknown Toxicity

Water Body	Tuolumne River, Lower
Stressor/Media/Beneficial Use	Group A Pesticides, Unknown Toxicity
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Change listing from the total length of 32 miles to 54 miles. Extent of affected area to be changed from 32 miles to 54 miles.
Data used to assess water quality	USGS topographic maps indicate that the total length of the River is 54 miles. (USGS 1958-2000) Chemical analysis indicate the entire length is affected by Group A pesticides.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. The impaired extent is from Don Pedro Reservoir to the San Joaquin River.

Region 5: Tuolumne River, Lower
Diazinon

Water Body	Tuolumne River, Lower
Stressor/Media/Beneficial Use	Diazinon
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Change listing from the total length of 32 miles to 54 miles. Extent of affected area to be changed from 32 miles to 42 miles.
Data used to assess water quality	USGS topographic maps indicate that the total length of the River is 54 miles. (USGS 1958-2000) Chemical analysis indicate the length affected by Diazinon is 42 miles.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in Total Size and Size Affected.
SWRCB Staff Recommendation	Change in Total Size and Size Affected. The impaired extent is from Don Pedro Reservoir to the San Joaquin River.

Region 5: Walker Slough
Pathogens

Water Body	Walker Slough
Stressor/Media/Beneficial Use	Pathogens/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Pathogens linked REC-1 Beneficial uses.
Utility of measure for judging if standards or uses are not attained	Basin Plan for WQO for bacteria (REC-1).
Water Body-specific Information	Data = 6 months (2000-2001), Data measured at the site, Species or Indicator present at site, Environmental conditions considered at site.
Data used to assess water quality	Data = A Geometric Mean has been calculated for 28 samples at 14 each at two separate locations along the canal. Both the locations have greatly exceeded the USEPA criteria for E. coli. The geometric mean was 4-8 times higher than the criteria level. Using the USEPA criteria the WQO is exceeded.
Spatial representation	The data were collected from two locations, one upstream and one downstream.
Temporal representation	The data were collected during six months over 2000-2001, and 14 samples were taken at two separate locations, for a total of 28 samples.
Data type	Numerical data.
Use of standard method	DeltaKeeper methods.
Potential Source(s) of Pollutant	Urban Runoff/Recreation.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered.

Region 5: Walker Slough
Pathogens

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List all of Walker Slough for Pathogens. The WQO has been exceeded, using the USEPA criterion.

Region 5: West Squaw Creek, Upper and Lower
Cadmium, copper, lead, and zinc

Water Body	West Squaw Creek, Upper and Lower
Stressor/Media/Beneficial Use	Cadmium, copper, lead, and zinc
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Upper and Lower West Squaw Creek were combined to be one segment/water body and the impaired extent begins below the Balaklala Mine. Name change: Inserted a clarifying description to the water body name that the impaired extent is below Balaklala Mine. Comment change: Comments on lower squaw creek were deleted because they are now part of the water body name. Size change: The mapped impaired extent was changed from 1.3 miles to 2.0 miles.
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 2.0miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. Size change: The mapped impaired extent changed from 1.3 miles to 2.0 miles.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. The extent of the impacted area is 2.0 miles.

Region 5: Whiskeytown Reservoir
High coliform count

Water Body	Whiskeytown Reservoir
Stressor/Media/Beneficial Use	High coliform count
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 98 acres. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. The impaired extent is only for the areas near Oak Bottom, Brandy Creek Campgrounds and Whiskeytown. Size change: The mapped impaired extent changed 3,116 acres to 98 acres.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. The extent of the impacted area is 98 acres.

Region 5: Willow Creek (Shasta County)
Acid mine drainage, copper, zinc

Water Body	Willow Creek (Shasta County)
Stressor/Media/Beneficial Use	Acid mine drainage, copper, zinc
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Inserted a clarifying description to the water body name that the impaired extent is from below the Greenhorn Mine to Clear Creek and that the creek is in Shasta County. "Whiskeytown" was deleted and Shasta County was added to better reflect the location of the creek. Size change: The mapped impaired extent was changed from 6.9 miles to 4.0 miles.
Data used to assess water quality	The total size and size affected were reassessed by SWRCB staff and RWQCB staff, subsequent to the RWQCB's first change recommendation. This waterbody has been remapped and the revised extent impacted is 4.0 miles. The new extent is calculated by the Geospatial Water Body System (GeoWBS), using staff's best estimate of the extent to which water quality standards are not met.
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Change in total size affected. Size change: The mapped impaired extent was changed from 6.9 miles to 4.0 miles.
SWRCB Staff Recommendation	Change in total size affected. RWQCB staff worked with SWRCB staff and this area was remapped. "Whiskeytown" was deleted and Shasta County was added to better reflect the location of the creek. The waterbody now is shown as Willow Creek (Shasta County. The extent of the impacted area is 4.0 miles.

Region 5: Wolf Creek
Fecal Coliform

Water Body	Wolf Creek
Stressor/Media/Beneficial Use	Fecal Coliform/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Generally limited consideration to those organizations that conduct monitoring using documented QA/QC procedures.
Linkage between measurement endpoint and benefical use or standard	Fecal coliform linked to REC-1 WQO for Bacteria.
Utility of measure for judging if standards or uses are not attained	WQO for bacteria, REC-1.
Water Body-specific Information	Data = 2 years (2000-2001), Data measured at the site, Species or Indicator present at site, Environmental Conditions considered at site.
Data used to assess water quality	Data was collected upstream and downstream of the GVWTP and the calculated Geometric Mean was 1491 MPN/100ml for the Total coliform, exceeding the WQO Geometric Mean levels of 200 MPN/100ml,. Downstream of the GVWTP the Geometric Mean was 1000MPN/100ml for the total coliform, exceeding the WQO Geometric Mean levels of 200 MPN/100ml.The WQO has been exceeded. Both the upstream and downstream calculated Geometric Means for Fecal Coliform were in exceedance as well. Some of them reached 2300MPN/100ml, in February 2000.
Spatial representation	The data were collected upstream and downstream of the GVWTP.
Temporal representation	The data were collected over two years, 2000-2001.
Data type	Numerical data.
Use of standard method	Waste Discharge Reports GVWTP, and Regional Board methods.
Potential Source(s) of Pollutant	Urban Runoff/Recreation/Agriculture.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the

data were considered.

All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List all of Wolf Creek for Fecal Coliform.

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Water Bodies Proposed for the Monitoring List in Region 5

Water Body	Pollutant/Stressor	Rationale
American River, Lower		
	Pathogens	Based on a single beach closure (in 2000) and occasional high fecal coliform bacteria measurements. The fecal coliform objectives specifically allow the maximum (400 MPN/ml) to be exceeded 10% of the time. The available data indicates that the fecal coliform number is not exceeded more than 10% of the time. Other pathogen measurements, including E. coli, Cryptosporidium, giardia, and virus measurements, indicate that these indicators are below applicable guidelines. The lower river has a high recreation value and with increased urbanization and increasing use should be monitored to ensure that the pathogen levels in the river do not rise above standards.
Arcade Creek		
	Malathion	A USGS NAWQA study conducted from 1996 and 1998 analyzed 31 ambient water samples in Arcade Creek. Of the 31 samples collected and analyzed, 3 out of 31 (about 10%) exceeded the USEPA recommended criterion of 0.1ug/l. Samples collected in 4/97, 5/97, and 6/97 had concentrations of 0.634, 0.144, and 0.135 ug/l, respectively. The study did not include sampling during April through June in 1996 or 1998. Further assessment is needed to confirm that the exceedances recur.
Butte Slough		
	Malathion	Between 1995 and 1998, a total of 70 ambient water samples collected in the Butte Slough were analyzed for malathion. Overall, 2 of 70 samples contained malathion concentrations above the USEPA recommended criterion of 0.1 ug/l. These two samples above the criteria have the same sample date, as reported in the Department of Pesticide Regulation's Surface Water Database. The samples are, therefore, likely duplicates. Since only one sample date indicates malathion levels above the criterion, there is no indication that elevated levels of malathion are recurring in Butte Slough.
	Molinate	Molinate Data = 99 samples were collected and over six years 7 samples exceeded the CDFG criterion for Molinate. The CDFG criteria was used to determine that the narrative objectives for pesticide and toxicity are not being attained. An inadequate number of samples exceeded the evaluation criteria value. All the data used in this assessment were collected during the period of application of molinate to rice (generally may and June). The data reviewed show that the evaluation values was exceeded five times in 1996 and two times in 1997. The magnitude of the observed concentrations were very close to the 13 ug/L evaluation value; in 1996 and 1997 the highest values observed were 15.7 ug/L and 16.42 ug/L. The evaluation value was not exceeded in data from 1994, 1995, 1998, 1999, and 2000. Given the circumstances in this particular situation, Butte Slough should not be listed for molinate. There is a low confidence in 5% of the samples exceeding the objective.
	Thiobencarb	Between 1995 and 1998, a total of 77 ambient water samples collected in the Butte Slough were analyzed for thiobencarb. Overall, 1 of 77 samples contained thiobencarb concentrations above the CDFG recommended criterion of 3.1 ug/l. Since only one sample was above the criterion, there is no indication that elevated levels of thiobencarb are recurring in Butte Slough.
Camanche Reservoir		
	Aluminum	There were 260 samples taken over seven years. Of those samples 18 exceeded the NWRAQ criterion. The NWRAQ was used to determine the narrative objective for toxicity. In 1995 data had unusually high TSS values based on the EBMUD data set. Three of 18 the exceedances were during storm events. Since storm events that resulted in the highest observed aluminum levels it is unlikely that the aluminum criteria will be exceeded. There exists a low confidence in 5.7% of the samples exceeding the objective.

Water Body	Pollutant/Stressor	Rationale
Colusa Basin Drain		
	Chlorpyrifos	Between 1994 and 1998, multiple studies analyzed a total of 24 ambient water samples collected in the CBD for chlorpyrifos. Overall, 3 of 24 samples contained chlorpyrifos concentrations at or above CDFG chronic (4-day average) water quality criterion of 0.014 ug/l and 0 of 24 samples exceeded CDFG acute water quality criterion of 0.02 ug/l. The 3 sample dates on which chlorpyrifos concentrations were above the chronic criteria were relatively minor exceedances (0.019, 0.0164, 0.0149 ug/l). In addition, there was no evidence that the 4-day average concentration would have been above 0.014 ug/l. Further assessment of chlorpyrifos levels in Colusa Basin Drain is needed.
	Dicamba	Between 1992 and 1998, multiple studies analyzed a total of 38 ambient water samples collected in the CBD for dicamba. Two of 38 samples exceeded the Canadian Environmental Quality Guidelines of 0.006 ug/l. The two samples that were above the Canadian guidelines were collected in 1992. Samples analyzed from 1996-1998 did not have detectable levels of dicamba, so there is no indication that current levels of dicamba are above applicable guidelines.
Del Puerto Creek		
	Malathion	Between 1991 and 1993, a total of 33 ambient water samples collected in Del Puerto Creek were analyzed for malathion. Overall, 2 of 33 samples contained malathion concentrations above the USEPA recommended criterion of 0.1ug/l. An apparent duplicate of one of the samples above the criterion had non-detectable levels of malathion. When the duplicates are averaged, the concentration for that day is below the criterion. Since only one sample date had malathion concentrations above the criterion, there is no indication that current levels of malathion are above applicable guidelines.
Delta Waterways (Eastern Portion)		
	Pathogens	Data was available from the DeltaKeeper for a large number of sites throughout the Delta. The data was generally limited in time, with a relatively few sampling events. None of the sites appeared to exceed the Department of Health Services 30 day log mean E. coli guidelines. A few sites had a single exceedance of E. coli single sample guidelines. Due to the limited number of sampling events, it was difficult to determine whether the few observed exceedances of Department of Health Services E. coli guidelines are due to a chronic condition of pollution (likely to occur again) or an acute condition (not likely to occur again). More data, both temporal and spatial, is needed before determining whether or not the Delta is attaining water quality standards with respect to pathogens.
Delta Waterways (Stockton Ship Channel)		
	Pathogens	Data was available from the DeltaKeeper for a large number of sites throughout the Delta. The data was generally limited in time, with a relatively few sampling events. None of the sites appeared to exceed the Department of Health Services 30 day log mean E. coli guidelines. A few sites had a single exceedance of E. coli single sample guidelines. Due to the limited number of sampling events, it was difficult to determine whether the few observed exceedances of Department of Health Services E. coli guidelines are due to a chronic condition of pollution (likely to occur again) or an acute condition (not likely to occur again). More data, both temporal and spatial, is needed before determining whether or not the Delta is attaining water quality standards with respect to pathogens.
Feather River		
	Group A Pesticides	The Delta waterways are currently on the 303(d) list for DDT and Group A pesticides. The Feather River is currently on the 303(d) list for Group A pesticides. Fish tissue data from earlier studies (1980's and early 1990's) had indicated that National Academy of Sciences and/or U.S. Food and Drug Administration guidelines were not being met. More recent studies had indicated substantial reductions in these contaminants in fish tissue. The sampling design and fish collected in the earlier and later studies were not directly comparable (especially in terms of percent lipid content). Additional fish tissue samples should be collected and analyzed to determine whether applicable criteria and guidelines are currently being met.

Water Body	Pollutant/Stressor	Rationale
French Camp Slough		
	Pathogens	There was limited data for French Camp Slough (4 data points over 2 months from a single sample location). Two out of four samples (one each month) were above the single sample value. The geometric mean for the four data points is well below the guidelines. The extremely limited sample set made it difficult to determine whether the elevated E. coli levels are likely to be observed again. Further assessment of French Camp Slough is recommended.
Fresno River		
	Nutrients/Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. RWQCB staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.
Hensley Lake		
	Nutrients/Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. RWQCB staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.
Ingram/Hospital Creek		
	Carbaryl	Between 1991 and 1993, a total of 26 ambient water samples collected in Ingram/Hospital Creek were analyzed for carbaryl. Two of the 26 samples contained carbaryl concentrations above the CDFG criterion of 2.53ug/l. Those two samples were collected in May 1991 (8.4 ug/l) and May 1992 (2.8 ug/l) respectively. The data indicates that carbaryl may be a problem in May. Since the data was collected about a decade ago and the elevated levels only occurred in one month, further assessment is needed to determine whether carbaryl levels are currently elevated.
Kaweah River		
	Nutrients/Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. RWQCB staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.

Water Body	Pollutant/Stressor	Rationale
Kern River		
	Nutrients/Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. RWQCB staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.
Lake Isabella		
	Nutrients/Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. RWQCB staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.
Lake Kaweah		
	Nutrients/Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. RWQCB staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.
Lake Success		
	Nutrients/Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available to RWQCB staff indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. RWQCB staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.

Water Body	Pollutant/Stressor	Rationale
Merced River		
	Mercury	Further assessment is needed because: 1. The weighted-average Trophic Level 4 (TL4) fish tissue mercury concentration for each waterbody closely approached the USEPA criterion of 0.3 ppm. 2.The weighted-average mercury concentrations for the bass and white catfish samples from both water bodies exceeded USEPA criterion. 3. The channel catfish concentrations were consistently lower than the other TL4 species. For widespread comparisons between water bodies throughout the Central Valley, staff considered channel catfish to be a trophic level 4 species because usually channel catfish fish measuring more than 300-380 mm in length are pisciverous (Moyle, 2002). However, staff observed that channel catfish from several water bodies have average mercury concentrations that are lower than mercury concentrations in white catfish and bass samples. Additional information about which fish species humans are catching and eating from the Merced and Tuolumne Rivers is needed. Staff can then calculate the average fish tissue concentration based on distribution of species being caught by humans, rather than basing the calculation on species sampled.
Mormon Slough		
	Diazinon	In February 1994 toxicity tests were performed on two ambient water samples collected from Mormon Slough. The samples were collected on consecutive days. Diazinon levels were analyzed for both samples. Both samples were above the CDFG acute and chronic criteria of 0.08 ug/l and 0.05 ug/l, respectively. Both of the samples caused toxicity to Ceriodaphnia dubia. The addition of PBO to the samples eliminated the toxicity (data as reported in Lee and Jones-Lee, 2001). Further assessment of diazinon levels in Mormon Slough is needed, since the current data set only includes two data points from samples collected on consecutive days. The available data set is not sufficient to determine that elevated diazinon levels recur in Mormon Slough.
Oristemba Creek		
	Methidathion	Between 1996 and 2000, multiple studies analyzed a total of 1050 ambient water samples collected in Orestimba Creek for methidathion. Two of 1050 (about 0.2%) exceeded the USEPA Integrated IRIS Reference Dose of 0.7 ug/l. The two samples were collected in 1993 (2.14 ug/l) and 2000 (1.74 ug/l). Since only 2 out of 1050 samples were above the reference dose and there were seven years between detections of elevated levels, the frequency of occurrence of elevated levels of methidathion is relatively low. In addition, IRIS reference doses are for the protection of human health from consumption of drinking water. RWQCB staff is not aware of any drinking water intakes within Orestimba Creek. The low frequency of exceedance of the IRIS reference dose combined with the low likelihood of exposure suggests that water quality objectives relevant to methidathion are being met
Putah Creek, Lower		
	Unknown Toxicity	Toxicity Data was collected monthly and during rain events as well (at least 24 samples). 16 of the samples resulted in impaired growth, impaired reproduction and/or mortality. Further TIE test were run and the tests failed to pinpoint the cause while ammonia and pathogenicity were eliminated as causes because no toxicity was observed.
Putah Creek, Upper		
	Unknown Toxicity	On four of the sampling dates the water caused reproductive impairments to Ceriodaphnia They were analyzed using TIE. The results indicate an unknown toxicant that suggests that a non-polar, organic chemical caused the impairments. A July 1999 sample showed impairment to growth to Selenastrum, toxicity unknown. Overall 5 out of 12 (42%) of the samples resulted in toxicity. Follow-up toxicity tests showed not toxicity. Studies did show that non-polar chemicals when increased to three times the concentration ambient waters did cause toxicity. These higher concentrations do not represent ambient water concentrations and could not be linked tot he originally observed toxicity.

Water Body	Pollutant/Stressor	Rationale
Salt Slough		
	Malathion	Between 1991 and 1993, a total of 46 ambient water samples collected in Salt Slough were analyzed for malathion. Overall, 2 of 46 samples contained malathion concentrations above the USEPA recommended criterion of 0.1 ug/l. The two samples above the criterion were collected in March 1992 (0.16 ug/l) and March 1993 (0.39 ug/l). Since the data was collected about a decade ago and the elevated levels only occurred in one month, further assessment is needed to determine whether malathion levels are currently elevated.
San Luis Reservoir		
	Copper	Data was received from the California Department of Water Resources (CDWR) on levels of copper in the San Luis Reservoir as part of the initial solicitation. Some of the data submitted was received after the initial May 15, 2001 deadline. The data now available indicates that copper levels exceeded California Toxics Rule criteria frequently from October 1999 to September 2000 (7 out of 10 samples exceeded the chronic criteria, 3 out of 10 exceeded the acute). Since there was only one minor exceedance (0.1 ppb above the criteria) prior to October 1999 and no exceedances since September 2000, the exceedances may have been due to conditions unique to the October 1999- September 2000 time period. Regional Board staff received data from CDWR that included copper results through June 2002 (CDWR, 2002). All samples collected since September 2000 have copper levels well below the CTR criteria. RWQCB staff has discussed with CDWR staff the time period in which CTR criteria were exceeded and it is not clear why those exceedances occurred at that time and not before or since. RWQCB staff reviewed data available on CDWR's web site (http://wwwomwq.water.ca.gov/wqmon.html) to determine whether sites upstream and downstream of the San Luis Reservoir showed elevated levels of copper. A review of data on copper levels at the pumping plants in the Delta, in the Delta-Mendota Canal, and in the O'Neil Forebay, indicates that copper levels were well below CTR criteria even when the observed exceedances in the San Luis Reservoir occurred. Staff does not recommend listing the San Luis Reservoir for non-attainment of copper standards at this time. The combination of the finite time period of the excursions, the relatively low levels of copper since the excursions occurred, and the lack of elevated levels downstream and upstream of the reservoir indicate that the excursions may not occur again (i.e. the evidence suggests that standards are currently attained). Sampling and analysis for copper should continue and that factors that could affect copper analytical results be carefully tracked (e.g. timing of application of copper based pesticides, sampling location, reservoir levels, etc.).
Ten Mile River (South fork Kings River)		
	Nutrients/Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. Regional Board staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.

Water Body	Pollutant/Stressor	Rationale
Tule River		
	Nutrients/ Pathogens	Further assessment is needed based on largely anecdotal information on the water quality in these streams and lakes. RWQCB staff has been made aware of algae die offs, which could be a result of nutrient water quality problems. RWQCB staff has been made aware of cattle in or near these streams and lakes, which could result in pathogen water quality problems. RWQCB staff has at most one or two water quality data points from these streams and lakes. The data and information available to indicates a potential water quality problem, but is not sufficient to determine whether applicable standards are being attained or not. RWQCB staff will try to pursue funding to monitor these waters to determine whether nutrient and or pathogen related water quality problems exist.
Tuolumne River		
	Mercury	Further assessment is needed because: 1. The weighted-average TL4 fish tissue mercury concentration for each waterbody closely approached the USEPA criterion of 0.3 ppm. 2. The weighted-average mercury concentrations for the bass and white catfish samples from both water bodies exceeded USEPA criterion. 3. The channel catfish concentrations were consistently lower than the other TL4 species. For widespread comparisons between water bodies throughout the Central Valley, staff considered channel catfish to be a trophic level 4 species because usually channel catfish fish measuring more than 300-380 mm in length are pisciverous (Moyle, 2002). However, staff observed that channel catfish from several water bodies have average mercury concentrations that are lower than mercury concentrations in white catfish and bass samples. Staff believes that additional information about which fish species humans are catching and eating from the Merced and Tuolumne Rivers is needed. Staff can then calculate the average fish tissue concentration based on distribution of species being caught by humans, rather than basing the calculation on species sampled.
Walker Slough		
	Diazinon	Between 1994 and 1998, 6 samples were collected from Walker Slough and toxicity tests were performed on them (as summarized in Lee and Jones-Lee, 2001). Diazinon levels were measured in three of those samples. Most of these samples were collected during wet weather events in the winter. Of the 6 samples, 2 resulted in 100% mortality within 7 days to Ceriodaphnia dubia. The two samples exhibiting 100% mortality had diazinon concentrations of 0.273 ug/l and 0.170 ug/l. PBO was added to one of the toxic samples and eliminated the toxicity. Further assessment is needed of diazinon levels in Walker Slough due to the limited data set currently available.
Yuba River		
	Pathogens	The Yuba River received much press coverage last summer concerning high levels of bacteria in the river and for beach closures. There has been ongoing concern with possible interference in test methods used at the river. The river was tested for both E. coli and enterococci. The E. coli levels remained low while the enterococci levels were high. Additionally, the county and a citizens monitoring group have been attempting to determine if the sampling indicates impairment or if it was due to a single, non-recurring incident of pollution. Confirmation sampling and method evaluation for the Yuba River is being conducted this summer. Due to the contradictory information regarding the pathogen indicators, further assessment is necessary to determine if water quality standards are attained with respect to pathogens.

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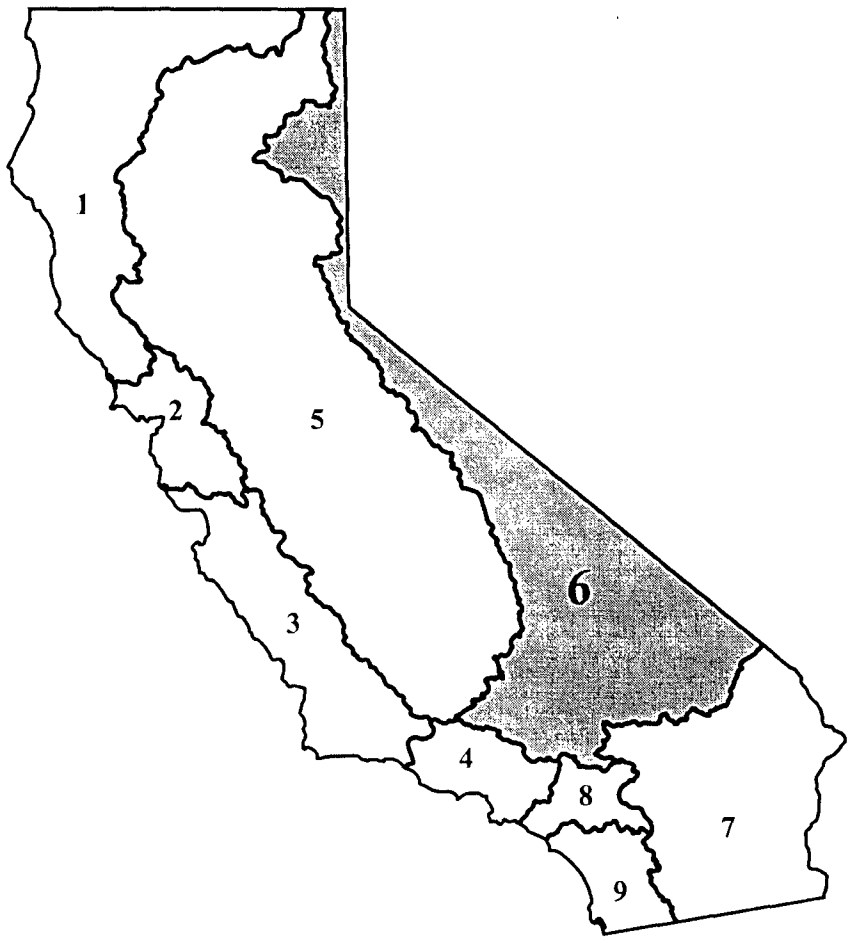
Regional Water Quality Control Board

LAHONTAN REGION (6)



SECTION 303 (d) LIST PROPOSALS

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Region 6: Alkali Lake, upper
Salinity, TDS, Chlorides

Water Body	Alkali Lake, upper
Stressor/Media/Beneficial Use	Salinity, TDS, Chlorides/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Input from geothermal springs and concentration by evaporation over geologic timescale.
Alternative Enforceable Program	
RWQCB Recommendation	Delist because exceedence of standards is due to natural causes. TMDL is not applicable.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because the source of impacts to water quality standards is entirely natural. Implementation of a TMDL is not appropriate.

Region 6: Big Meadow Creek (Tributary to Lake Tahoe) Pathogens

Water Body	Big Meadow Creek (Tributary to Lake Tahoe)
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1999-2000.
Data used to assess water quality	Violations of standard (20/100ml log mean during any 30-day period or not more than 10% of samples to exceed 40/100 ml in any 30-day period) were common (50-70% of samples) during grazing season. They were less common (0-9% of samples) during non-grazing season.
Spatial representation	Targeted in water body.
Temporal representation	Data collected in 1999-2000. WQO is log mean not to exceed 20/100 ml during any 30-day period, or not more than 10% of samples to exceed 40/100 ml in any 30-day period.
Data type	WQO and fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	Waste from livestock grazing believed to be primary source.
Alternative Enforceable Program	USFS Grazing management plan.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Big Springs
Arsenic

Water Body	Big Springs
Stressor/Media/Beneficial Use	Arsenic/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Source is of volcanic origin, with no sources of industrial or agricultural discharges.
Alternative Enforceable Program	N/A
RWQCB Recommendation	De-list due to natural causes. Beneficial use is drinking water supply for City of Los Angeles. Arsenic is removed from this water supply before delivery for use.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because applicable water quality standards are exceeded but the source of the pollutant is entirely natural (i.e., volcanic).

Region 6: Blackwood Creek (Tributary to Lake Tahoe) Nitrogen

Water Body	Blackwood Creek (Tributary to Lake Tahoe)
Stressor/Media/Beneficial Use	Nitrogen/Water/Aquatic Life
***Data quality assessment. Extent to* which data quality requirements met.**	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Nitrogen is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to WQO directly.
Water Body-specific Information	Samples collected from creek mouth between 1989-1996 by Lake Tahoe Interagency Monitoring Program.
Data used to assess water quality	Violations of WQO for total Nitrogen (0.19 mg/L annual mean) in 6 of 8 water years.
Spatial representation	Samples collected from creek mouth.
Temporal representation	Samples collected between 1989-1996.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Sources are atmospheric deposition, erosion, stormwater.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Blackwood Creek (Tributary to Lake Tahoe) Phosphorus

Water Body	Blackwood Creek (Tributary to Lake Tahoe)
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Phosphorous is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to WQO directly.
Water Body-specific Information	Samples collected from creek mouth between 1989-1996 by Lake Tahoe Interagency Monitoring Program.
Data used to assess water quality	Violations of WQO for total Phosphorus in 15 of 17 water years from 1980-1996.
Spatial representation	Samples collected from creek mouth.
Temporal representation	Samples collected between 1989-1996.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Erosion from severely disturbed areas (logging, gravel mining), atmospheric, deposition, stormwater, forest fire.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Blackwood Creek (Tributary to Lake Tahoe)
Iron (plant nutrient)

Water Body	Blackwood Creek (Tributary to Lake Tahoe)
Stressor/Media/Beneficial Use	Iron (plant nutrient)/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Iron is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to WQO directly.
Water Body-specific Information	Samples collected from creek mouth between 1989-1996 by Lake Tahoe Interagency Monitoring Program.
Data used to assess water quality	Violations of WQO for total iron in 8 of 8 water years, from 1989-1996.
Spatial representation	Samples collected from creek mouth.
Temporal representation	Samples collected between 1989-1996.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	Yes
Potential Source(s) of Pollutant	Erosion from severely disturbed areas (logging, gravel mining).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Bridgeport Reservoir, Crowley Lake, Lake Tahoe
Nitrogen, Phosphorus

Water Body	Bridgeport Reservoir, Crowley Lake, Lake Tahoe
Stressor/Media/Beneficial Use	Nitrogen, Phosphorus/Water/Aquatic life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Stormwater runoff, erosion, atmospheric deposition.
Alternative Enforceable Program	N/A
RWQCB Recommendation	Clarify previous listings for nutrients. Replace nutrient listings with separate listings for nitrogen and phosphorus.
SWRCB Staff Recommendation	Clarify previous listings for nutrients. Replace nutrient listings with separate listings for nitrogen and phosphorus.

Region 6: Buckeye Creek
Pathogens

Water Body	Buckeye Creek
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from April 2000-June 2001.
Data used to assess water quality	At least 5 of 10 (50%), and at least 6 of 14 samples (43%) exceeded the 40/100 ml WQO.
Spatial representation	Targeted in water body.
Temporal representation	Data collected from April 2000 - June 2001.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	High bacterial counts coincide with months when livestock are present. Natural sources of bacteria may also occur.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Carson River, East Fork (was East Fork Carson River) Nutrients

Water Body	Carson River, East Fork (was East Fork Carson River)
Stressor/Media/Beneficial Use	Nutrients/Water/Aquatic life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used for pH analysis.
Linkage between measurement endpoint and benefical use or standard	Nutrients can be linked to Aquatic Life.
***Utility of measure for judging if* standards or uses are not attained**	Increases in pH can results from algal blooms, which result from high nutrient levels
Water Body-specific Information	pH data collected in Nevada, 12-13 miles downstream of state boundary.
Data used to assess water quality	24 laboratory measurements of pH taken between 1997-2001 showed no violations of the WQO for pH. 5 of 26 field measurements were slightly outside the WQO for pH. These deviations are not enough to affect beneficial uses.
Spatial representation	pH data collected in Nevada, 12-13 miles downstream of state boundary.
Temporal representation	24 laboratory measurements of pH taken between 1997-2001.
Data type	pH values are numeric.
Use of standard method	
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist based on faulty data used in original listing, and current data that shows that no impairment of beneficial uses.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because of faulty data used in original listing, and because current data that shows that standards are not exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is extremely low.

Region 6: Carson River, West Fork (headwaters to Woodfords) (was West + Nitrogen

Water Body	Carson River, West Fork (headwaters to Woodfords) (was West Fork Carson River, Headwaters to Woodfords)
Stressor/Media/Beneficial Use	Nitrogen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Nitrogen is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between 1981-2000.
Data used to assess water quality	Data exceeded the objectives for total Kjeldahl nitrogen (0.13 mg/L mean of monthly means), nitrate (0.02 mg/L mean of monthly means), and total nitrogen (0.15 mg/L mean of monthly means).
Spatial representation	Targeted in water body.
Temporal representation	Mean of monthly means.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Sources may be septic systems, erosion, stormwater, historic livestock grazing, and natural nitrogen fixation.
Alternative Enforceable Program	None.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical, not numerical, both numerical and not numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Carson River, West Fork (headwaters to Woodfords) (was West + Phosphorus

Water Body	Carson River, West Fork (headwaters to Woodfords) (was West Fork Carson River, Headwaters to Woodfords)
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Phosphorus is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO
Water Body-specific Information	Data collected between 1997-2001
Data used to assess water quality	The WQO is 0.02 mg/L (annual mean of monthly means). Data collected between 1997-2001 showed the following values: 1997=0.09 mg/L; 1998=0.03 mg/L; 1999=0.02 mg/L; 2000=0.03 mg/L
Spatial representation	Targeted in water body.
Temporal representation	Annual mean of monthly means
Data type	WQO and water column chemistry data are numeric values
Use of standard method	
Potential Source(s) of Pollutant	Sources are erosion, stormwater, atmospheric, deposition.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical, not numerical, both numerical and not numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Carson River, West Fork (headwaters to Woodfords) (was West + Percent sodium

Water Body	Carson River, West Fork (headwaters to Woodfords) (was West Fork Carson River, Headwaters to Woodfords)
Stressor/Media/Beneficial Use	Percent sodium/Water/Crop protection
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Percent sodium is linked to agricultural beneficial uses.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected in 2000.
Data used to assess water quality	The WQO is 20% expressed as a mean of monthly means. Data collected in 2000 showed a mean of monthly means of 21.7%.
Spatial representation	Targeted in water body. Locations unknown.
Temporal representation	Mean of monthly means.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	Yes.
Potential Source(s) of Pollutant	Road salt, septic systems, natural.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical, not numerical, both numerical and not numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Carson River, West Fork (Woodfords to Paynesville) (was Wes + Nitrogen

Water Body	Carson River, West Fork (Woodfords to Paynesville) (was West Fork Carson River, Woodfords to Paynesville)
Stressor/Media/Beneficial Use	Nitrogen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Nitrogen is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between 1981-2000.
Data used to assess water quality	Data exceeded the objectives for total nitrogen (0.25 mg/L mean of monthly means), and nitrate (0.03 mg/L mean of monthly means).
Spatial representation	Targeted in water body.
Temporal representation	Mean of monthly means.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Pasture runoff, stormwater, erosion, atmospheric deposition.
Alternative Enforceable Program	None.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical, not numerical, both numerical and not numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Carson River, West Fork (Woodfords to Paynesville, Paynesvi + Percent sodium

Water Body	Carson River, West Fork (Woodfords to Paynesville, Paynesville to State Line) (was West Fork Carson River, Woodfords to Paynesville)
Stressor/Media/Beneficial Use	Percent sodium/Water/Crop Protection
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Sodium is linked to Agriculture and Crop Protection.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected in 2000.
Data used to assess water quality	The WQO is 20% expressed as a mean of monthly means. Data collected in 2000 showed a mean of monthly means of 23%.
Spatial representation	Targeted in water body.
Temporal representation	Mean of monthly means.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Road salt, septic systems, natural.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Carson River, West Fork (Woodfords to Paynesville, Paynesvi + Pathogens

Water Body	Carson River, West Fork (Woodfords to Paynesville, Paynesville to State Line) (was West Fork Carson River, Woodfords to State Line)
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 2000-2001.
Data used to assess water quality	Data indicated violation of the fecal coliform WQO in four of ten months sampled. Numbers of total and fecal coliform bacteria were higher during the summer grazing season.
Spatial representation	Targeted in water body.
Temporal representation	Ten months sampled.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	Partially natural sources (i.e. wildlife). Primary source is believed to be livestock waste.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical, not numerical, both numerical and not numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Crowley Lake
Arsenic

Water Body	Crowley Lake
Stressor/Media/Beneficial Use	Arsenic/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Source is of volcanic origin, with no sources of industrial or agricultural discharges.
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist due to natural causes. Beneficial use is drinking water supply for City of Los Angeles Arsenic is removed from this water supply before delivery for use.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because applicable water quality standards are exceeded but the source of the pollutant is entirely natural (volcanic). Beneficial use is drinking water supply for City of Los Angeles. Arsenic is removed from this water supply before delivery for use.

Region 6: Donner Lake
Priority Organics (including PCBs, chlordane)

Water Body	Donner Lake
Stressor/Media/Beneficial Use	Priority Organics (including PCBs, chlordane)/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	TSMP uses QAPP
Linkage between measurement endpoint and benefical use or standard	Priority organics are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to MTRL.
Water Body-specific Information	Fish collected in Lake. Most recent TSMP data from 1991, 1993.
Data used to assess water quality	Two composite fish tissue samples (1991, 1993) showed PCB concentrations of 165 ppb and 102 ppb. The MTRL for PCBs is 5.3 ppb. MTRL for chlordane is 8.0 ppb. One fish tissue sample from 1991 showed a chlordane concentration of 26.2 ppb.
Spatial representation	Two composite fish tissue samples of 6-7 fish each.
Temporal representation	Data collected at various times since 1978. Most recently in 1991 and 1993.
Data type	Numerical fish tissue data.
Use of standard method	
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	
RWQCB Recommendation	Delist based on limited data used to list. No OEHHA advisory in effect. No recent data available.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should not be removed from the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Donner Lake
Priority Organics (including PCBs, chlordane)

TSMP data is sufficient (two composite samples of 13 fish), and exceedances of WQO are large enough to maintain listing. PCB concentrations were 165 and 102 ppb. (MTRL is 5.3 ppb). Chlordane result was 26.2 ppb. MTLR is 8.0 ppb. RWQCB may request TSMP to schedule additional monitoring before next listing cycle.

Region 6: Eagle Lake
Nitrogen, Phosphorus (was Low Dissolved Oxygen)

Water Body	Eagle Lake
Stressor/Media/Beneficial Use	Nitrogen, Phosphorus (was Low Dissolved Oxygen)
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Change listing from low dissolved oxygen to separate listings for nitrogen and phosphorus.
SWRCB Staff Recommendation	Clarify by changing listing from low dissolved oxygen to separate listings for nitrogen and phosphorus.

Region 6: East Walker River
Metals

Water Body	East Walker River
Stressor/Media/Beneficial Use	Metals/Tissue/Human health
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because original listing was based on inappropriate use of EDLs as WQOs. EDLs are Elevated Data Levels that are the 85th and 95th percentiles of all data collected, and are not WQOs.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because of faulty criteria used in original listing. Elevated Data Levels (EDLs) were used as a basis for concluding that water quality standards were not being met. This is inappropriate. EDLs are the 85th and 95th percentiles of all data collected, and are not appropriate guidelines. The staff confidence that standards were exceeded is extremely low.

Region 6: East Walker River above Bridgeport Reservoir Pathogens

Water Body	East Walker River above Bridgeport Reservoir
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Samples collected from 2000-2001.
Data used to assess water quality	At least 8 of 17 samples (47%) exceeded 40 colonies/100 ml.. The WQO requires that no more than 10% of samples exceed 40 colonies/100 ml.
Spatial representation	Targeted in water body.
Temporal representation	Samples collected 2000-2001.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	Fecal coliform counts were highest during grazing season.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: East Walker River below Bridgeport Reservoir
Nitrogen

Water Body	East Walker River below Bridgeport Reservoir
Stressor/Media/Beneficial Use	Nitrogen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Nitrogen is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Samples collected from April 2000 - February 2001 by USGS.
Data used to assess water quality	The mean of 9 samples was 0.64 mg/L. This exceeds the WQO (0.50 mg/L annual mean). Three of 9 samples (33%) exceeded the 90th percentile value of 0.80 mg/L. The WQO requires that no more than 10% of samples exceed the 90th percentile value.
Spatial representation	Targeted in water body.
Temporal representation	Samples collected April 2000 - February 2001.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Reservoir releases, stormwater, erosion.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: East Walker River below Bridgeport Reservoir
Phosphorus

Water Body	East Walker River below Bridgeport Reservoir
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Phosphorus is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Samples collected by USGS between April 2000-February 2001.
Data used to assess water quality	The mean of 11 samples was 0.083 mg/L. This exceeds the WQO of 0.06 mg/L (annual mean). Four of nine samples exceeded the 90th percentile value of 0.10 mg/L.
Spatial representation	Targeted in water body.
Temporal representation	Annual mean.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Release from Bridgeport Reservoir.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: General Creek (Tributary to Lake Tahoe) Phosphorus

Water Body	General Creek (Tributary to Lake Tahoe)
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Phosphorus is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1981-96.
Data used to assess water quality	Annual means for 12 of 16 water years exceed the WQO (0.015 mg/L annual mean)
Spatial representation	Targeted in water body.
Temporal representation	Annual means for 12 of 16 water years.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Major sources from erosion, atmospheric deposition, stormwater.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: General Creek (Tributary to Lake Tahoe)
Iron (plant nutrient)

Water Body	General Creek (Tributary to Lake Tahoe)
Stressor/Media/Beneficial Use	Iron (plant nutrient)/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Iron is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1989-96.
Data used to assess water quality	Annual means for 8 of 8 water years exceed the WQO (0.03 mg/L annual mean).
Spatial representation	Targeted in water body.
Temporal representation	Annual means for 8 of 8 water years
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Major sources from erosion, stormwater.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Grant Lake
Arsenic

Water Body	Grant Lake
Stressor/Media/Beneficial Use	Arsenic/Water, Tissue/Drinking, Human health
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Beneficial uses are drinking water supply for City of Los Angeles and fish consumption. Water is blended in order to meet current drinking water standard at the tap. 1991 TSMP data showed no exceedences of fish consumption criteria.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Source is of volcanic origin, with no sources of industrial or agricultural discharges.
Alternative Enforceable Program	
RWQCB Recommendation	Delist due to natural causes. Beneficial uses are drinking water supply for City of Los Angeles and fish consumption. Water is blended in order to meet current drinking water standard at the tap. 1991 TSMP data showed no exceedences of fish consumption criteria.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because applicable water quality standards are exceeded but the source of the pollutant is entirely natural.

Region 6: Haiwee Reservoir
Copper

Water Body	Haiwee Reservoir
Stressor/Media/Beneficial Use	Copper/water/MUN, REC-1, REC-2, COLD, WILD, RARE, SPWN
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	City of Los Angeles applies copper-based algaecide in order to satisfy drinking water requirements (for color, odor).
Alternative Enforceable Program	
RWQCB Recommendation	Existing 1998 listing.
SWRCB Staff Recommendation	The comment below will be added to the list and fact sheet indicating, where relevant, that the question of whether Haiwee Reservoir, a water-quality-limited segment, is a water of the United States was raised, but that listing is not a determination of that question.

* 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.

Region 6: Heavenly Valley Creek, source to USFS boundary (was Heavenl + Sediment

Water Body	Heavenly Valley Creek, source to USFS boundary (was Heavenly Valley Creek between USFS boundary and confluence with Trout Creek)
Stressor/Media/Beneficial Use	Sediment/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	Sedimentation is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	There is a numerical suspended sediment objective (60 mg/L as an annual 90th percentile) that applies to all tributaries of Lake Tahoe.
Water Body-specific Information	A TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA.
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Source is erosion from upstream developments, local streambank erosion, stormwater from Pioneer Trail, and other nonpoint sources.
Alternative Enforceable Program	A TMDL has been completed
RWQCB Recommendation	Place on TMDL Completed List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA.

Region 6: Heavenly Valley Creek, source to USFS boundary (was Heavenl + Phosphorus

Water Body	Heavenly Valley Creek, source to USFS boundary (was Heavenly Valley Creek, within USFS boundary)
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Phosphorus is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between 1997-2001 by USFS.
Data used to assess water quality	Annual means of samples collected from 6 sites all exceeded standard, 0.015 mg/L annual mean.
Spatial representation	Data collected from 6 sites.
Temporal representation	Annual means of samples.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Sources may be atmospheric, deposition, erosion from disturbed areas, and natural.
Alternative Enforceable Program	Coordination with TMDL for Trout Creek.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Heavenly Valley Creek, source to USFS boundary and USFS bou + Chloride

Water Body	Heavenly Valley Creek, source to USFS boundary and USFS boundary to Trout Creek (was Heavenly Valley Creek)
Stressor/Media/Beneficial Use	Chloride/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Chloride is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to WQO directly.
Water Body-specific Information	Data collected between 1997-2001 by USFS.
Data used to assess water quality	Annual means of samples collected from 6 sites all exceeded standard, 0.15 mg/L annual mean'.
Spatial representation	Samples collected from 6 sites.
Temporal representation	Annual means of samples.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Sources may be road salt, atmospheric deposition, and some natural sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Heavenly Valley Creek, USFS boundary to Trout Creek) (was H + Sediment

Water Body	Heavenly Valley Creek, USFS boundary to Trout Creek) (was Heavenly Valley Creek)
Stressor/Media/Beneficial Use	Sediment/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Continue to list the lower two portions of Heavenly Valley Creek for sediment.
SWRCB Staff Recommendation	Due to completion of a TMDL for Heavenly Valley Creek--source to USFS boundary, the entire Creek should no longer be on the 303(d) list. Instead, the lower portion, USFS boundary to Trout Creek, should be specifically identified as remaining on the list.

Region 6: Hot Creek
Metals

Water Body	Hot Creek
Stressor/Media/Beneficial Use	Metals/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Metals (arsenic and others) come from natural geothermal and volcanic sources.
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist due to natural sources of metals.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because the sources are entirely natural.

Region 6: Indian Creek
Pathogens

Water Body	Indian Creek
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Samples collected between June 2000- May 2001.
Data used to assess water quality	13 of 30 samples (43%) exceeded the WQO. The WQO requires that no more than 10% of samples exceed 40 colonies/100 ml.
Spatial representation	Targeted in water body.
Temporal representation	June 2000- May 2001.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Fecal coliform counts were highest during grazing season.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Lower Alkali Lake
Salinity, TDS, Chlorides

Water Body	Lower Alkali Lake
Stressor/Media/Beneficial Use	Salinity, TDS, Chlorides/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Input from geothermal springs and concentration by evaporation over geologic timescale.
Alternative Enforceable Program	
RWQCB Recommendation	Delist because exceedence of standards is due to natural causes. TMDL is not applicable.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because the sources of salinity, TDS and chlorides are natural.

Region 6: Middle Alkali Lake
Salinity, TDS, Chlorides

Water Body	Middle Alkali Lake
Stressor/Media/Beneficial Use	Salinity, TDS, Chlorides/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Input from geothermal springs and concentration by evaporation over geologic timescale.
Alternative Enforceable Program	
RWQCB Recommendation	Delist because exceedence of standards is due to natural causes. TMDL is not applicable.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because the sources of salinity, TDS and Chlorides are natural.

Region 6: Mojave River
Priority Organics

Water Body	Mojave River
Stressor/Media/Beneficial Use	Priority Organics/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	Also a 1991 USGS study showed that priority pollutants are no longer present in concentrations of concern in the area affected by the groundwater plume.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	"Barstow Slug" of subsurface pollutants.
Alternative Enforceable Program	
RWQCB Recommendation	Delist because pollutants were present in groundwater portion of this intermittent stream, and listings are limited to surface waters. Also a 1991 USGS study showed that priority pollutants are no longer present in concentrations of concern in the area affected by the groundwater plume.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because while pollutants were present in groundwater portion of this intermittent stream, listings are limited to surface waters. The staff confidence that surface water quality standards were exceeded is low. A TMDL is not applicable.

Region 6: Monitor Creek
Sulfate

Water Body	Monitor Creek
Stressor/Media/Beneficial Use	Sulfate/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	Unknown.
Linkage between measurement endpoint and benefical use or standard	Sulfate is linked to Drinking Water Beneficial Use.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1990-1991.
Data used to assess water quality	Data indicated an annual mean that exceeded 100 mg/L with maximum values of 700- 800 mg/L. The WQO for sulfate is 4.0 mg/L as an annual mean.
Spatial representation	Targeted in water body.
Temporal representation	Applicable Basin Plan objectives (East Fork of Carson River watershed) are in the form of an annual mean and a 90th percentile number.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	Standard methods of analysis were used.
Potential Source(s) of Pollutant	Acid mine drainage.
Alternative Enforceable Program	No alternative program is currently available.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Monitor Creek
TDS

Water Body	Monitor Creek
Stressor/Media/Beneficial Use	TDS/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	Unknown.
Linkage between measurement endpoint and benefical use or standard	TDS is linked to Drinking Water Beneficial Use.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1990-1991.
Data used to assess water quality	Data indicated an annual mean that exceeded 500mg/L at 4 of 7 sampling locations, with maximum values of 1000 mg/L at locations below mine tailings. The WQO for TDS is 80 mg/L as an annual mean.
Spatial representation	Targeted in water body.
Temporal representation	Annual mean.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Acid mine drainage.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Monitor Creek
Iron, silver, aluminum, manganese (was "metals")

Water Body	Monitor Creek
Stressor/Media/Beneficial Use	Iron, silver, aluminum, manganese/Water/Aquatic life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Acid mine drainage. Specific metals identified during a Section 205(j)-funded study of the chemistry and biology of Monitor Creek.
Alternative Enforceable Program	N/A
RWQCB Recommendation	Clarify metals listing. Replace metals listing with listings for 4 specific metals- iron, silver, aluminum, manganese.
SWRCB Staff Recommendation	Clarify metals listing. Replace metals listing with listings for 4 specific metals - iron, silver, aluminum, manganese.

Region 6: Mono Lake
Salinity, TDS, Chlorides

Water Body	Mono Lake
Stressor/Media/Beneficial Use	Salinity, TDS, Chlorides/Water/Aquatic life, Wildlife
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Water diversion. Natural causes.
Alternative Enforceable Program	SWRCB Water Rights Decision 1631.
RWQCB Recommendation	Delist because high concentrations of salts and trace elements are from natural sources. SWRCB Decision 1631 establishes conditions to control lake level and salt concentrations.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list and placed on the Enforceable Program List because while applicable water quality standards are exceeded, another program will address the problem. SWRCB Decision 1631 establishes conditions to control lake level and salt concentrations. Salt concentrations are not solely due to natural causes. Fifty years of water diversions caused a 45 foot drop in lake level, which caused increases in salt concentrations above those caused by natural sources. SWRCB Decision 1631 established a restored lake level of 6391 feet to meet water quality standards.

Region 6: Owens Lake
Salinity, TDS, Chlorides

Water Body	Owens Lake
Stressor/Media/Beneficial Use	Salinity, TDS, Chlorides/Water/Drinking, Aquatic life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Owens Lake has accumulated salts and trace elements from volcanic and geothermal sources and from concentration caused by water diversions in a closed basin over geologic time.
Alternative Enforceable Program	Windblown dust control agreement by LADWP and Great Basin Unified Air Pollution Control District.
RWQCB Recommendation	Delist.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because impairment is due to natural sources of salts and trace elements. Except for a few inches of water used to wet the dry lakebed to reduce particulate air pollution, no water remains. The Lake is not a drinking water supply.

Region 6: Owens River
Arsenic

Water Body	Owens River
Stressor/Media/Beneficial Use	Arsenic/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Source is of volcanic origin, with no sources of industrial or agricultural discharges.
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because impairment is from natural causes. The beneficial use is drinking water supply for City of Los Angeles Arsenic is removed from this water supply before delivery for use.

Region 6: Robinson Creek
Pathogens

Water Body	Robinson Creek
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between April 2000- June 2001.
Data used to assess water quality	At least 5 of 6 fecal coliform samples (83%) exceeded the WQO (no more than 10% of samples collected in any 30-day period shall exceed 40/100 ml).
Spatial representation	Targeted in water body.
Temporal representation	No more than 10% of samples collected in any 30-day period shall exceed 40/100 ml.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	High coliform counts coincide with months when livestock are present.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. An inadequate amount number of water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is currently low. Nonetheless, there is some evidence of impacts to beneficial uses. Therefore, this water body should be monitored more extensively before the next listing cycle.

Region 6: Searles Lake
Salinity, TDS, Chlorides

Water Body	Searles Lake
Stressor/Media/Beneficial Use	Salinity, TDS, Chlorides/Water/WILD, REC-1, REC-2, SAL
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	Department of Fish and Game (DFG) believes that wastewater ponds created at Searles Lake are an on-going threat to wildlife. DFG has documented hundreds of bird deaths, primarily from salt toxicosis and salt encrustation (documentation enclosed). Historically, the dry lakebed offered little or no open water to migrating waterfowl. Hence birds did not stop and mortality was minimal. That is in contrast to current conditions, where effluent from salt-extraction operations have created a lethal attraction for migrating birds.
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Some natural sources, possible discharges of brine from IMCC. Waste Discharge Requirements Cleanup and Abatement Orders.
Alternative Enforceable Program	The RWQCB has issued Cleanup and Abatement Orders to address this pollutant problem in Searles Lake (Cleanup and Abatement Order Nos. 6-00-64 and 6-00-64A1). These orders require the company to (1) describe methods implemented to significantly reduce the number of waterfowl deaths, (2) eliminate ongoing sources of contaminant concentrations to the Lake, (3) implement any additional methods that are necessary to correct the problems, (4) eliminate all visible petroleum hydrocarbons from surface waters of the Lake, (5) remove or remediate to non-detect levels, all visible petroleum hydrocarbon contaminated surface soils and sediments, and (6) to periodically report on the effectiveness of remediation efforts.
RWQCB Recommendation	Delist because impairment resulting from salinity/TDS/chlorides is from natural sources, and the lake is supporting aquatic life uses to the extent possible under extreme environmental conditions.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that Searles Lake should be removed from the section 303(d) list for salinity, TDS, and chlorides and placed on the Enforceable Program List because

applicable water quality standards are exceeded but other programs will better address the problem.*

This conclusion is based on the staff findings that:

1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses have been established for the water body.
4. Standard methods were used.
5. Other water body- or site-specific information including the effects of natural sources and age of the data were considered.

An adequate amount of the measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

* 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.

Region 6: Searles Lake
Petroleum Hydrocarbons

Water Body	Searles Lake
Stressor/Media/Beneficial Use	Petroleum Hydrocarbons/Water/WILD, REC-1, REC-2, SAL
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Petroleum Hydrocarbons are linked to Beneficial Uses.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to WQO directly.
Water Body-specific Information	13 site inspections by Regional Board staff between February and June, 2000.
Data used to assess water quality	Numerous (at least 13) observations of visible oil on Lake waters, banks, channels and ponds. Over 150 dead waterfowl collected by CDFG. Waterfowl encrusted with brine and oil. Oil found in internal organs of waterfowl. Visible oil observed. Sample collected showed 156,000 ppm TPH. DFG believes that wastewater ponds created at Searles Lake are an on-going threat to wildlife. DFG has documented hundreds of bird deaths, primarily from salt toxicosis and salt encrustation (documentation enclosed). Historically, the dry lakebed offered little or no open water to migrating waterfowl. Hence birds did not stop and mortality was minimal. That is in contrast to current conditions, where effluent from salt-extraction operations have created a lethal attraction for migrating birds.
Spatial representation	Visible oil observed at numerous locations.
Temporal representation	Visible oil observed on more than 13 occasions during a 5-month period.
Data type	13 site inspections by Regional Board staff between February and June, 2000. Visible oil observed. Sample collected showed 156,000 ppm TPH.
Use of standard method	
Potential Source(s) of Pollutant	Source is IMCC Chemical mineral extraction operation. Waste Discharge Requirements, Cleanup and Abatement Orders.
Alternative Enforceable Program	The RWQCB has issued Cleanup and Abatement Orders to address this pollutant problem in Searles Lake (Cleanup and Abatement Order Nos. 6-00-64 and 6-00-64A1). These orders require the company to (1) describe methods implemented to significantly reduce the number of waterfowl deaths, (2) eliminate ongoing sources of contaminant concentrations to the Lake, (3) implement any additional methods that are necessary to correct the problems, (4) eliminate all visible petroleum hydrocarbons from surface waters of the Lake, (5) remove or remediate to non-detect levels, all visible petroleum hydrocarbon contaminated surface soils and sediments, and (6) to periodically report on the effectiveness of remediation efforts.
RWQCB Recommendation	List.

Region 6: Searles Lake
Petroleum Hydrocarbons

SWRCB Staff Recommendation

After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that Searles Lake should be removed from the section 303(d) list and placed on the Enforceable Program List because applicable water quality standards are exceeded but other programs will better address the problem.*

This conclusion is based on the staff findings that:

1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses have been established for the water body.
4. The evaluation guideline used to interpret narrative water quality standards is adequate.
5. Data are numerical, not numerical, both numerical and not numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the effects of natural sources and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

* 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.

Region 6: Snow Creek
Habitat Alterations

Water Body	Snow Creek
Stressor/Media/Beneficial Use	Habitat Alterations/Habitat/Aquatic life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	
RWQCB Recommendation	Delist due to implementation of a wetland/riparian restoration program that included removal of fill material, restoration of the stream channel, revegetation, and installation of culverts to allow fish passage and reduce highway flooding.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because although applicable water quality standards were exceeded, the problem is not due to a pollutant and another program addressed the problem--i.e., implementation of a wetland/riparian restoration program that included removal of fill material, restoration of the stream channel, revegetation, and installation of culverts to allow fish passage and reduce highway flooding.

Region 6: Swauger Creek
Pathogens

Water Body	Swauger Creek
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from March 2000- June 2001.
Data used to assess water quality	Data exceeded the WQO (40/100 ml) in at least 5 of 16 samples (31%). The WQO allows no more than 10% of samples to exceed the 40/100 ml.
Spatial representation	Targeted in water body.
Temporal representation	Data collected from March 2000- June 2001.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	Livestock, wildlife, septic systems, human recreational users.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Swauger Creek
Phosphorus

Water Body	Swauger Creek
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Phosphorus is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 2000-2001.
Data used to assess water quality	Data showed violations of the WQO (0.06 mg/L as an annual mean) in both years.
Spatial representation	Targeted in water body.
Temporal representation	Annual mean.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Partially natural sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Tallac Creek (Tributary To Lake Tahoe) Pathogens

Water Body	Tallac Creek (Tributary To Lake Tahoe)
Stressor/Media/Beneficial Use	Pathogens/Water/Human Health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected in 2001.
Data used to assess water quality	Data collected in 2001 from 2 sampling stations showed 4 violations of the WQO at the downstream station.
Spatial representation	2 sampling stations.
Temporal representation	Data collected in 2001.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	Livestock wastes are primary source.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 6: Tinemaha Reservoir
Arsenic

Water Body	Tinemaha Reservoir
Stressor/Media/Beneficial Use	Arsenic/Water/Drinking
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Source is of volcanic origin, with no sources of industrial or agricultural discharges.
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist due to natural causes. Beneficial use is drinking water supply for City of Los Angeles Arsenic is removed from this water supply before delivery for use.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because the source is entirely natural. The beneficial use is drinking water supply for City of Los Angeles. Arsenic is removed from this water supply before delivery for use.

Region 6: Top Spring
Radiation

Water Body	Top Spring
Stressor/Media/Beneficial Use	Radiation/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Natural source of radioactivity. Spring is contained within a pipe and is not used as a water supply.
Alternative Enforceable Program	
RWQCB Recommendation	Delist because exceedence of standards is due to natural causes. TMDL is not applicable.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because the sources are entirely natural.

Region 6: Trout Creek (above Hwy 50, below Hwy 50) (was Trout Creek [+ Pathogens

Water Body	Trout Creek (above Hwy 50, below Hwy 50) (was Trout Creek [above and below Hwy 50] [Tributary to Lake Tahoe])
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between June-Sept, 2001.
Data used to assess water quality	Data showed frequent violations of WQOs for fecal coliform bacteria.
Spatial representation	Targeted in water body.
Temporal representation	Data collected between June-Sept, 2001.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	Livestock wastes are primary source.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Trout Creek (above Hwy 50, below Hwy 50) (was Trout Creek [+ Phosphorus

Water Body	Trout Creek (above Hwy 50, below Hwy 50) (was Trout Creek [Tributary to Lake Tahoe])
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	Phosphorus is linked to Aquatic Life.
Linkage between measurement endpoint and benefical use or standard	Yes.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between 1980-1996.
Data used to assess water quality	Annual means for 14 of 14 water years exceed the WQO (0.015 mg/L annual mean).
Spatial representation	Targeted in water body.
Temporal representation	Annual means for 14 of 14 water years.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Sources are erosion, stormwater, atmospheric, Deposition due to wetland and riparian disturbance.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Trout Creek (above Hwy 50, below Hwy 50) (was Trout Creek [+ Nitrogen

Water Body	Trout Creek (above Hwy 50, below Hwy 50) (was Trout Creek [Tributary to Lake Tahoe])
Stressor/Media/Beneficial Use	Nitrogen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Nitrogen is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between 1989-1996.
Data used to assess water quality	Annual means for 6 of 8 water years exceed the WQO (0.19 mg/L annual mean)
Spatial representation	Targeted in water body.
Temporal representation	Annual means for 6 of 8 water years.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Source are natural as well as anthropogenic, including atmospheric deposition, stormwater, fertilizer use, livestock grazing, septic systems, wastewater disposal to land.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Trout Creek (above Hwy 50, below Hwy 50) (was Trout Creek [+ Iron (plant nutrient)

Water Body	Trout Creek (above Hwy 50, below Hwy 50) (was Trout Creek [Tributary to Lake Tahoe])
Stressor/Media/Beneficial Use	Iron (plant nutrient)/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Iron is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between 1989-1996.
Data used to assess water quality	Annual means for 8 of 8 water years exceed the WQO (0.03 mg/L annual mean).
Spatial representation	Targeted in water body.
Temporal representation	Annual means for 8 of 8 water years.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Natural loading has increased due to increased erosion and stormwater runoff due to land disturbance.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Truckee River, upper (above and below Christmas Valley) (wa + Phosphorus

Water Body	Truckee River, upper (above and below Christmas Valley) (was Upper Truckee River [Tributary to Lake Tahoe])
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Phosphorus is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1980-1996.
Data used to assess water quality	Annual means for 17 of 17 water years exceed the WQO (0.015 mg/L annual mean).
Spatial representation	Targeted in water body.
Temporal representation	Annual means for 17 of 17 water years.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Erosion, fertilizer use, stormwater.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Truckee River, upper (above and below Christmas Valley) (wa + Iron (plant nutrient)

Water Body	Truckee River, upper (above and below Christmas Valley) (was Upper Truckee River [Tributary to Lake Tahoe])
Stressor/Media/Beneficial Use	Iron (plant nutrient)/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Iron is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1989-1996.
Data used to assess water quality	Annual means for 8 of 8 water years exceed the WQO (0.03 mg/L annual mean).
Spatial representation	Targeted in water body.
Temporal representation	Annual means for 8 of 8 water years.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Natural background, increased loading due to land disturbance, stormwater.
Alternative Enforceable Program	
RWQCB Recommendation	List
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Truckee River, upper (above Christmas Valley) (was Upper Tr + Pathogens

Water Body	Truckee River, upper (above Christmas Valley) (was Upper Truckee River [Tributary to Lake Tahoe])
Stressor/Media/Beneficial Use	Pathogens/Water/Human Health .
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1999-2001.
Data used to assess water quality	Violations of WQO observed in July, August and Sept. 2001, during grazing season. (WQO = 20/100ml log mean during any 30-day period or not more than 10% of samples to exceed 40/100 ml in any 30-day period).
Spatial representation	Violations of WQO observed at 2 stations in 2000 at end of grazing season.
Temporal representation	Violations of WQO observed in July, August and Sept. 2001, during grazing season.
Data type	WQO and fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	Waste from livestock grazing believed to be primary source.
Alternative Enforceable Program	USFS Grazing management plan.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Virginia Creek
Pathogens

Water Body	Virginia Creek
Stressor/Media/Beneficial Use	Pathogens/Water/Human health
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Pathogens are linked to Human Health.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected between April 2000- June 2001.
Data used to assess water quality	1 of 15 fecal coliform samples (7%) exceeded the WQO of 40/100 ml. WQO requires that no more than 10% of samples collected in any 30-day period shall exceed 40/100 ml. Standard is being met.
Spatial representation	Targeted in water body.
Temporal representation	No more than 10% of samples collected in any 30-day period shall exceed 40/100 ml.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Do not list.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should not be placed on the section 303(d) list because applicable water quality standards are not exceeded. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were not exceeded is moderate.

Region 6: Ward Creek (Tributary To Lake Tahoe) Nitrogen

Water Body	Ward Creek (Tributary To Lake Tahoe)
Stressor/Media/Beneficial Use	Nitrogen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Nitrogen is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1989-1996.
Data used to assess water quality	Data exceeded WQO in 7 of 8 years.
Spatial representation	Targeted in water body.
Temporal representation	Data collected over 8 year period.
Data type	Fecal coliform counts are numeric information.
Use of standard method	
Potential Source(s) of Pollutant	Natural (nitrogen fixation) and anthropogenic (atmospheric, deposition, erosion, stormwater).
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Ward Creek (Tributary To Lake Tahoe) Phosphorus

Water Body	Ward Creek (Tributary To Lake Tahoe)
Stressor/Media/Beneficial Use	Phosphorus/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Phosphorous is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1980-1996.
Data used to assess water quality	Annual means for 15 of 17 water years exceed the WQO (0.015 mg/L annual mean).
Spatial representation	Targeted in water body. Locations unknown.
Temporal representation	Annual means for 17 water years.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Erosion, stormwater, atmospheric deposition.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Ward Creek (Tributary to Lake Tahoe)
Iron (plant nutrient)

Water Body	Ward Creek (Tributary to Lake Tahoe)
Stressor/Media/Beneficial Use	Iron (plant nutrient)/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA procedures used.
Linkage between measurement endpoint and benefical use or standard	Iron is linked to Aquatic Life.
Utility of measure for judging if standards or uses are not attained	Measurement can be directly compared to WQO.
Water Body-specific Information	Data collected from 1989-1996.
Data used to assess water quality	Annual means for 8 of 8 water years exceed the WQO (0.03 mg/L annual mean).
Spatial representation	Targeted in water body.
Temporal representation	Annual means for 8 water years.
Data type	WQO and water column chemistry data are numeric values.
Use of standard method	
Potential Source(s) of Pollutant	Iron is naturally present in soil, but loading has increased due to erosion from land disturbance.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 6: Wendel Hot Springs, Amedee Hot Springs, Hot Creek, Fales Ho + Salinity, metals, arsenic

Water Body	Wendel Hot Springs, Amedee Hot Springs, Hot Creek, Fales Hot Springs, Little Hot Creek, Little Alkali Lake, Deep Springs Lake, Keogh Hot Springs, Amaragosa River
Stressor/Media/Beneficial Use	Salinity, metals, arsenic
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Natural causes.
Alternative Enforceable Program	
RWQCB Recommendation	Delist due to natural causes of impairments. Basin Plan amendments for 9 waters to remove MUN use have been approved by SWRCB. Use attainability analysis has been prepared by RWQCB.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be removed from the section 303(d) list because the source of impacts to water quality standards is natural. Basin Plan amendments for nine water bodies to remove the MUN use have been approved by SWRCB. A Use Attainability Analysis has been prepared by RWQCB.

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Water Bodies Proposed for the Monitoring List in Region 6

Water Body	Pollutant/Stressor	Rationale
Angora Lake, upper		
	Pesticides (16 different compounds)	USGS study showed detectable levels of pesticides (in violation of RWQCB narrative objective). However, data quantity was considered insufficient to warrant listing. Additional monitoring is necessary to confirm impacts to beneficial uses.
Arrowhead, Lake (was Lake Arrowhead)		
	Boat fuel constituents (Petroleum Products), nutrients	For boat fuel constituents: The Lake is used extensively for boating. Based on sampling elsewhere in Region 6, boat fuel constituents may be impacting water quality and aquatic life uses. Additional monitoring is necessary to establish this likelihood. For nutrients: The watershed is heavily developed and the Lake is almost certainly impacted by stormwater discharges and atmospheric nutrient deposition. Additional monitoring is necessary to confirm these likelihoods.
Asa Lake		
	Nutrients	This water body was identified as "threatened" or "intermediate" in earlier Section 305(b) assessments due to high nutrient concentrations. These conditions likely persist, but no recent data is available in order to asses the current level and extent of threats to beneficial uses.
Aurora Canyon Creek		
	Total dissolved solids, nitrogen, phosphorus, mercury	For nitrogen, phosphorus, and total dissolved solids: A study sponsored by the North Mono Resource Conservation District showed some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB review. For mercury: There is an abandoned mercury ore mill in the watershed. It is the subject of a currently inactive CERCLA project. Testing in 1980s showed mercury in soil and sediment exceeding certain criteria used in the CERCLA process. However, there is no recent data available. Up-to-date monitoring is necessary to confirm likely impacts to beneficial uses.
Barney Lake		
	Nitrogen	Study sponsored by North Mono RCD showed the possibility for water quality problems, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary.
Blackwood Creek		
	Pesticides (4 different compounds)	USGS study showed detectable levels of pesticides. However, data quantity was considered insufficient to evaluate compliance. Additional monitoring is necessary.
Blue Lake		
	Nitrogen	Study sponsored by North Mono RCD showed the potential for impacts on water quality, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary.
Bonnie Lake		
	Nitrogen	Study sponsored by North Mono RCD showed the potential for water quality problems, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary.

Water Body	Pollutant/Stressor	Rationale
Buckeye Creek		
	Phosphorus	While the water quality objective is not exceeded, it is probably set at a level too high to protect beneficial uses. In other words, existing beneficial uses are probably being deleteriously impacted. Additional monitoring is necessary to confirm this and to allow revision of the inappropriate objective.
	Total dissolved solids	Study sponsored by North Mono RCD shows the potential for a water quality problem, but quality assurance/quality control information was not provided for the RWQCB listing effort. More monitoring is necessary.
Carson River, West Fork (headwaters to Woodfords, Woodfords to Paynesville, Paynesville to State Line) (was West Fork Carson River)		
	sulfate, boron	The RWQCB objectives are exceeded, but insufficient data were available to determine whether the constituent causing the problem were pollutants or from natural sources. Additional study is needed to determine this information.
Chain o Lakes		
	Nitrogen	Study sponsored by North Mono RCD showed the potential for a water quality problem, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary.
Cold Stream		
	Sediment	The degree of attainment of water quality standards cannot be determined for this water body. Additional monitoring and assessment is required in order to determine more accurately the need for development of a TMDL.
Cooney Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Crown Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Deep Creek		
	Total dissolved solids, sulfate, fluoride	Prior monitoring showed some violations of water quality objectives. However, data quantity was insufficient to warrant listing. Also, quality assurance/quality control information was not available. Further study is necessary to gather appropriate data.
Desert Creek		
	Sulfate, acid mine drainage	An inactive mine in California discharges into this water body. Monitoring downstream in Nevada shows high sulfate levels. Monitoring in California is needed to confirm impacts to beneficial uses.
Diaz Lake		
	Nutrients	Lake was identified as "threatened" or "intermediate" in an earlier Section 305(b) assessment. RWQCB staff observations strongly suggest that beneficial uses are being impacted. However, there is no recent data available.
Donner Creek		
	Sediment	RWQCB staff have observed streambank erosion downstream of Donner Lake. The Creek is affected by releases from lake and was impacted by a 1997 flood. Water quality monitoring is required to confirm impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
Donner Lake		
	Boat Fuel Constituents (Petroleum Products)	A U.C. Davis study shows increases in petroleum hydrocarbons following peak boating weekends. The results of the ongoing Lake Tahoe study of PAH-effects on aquatic life are needed (but currently unavailable) in order to determine whether beneficial uses at Donner Lake are impacted.
	Pathogens	The (surface water) drinking water system at the Lake was recently upgraded due to reports of illness; further source water monitoring is necessary to confirm likely impacts to beneficial uses.
Eagle Creek		
	Nitrogen, phosphorus	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Eagle Lake		
	Mercury	Limited amounts of Department of Water Resources data show violations of criteria in water, sediment and fish tissue. (The source is probably natural.) Additional data are needed to confirm impairment.
East Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
East Walker River above Bridgeport Reservoir		
	Phosphorus, nickel	The RWQCB water quality objective is not exceeded, but is probably set at a level too high to protect beneficial uses. In other words, existing beneficial uses are probably being deleteriously impacted. Additional monitoring is necessary to confirm this and to allow revision of the inappropriate objective.
East Walker River below Bridgeport Reservoir		
	Fuel oil (spill), mercury, nickel and other metals	For mercury, nickel, and other metals: There is an abandoned mercury ore mill in the watershed. There have been elevated metal levels (including mercury) in Toxic Substances Monitoring Program fish tissue samples. Additional sampling is necessary to establish exactly to what extent water quality standards are being impacted. (The entire East Walker River is proposed to be removed from the 303(d) list due to metals.) For Fuel oil (spill): Results of monitoring associated with cleanup activities were not available to RWQCB 303(d) assessment staff. Long term monitoring is necessary to document beneficial use recovery.
Echo Lake, Lower (was Lower Echo Lake)		
	Nutrients	The watershed is affected by gray water discharges from summer homes and human waste from heavy backcountry recreational use. Limited monitoring by the Tahoe Regional Planning Agency shows higher nitrogen concentrations than in oligotrophic Fallen Leaf Lake. Additional monitoring is necessary to help protect beneficial uses of this important water body.
Echo Lake, upper		
	Nitrogen	The watershed is significantly affected by human wastes from heavy backcountry recreational use. Limited monitoring by the Tahoe Regional Planning Agency shows higher nitrogen concentration levels than in oligotrophic Fallen Leaf Lake. More monitoring is required to help accurately determine the nature and extent of impacts to water quality standards at the Lake.

Water Body	Pollutant/Stressor	Rationale
Emerson Creek		
	Sediment	Streams on east slope of Warner Mountains were "blown out" by January 1997 flood; no quantitative data is currently available to determine beneficial use impacts, but ongoing impacts are likely.
Fallen Leaf Lake		
	Nutrients	A 1990s U.C. Davis study indicated that the Lake is oligotrophic, but the study did not document the reason for the 1980s taste and odor problems (associated with algae blooms). Periodic monitoring as part of the overall Tahoe Basin monitoring program is necessary.
Fredericksburg Canyon Creek		
	Sediment	RWQCB staff analysis for earlier Section 305(b) assessment pointed to erosion, from area affected by wildfire, as a significant cause of water quality degradation. However, there is no recent data/information to determine the extent and nature of present-day impacts to beneficial uses.
Fremont Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Frog Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
General Creek		
	Pesticides (5 different compounds)	USGS study showed detectable levels of pesticides. However, data quantity was considered insufficient to warrant listing. Additional monitoring is necessary to confirm impacts to beneficial uses.
George, Lake (was Lake George)		
	Metals	Lake George was identified as "threatened" or "intermediate" in a prior Section 305(b) assessment based on limited STORET data. Beneficial uses may be impacted. However, no recent data are available.
Gilman Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Grass Lake Wetlands		
	Road salt	This is a USFS Significant Natural Area (sphagnum bog). Agency concern has been expressed about road salt impacts but no monitoring data were available for review. Monitoring is necessary to establish likely impacts to water quality standards.
Green Creek		
	Nitrogen	USGS data provided included a number of estimated values and one violation of objective. Additional data is needed to determine without a doubt whether the water quality objective is being violated.
Green Creek, above Green Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
Green Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Griff Creek		
	Sediment	An erosion control project was implemented in early 1980s. However, there is no recent monitoring data available. Observations suggest problems, but up-to-date sampling is necessary to confirm impacts to water quality standards.
Gull Lake		
	Nitrogen	The June Lakes watershed is significantly affected by stormwater discharges from recent development. Additional monitoring is necessary to document the types and extents of impacts to beneficial uses.
Harriet Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Heavenly Valley Creek, source to USFS boundary and USFS boundary to Trout Creek (was Heavenly Valley Creek)		
	Nitrogen	The RWQCB objective was possibly violated in the lower reach of the Creek, which is affected by a former wastewater disposal area and by urban runoff. However, data quantity was considered insufficient to warrant listing in 2002.
Heenan Reservoir		
	Nitrogen	Fish kills have occurred here due to dissolved oxygen depletion. The Department of Fish and Game maintains aerators there. The Reservoir is observed to have high levels of algae. However, there was no nutrient information available at the time of listing. Additional monitoring is necessary to confirm likely impacts to beneficial uses.
Helen Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Hidden Valley Creek (was Unnamed creek [aka Hidden Valley Creek])		
	Chloride	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the major source of pollutants is natural.
	Phosphorus	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the major source of pollutants is natural.
Hoover Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Horse Creek		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
Independence Creek		
	Mercury	Mercury levels in Toxic Substances Monitoring Program fish tissue sample exceeded the MTRL guidance level. Additional sampling is needed to verify the extent and nature of impacts to beneficial uses.
Indian Creek		
	Phosphorus, nitrogen	Prior (RWQCB) sampling showed high phosphorus and nitrogen levels but Creek has no site specific phosphorus/nitrogen objectives. Additional monitoring is required in order to confirm likely impacts to existing beneficial uses.
Ivanpah Dry Lake		
	Radioactive elements (lanthanides)	Ongoing cleanup action has been implemented for spills from Molycorp mining/ore processing facilities and past waste-disposal onto the Lake bed. More data is needed to assess impacts of lanthanides on beneficial uses of ephemeral Lake waters.
June Lake		
	Nutrients, mercury	For nutrients: The June Lakes watershed is significantly affected by stormwater from development. Additional monitoring is necessary to establish the exact level of impacts to water quality standards. For mercury: A Toxic Substances Monitoring Program fish tissue sample exceeded MTRL criterion. The source is probably natural (volcanic). Further monitoring is needed to determine whether impacts to beneficial uses exist.
Koenig Lake		
	Nutrients	Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted.
Lassen Creek		
	Sediment	RWQCB staff has on numerous occasions noted visual evidence of likely harmful impacts to beneficial uses from existing sediment loads. However, appropriate water quality sampling is needed to confirm this observations.
Lily Lake		
	Nutrients	From the 1970s, data and RWQCB staff observations indicate lake is eutrophic (probably natural marsh development). However, there is no recent nutrient data. Monitoring is necessary to confirm impacts to beneficial uses.
Little Truckee River		
	Sediment	DFG comments during earlier list update-cycle identified sediment problems associated with diversion to Sierra Valley (Feather River) watershed. However, appropriate water quality sampling is necessary to confirm these observations.
Little Walker River		
	Sediment, total dissolved solids, nitrogen	Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted.
Littlerock Reservoir		
	Sediment, iron, manganese	For sediment: The Palmdale Water District is planning a large-scale sediment removal project. However, there is no data available on impacts of sediment on aquatic life uses. Monitoring is needed to determine the exact nature of likely impacts to beneficial uses. For iron and manganese: Palmdale Water District customer reports show source water concentrations exceeding the applicable MCL guideline (and therefore the RWQCB "Chemical Constituents" objective). More monitoring is necessary to pin down the nature and extent of impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
Lonely Gulch Creek		
	Sediment	Severe impacts resulted to the Creek in the 1960s-1970s from subdivision development. Up-to-date monitoring is necessary confirm problems/improvements from recent watershed restoration projects.
Long Lake (Lower)		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Long Lake (Upper)		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Long Valley Creek		
	Sediment	RWQCB staff has on numerous occasions noted visual evidence of likely harmful impacts to beneficial uses from existing sediment loads. However, appropriate water quality sampling is necessary to confirm these observations. The Creek is affected by grazing and gravel quarrying.
Los Angeles Aqueduct		
	Copper	High levels of copper have been found in the Los Angeles aqueduct/reservoir system from copper-based algaecide applications. The RWQCB is concerned about beneficial use impacts. More monitoring is required.
Lundy Lake		
	Mine drainage (Acid Mine Drainage)	An inactive mine affects the watershed. Toxic Substances Monitoring Program results show elevated metals in fish tissue. However, more monitoring is needed closer to the mine in order to confirm likelihood of impacts to beneficial uses.
Madden Creek		
	Sediment	The Creek was classified as "Marginal" fish habitat in the 1996 Tahoe Regional Planning agency report. Up-to-date monitoring needed to document recovery and impacts to beneficial uses.
Markeeville Creek		
	Nitrogen, phosphorus, total dissolved solids, chloride	Monitoring shows some violations of applicable objective. But data quantity was insufficient to warrant listing. Additional monitoring is necessary to establish whether water quality standards are truly being impacted.
Martis Creek		
	Nutrients	The Creek is impacted by wastewater discharges to land. Concerns were recently expressed by stakeholders about algae blooms in Martis Creek Reservoir and nutrient discharges from golf courses and other development upstream. Additional monitoring is needed.
Mary, Lake (was Lake Mary)		
	Boat fuel constituents, including MTBE (Petroleum Products)	Comments on 303(d) list recommendations by former member of Mammoth County Water District Board discussed detectable MTBE in Lake waters. There is no current substantiation, however. Monitoring is necessary to determine the nature and extent of possible impacts to beneficial uses.
McGee Creek		
	Mine drainage (Acid Mine Drainage)	An inactive mine affects the watershed. Toxic Substances Monitoring Program results show elevated metals in fish tissue. However, more monitoring is needed closer to the mine in order to confirm likelihood of impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
McKinney Creek		
	Sediment	There appear to be significant sediment impacts from road operations/maintenance. Creek restoration is ongoing as a result of Regional Board enforcement actions. The Creek was classified as "Marginal" fish habitat in the 1996 Tahoe Regional Planning agency report. Up-to-date monitoring needed to document recovery and impacts to beneficial uses.
Meeks Creek		
	Sediment	The lower reach of this Creek is affected by stormwater discharges from campgrounds and development activities. There have been recent fires in the watershed, to the detriment of water quality. However, there is no recent sediment sampling data on which to base a listing.
Meiss Lake		
	Nutrients	The Lake appears to be naturally eutrophic (marshy) and may, as such, be particularly affected by wastes from livestock and recreational users. Unfortunately, there is no quantitative data available at this time, prompting the need for additional monitoring.
Mill Creek		
	Nitrogen	Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted.
Mojave River at Dam Forks		
	Sulfate	Prior monitoring showed some violations of water quality objective. However, data quantity was insufficient to warrant listing. Further study is required to accurately determine the extent and nature of impacts to beneficial uses.
Mojave River at Lower Narrows		
	Nutrients	Prior monitoring showed some violations of water quality objective. However, data quantity was insufficient to warrant listing. Further study is required to accurately determine the extent and nature of impacts to beneficial uses.
Mojave River between Upper and Lower Narrows		
	Chloride	Prior monitoring showed some violations of water quality objective. However, the RWQCB determined that data quantity was insufficient to warrant listing. Further study is required to accurately determine the extent and nature of impacts to beneficial uses.
	PCE and TCE (organic solvents)	The subsurface flow of the River is affected by PCE/TCE contamination in the groundwater beneath the City of Victorville. However, only one surface water sample is available. More monitoring is needed to determine the nature and extent of impacts to beneficial uses.
	Sulfate	Prior monitoring showed some violations of water quality objective. However, the RWQCB determined that data quantity was insufficient to warrant listing. Further study is required to accurately determine the extent and nature of impacts to beneficial uses.
	TDS	Prior monitoring showed some violations of water quality objective. However, the RWQCB determined that data quantity was insufficient to warrant listing. Further study is required to accurately determine the extent and nature of impacts to beneficial uses.
Mojave River, Barstow to Waterman Fault		
	Nitrogen, total dissolved solids	Samples collected where (subsurface) flow of river reaches the surface show high levels of nitrogen and TDS, but there are no site-specific nitrogen or TDS objectives for this reach. Nonetheless, beneficial uses are likely being impacted. Further monitoring is needed to confirm this.

Water Body	Pollutant/Stressor	Rationale
Mojave River, West Fork (was West Fork Mojave River)		
	Nitrogen	Prior monitoring showed some violations of water quality objective. However, data quantity was insufficient to warrant listing. Further study is required to accurately determine the extent and nature of impacts to beneficial uses.
Monitor Creek		
	Nitrogen, phosphorus	The limited data available indicate nutrient releases from Heenan Reservoir as a possible source of water quality problems. Additional monitoring is necessary to establish the level and extent of present-day impacts.
Peeler Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Pine Creek		
	Mine/tailings drainage, sediment	An inactive mine affects the watershed. Toxic Substances Monitoring Program results show elevated metals in fish tissue. However, more monitoring is needed closer to the mine in order to confirm likelihood of impacts to beneficial uses.
	Nutrients (nitrogen, phosphorus)	Limited data from early 1990s indicate some grounds for concern; Creek is largest tributary to mesotrophic Eagle Lake and nutrient monitoring will be necessary for development of Lake TMDL.
Raider Creek		
	Sediment	Streams on east slope of Warner Mountains were "blown out" by January 1997 flood; no quantitative data is currently available to determine beneficial use impacts, but ongoing impacts are likely.
Red Lake Creek		
	Sulfate, acid mine drainage	An inactive mine affects the watershed. Toxic Substances Monitoring Program results show elevated metals in fish tissue. Carson River monitoring shows relatively high sulfate. However, more monitoring is needed closer to the mine in order to confirm likelihood of impacts to beneficial uses.
Reversed Creek		
	Sediment, nutrients	The June Lakes watershed is significantly affected by stormwater from development. Additional monitoring is necessary to establish the exact level of impacts to water quality standards.
Robinson Creek		
	Total dissolved solids, phosphorus	For TDS: Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted. For phosphorus: Water quality objective is not exceeded, but is probably set at a level too high to protect beneficial uses. In other words, existing beneficial uses are probably being deleteriously impacted. Additional monitoring is necessary to confirm this and to allow revision of the inappropriate objective.
Robinson Creek above Barney Lake		
	Nitrogen	Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted.

Water Body	Pollutant/Stressor	Rationale
Robinson Creek, Barney Lake to Twin Lakes		
	Nitrogen	Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted.
Robinson Creek, Hwy 395 to Bridgeport Reservoir		
	Nitrogen	Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted.
Robinson Lake (Lower)		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Robinson Lake (Upper)		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Roosevelt Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Ruth Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Sawmill Pond		
	Sediment	The Pond received a threatened/intermediate rating in an earlier Section 305(b) assessment due to construction-related problems. There is no recent data. It is likely that there are significant impacts to beneficial uses. More up-to-date monitoring is required to verify this.
Scotts Lake		
	Sediment	RWQCB staff observations made for an earlier Section 305(b) assessment suggested that this water body is significantly impacted. Impacts to existing beneficial uses probably continue. However, there is no recent data/information to determine the extent and nature of present-day impacts to beneficial uses.
Shake Creek		
	Total dissolved solids, nitrate, sulfate, boron, fluoride, landfill leachate constituents	Monitoring associated with landfill maintenance shows exceedances of objectives. However, data quantity was insufficient to warrant listing at that time. Additional monitoring is necessary to confirm likely impacts to beneficial uses.
Sherwin Creek		
	Sediment, nutrients	Agency concern exists about the impacts of erosion and stormwater discharges from urban and ski resort development. Deleterious effects on beneficial uses are likely. However, no recent data are available.

Water Body	Pollutant/Stressor	Rationale
Silver Creek		
	Metals/acid mine drainage	An inactive mine affects the watershed. Toxic Substances Monitoring Program results show elevated metals in fish tissue. More monitoring is needed closer to the mine in order to confirm likelihood of impacts to beneficial uses.
Silver Lake		
	Nutrients	The June Lakes watershed is significantly affected by stormwater discharges from recent development. Additional monitoring is necessary to document the types and extents of impacts to beneficial uses.
Silverwood Lake		
	Salts, trace elements from imported water (Salinity)	Elevated metal levels were found in Toxic Substances Monitoring Program fish tissue samples. A concern was expressed by stakeholders about impacts of imported water on local drinking water supplies. Additional sampling is needed to establish the level and extent of impacts to beneficial uses.
Snow Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Spring Valley Lake		
	Sediment	The Lake was identified as "threatened" or "intermediate" in an earlier Section 305(b) assessment. RWQCB staff observations suggest the strong possibility of impacts to beneficial uses, but there is no recent data to confirm this.
Squaw Creek Meadow Wetlands		
	Pesticides	A golf course was developed within the meadow, whose wetland values were damaged by the 1960 Olympics development activities. Pesticide impacts on Squaw Creek are monitored but no data is available on wetland impacts. Further data must be collected in order to appropriately confirm the level and extent of impacts to beneficial uses.
Stampede Reservoir		
	Chlordane	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. An inadequate amount number of water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is currently extremely low. Nonetheless, there is some evidence of impacts to beneficial uses. Therefore, this water body should be monitored more extensively before the next listing cycle.
	Pesticides (lindane)	Only one data point was available during 1989 listing. WQO for lindane is 2.5 ug/kg and original sample result was 2.6 ug/kg. Periodic re-sampling through Toxic Substances Monitoring Program should be done to confirm lack of impacts to water quality standards.
Stella Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Summers Creek		
	Nitrogen, total dissolved solids	Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted.

Water Body	Pollutant/Stressor	Rationale
Summit Creek		
	Petroleum products	Aquatic life is impacted by spills from a petroleum pipeline, but monitoring results were not available for review during the 2001-2002 list update. Long term monitoring is necessary to document recovery of instream uses.
Summitt Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Susan River downstream of Susanville		
	Mercury	Elevated Mercury was found in Toxic Substances Monitoring Program fish tissue sample. Additional monitoring is needed to confirm impairment.
	Nickel	
	PCBs	Elevated PCBs were found in Toxic Substances Monitoring Program fish tissue sample. Additional monitoring is needed to confirm impairment.
Susan River upstream of Susanville		
	Mercury	A Toxic Substances Monitoring Program sample exceeded Maximum Tissue Residue Level criterion. OEHHA was considering, but has not yet issued, a fishing advisory. Additional monitoring is needed to confirm likely impacts to beneficial uses.
	Nickel	
Swauger Creek		
	Total dissolved solids, nitrogen	For TDS: Study sponsored by North Mono RCD shows some possible violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted. For nitrogen: Water quality objective is not exceeded, but is probably set at a level too high to protect beneficial uses. In other words, existing beneficial uses are probably being deleteriously impacted. Additional monitoring is necessary to confirm this and to allow revision of the inappropriate objective.
Tahoe Keys Sailing Lagoon		
	PCBs	Elevated Toxic Substances Monitoring Program fish tissue concentrations have been found here. Additional monitoring is needed to confirm impacts to beneficial uses.
	Toxaphene	Elevated Toxic Substances Monitoring Program fish tissue concentrations have been found here. Additional monitoring is needed to confirm impacts to beneficial uses.
Tahoe, Lake (was Lake Tahoe)		
	Boat fuel constituents (Petroleum Products)	Past studies show increases of petroleum hydrocarbons in areas with heavy motorboat use; results of ongoing study of PAH impacts on aquatic life is needed to determine whether beneficial uses are impacted.
	Iron	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. Iron is a micronutrient of concern in eutrophication of Lake Tahoe. Several tributaries exceed their iron objectives and are recommended for listing. Continued monitoring of iron in the Lake is needed to judge whether listing for iron is necessary. An inadequate amount number of water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is currently low. Nonetheless, there is some evidence of impacts to beneficial uses. Therefore, this water body should be monitored more extensively before the next listing cycle.

Water Body	Pollutant/Stressor	Rationale
	Lead in sediment	A U.C. Davis sediment study shows increased concentration (presumably from atmospheric deposition) since European settlement began. More monitoring is needed to determine whether to list based on antidegradation considerations.
	Mercury in sediment	A U.C. Davis sediment study shows increased concentration (presumably from atmospheric deposition) since European settlement began. More monitoring is needed to determine whether to list based on antidegradation considerations.
	Pesticides (40 different compounds)	USGS study shows detectable pesticides (in violation of RWQCB narrative objective). However, the data quantity was considered insufficient to warrant 303(d) listing. Further monitoring is warranted.
Taylor Creek		
	Pesticides (8 different compounds)	USGS study showed detectable levels of pesticides (in violation of RWQCB narrative objective). However, data quantity was considered insufficient to warrant listing. Additional monitoring is necessary to confirm impacts to beneficial uses.
Tower Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Truckee River		
	Chloride	Monitoring by Tahoe Truckee Sanitation Agency wastewater treatment plant indicates that road salt applications upstream of Truckee are contributing high levels salt to the River. Additional monitoring is needed to track sources and assess impacts on beneficial uses.
	TDS	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. Monitoring by Tahoe Truckee Sanitation Agency wastewater treatment plant indicates that road salt applications upstream of Truckee are contributing high levels salt to the River. Additional monitoring is needed to track sources and assess impacts on beneficial uses.
Truckee River, upper (above and below Christmas Valley) (was Upper Truckee River)		
	Pesticides (7 different compounds), nitrogen	USGS study showed detectable levels of pesticides (in violation of RWQCB narrative objective). However, data quantity was considered insufficient to warrant listing. Monitoring is required to determine impacts to beneficial uses.
Trumball Lake		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Twin Lake, Lower (was Lower Twin Lake)		
	Nutrients	Studies in 1970s-1980s indicated that the Upper and Lower Twin Lakes are mesotrophic. However, no recent data are available to confirm likely existing impacts to beneficial uses.
Twin Lake, Upper (was Upper Twin Lake)		
	Nutrients	Studies in 1970s-1980s indicated that the Upper and Lower Twin Lakes are mesotrophic. However, no recent data are available to confirm likely existing impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
Virginia Creek		
	Nitrogen, phosphorus, sediment, total dissolved solids	For total dissolved solids, phosphorus: Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses. For sediment: Creek was identified as "threatened" or "intermediate" in an earlier Section 305(b) assessment. RWQCB staff observations strongly suggest that water quality standards are impacted, but there is no recent data. For nitrogen: The RWQCB water quality objective was not exceeded but is probably set at a level too high to protect beneficial uses. Existing beneficial uses are probably impacted, but additional monitoring is necessary to confirm this and to allow proper revision of the objective.
Virginia Lake (Upper)		
	Nitrogen	Study sponsored by North Mono RCD showed some violations of objectives, but quality assurance/quality control information was not provided for the RWQCB review. Additional monitoring is necessary to confirm likely existing impacts to beneficial uses.
Watson Creek		
	Sediment	A 1996 Tahoe Regional Planning Agency report identified the needs for streambank and channel stabilization and improvement of stream morphology. There is no recent quantitative sediment data.
West Walker River		
	Total dissolved solids, nitrogen	Study sponsored by North Mono RCD shows some violations of water quality objectives, but quality assurance/quality control information was not provided for the RWQCB listing effort. Monitoring is required in order to determine if beneficial uses are truly being impacted.

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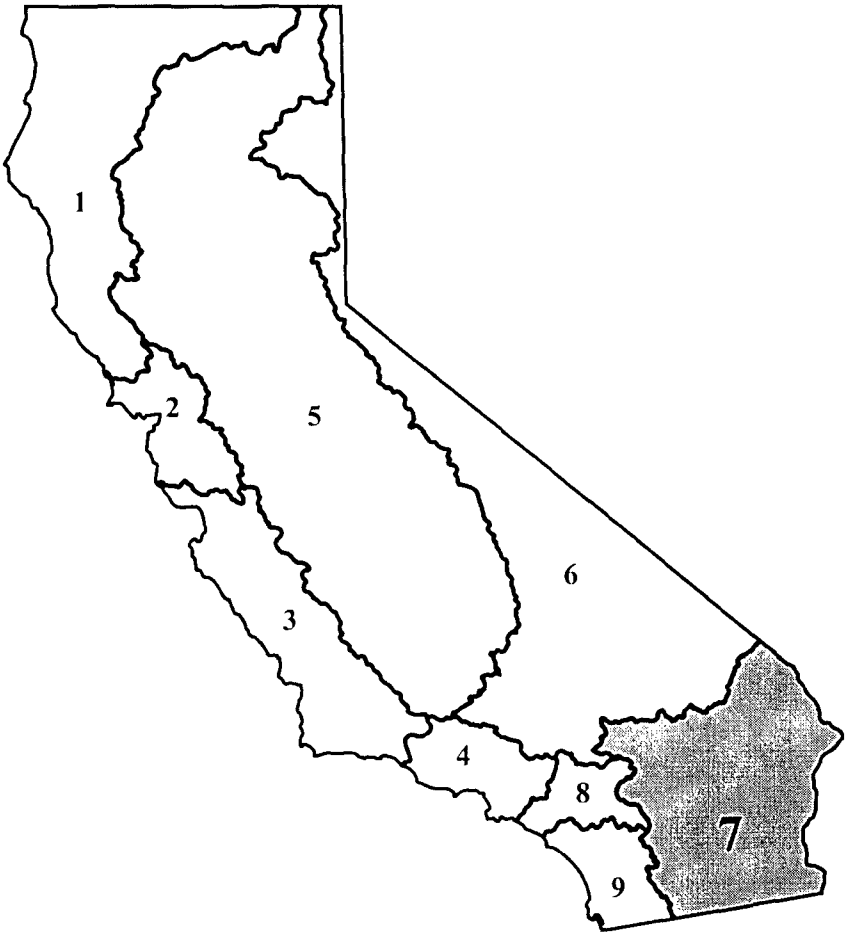
Regional Water Quality Control Board

COLORADO RIVER BASIN REGION (7)



SECTION 303 (d) LIST PROPOSALS

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Region 7: Alamo River Sedimentation/Siltation

Water Body	Alamo River
Stressor/Media/Beneficial Use	Sedimentation-Siltation/Water/Aquatic Life
***Data quality assessment. Extent to* which data quality requirements met.**	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	TMDL Completed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA.

Region 7: Coachella Valley Stormwater Channel Pathogens (was bacteria)

Water Body	Coachella Valley Stormwater Channel
Stressor/Media/Beneficial Use	Pathogens (was bacteria)
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Unknown
Alternative Enforceable Program	
RWQCB Recommendation	Clarification.
SWRCB Staff Recommendation	Change pollutant description and source, and Alternative program description in Fact Sheet.

Region 7: New River
Nutrients

Water Body	New River
Stressor/Media/Beneficial Use	Nutrients/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	No data available.
Linkage between measurement endpoint and benefical use or standard	The RWQCB monitors the New River for nutrients. Monitoring data shows that the New River carries nutrients in "relatively high concentrations."
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	No data available.
Data used to assess water quality	The Region 7 Basin Plan contains a narrative water quality objective for biostimulatory substances (including nutrients). This objective applies to the New River. The RWQCB staff has documented "objectionable odors," and low dissolved oxygen conditions in the New River. Both these conditions may be indicative of harmful impact to beneficial uses due to nutrient loads. (The RWQCB staff instead points as a cause to raw sewage from Mexico.)
Spatial representation	No data available.
Temporal representation	No data available.
Data type	No data available.
Use of standard method	No data available.
Potential Source(s) of Pollutant	Phosphates from Mexico and Imperial Valley.
Alternative Enforceable Program	Mexican-American Water Treaty.
RWQCB Recommendation	De-list.
SWRCB Staff Recommendation	Maintain Listing. There is no data available on which to base delisting. Staff report states that, RWQCB has no data showing that nutrients are violating water quality standards in the New River, however the River carries large amounts of nitrogen and phosphate which are causing eutrophic conditions and fish die-offs in the Salton Sea. Water quality conditions in the New River will need to be incorporated into TMDL for Salton Sea, so listing should be retained.

Region 7: New River
Dissolved oxygen

Water Body	New River
Stressor/Media/Beneficial Use	Dissolved oxygen (Dissolved Oxygen) Water WARM, REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	QA used by RWQCB staff.
Linkage between measurement endpoint and benefical use or standard	Results compared directly to WQO.
***Utility of measure for judging if* standards or uses are not attained**	Basin Plan numeric WQO used.
Water Body-specific Information	Water body-specific data collected monthly from 1996-2001 by Regional Board staff pursuant to an agreement between the United States Environmental Protection Agency and the State Water Resources Control Board.
Data used to assess water quality	Numerous violations (see "trigger" below) of the Basin Plan objectives for various impacts were observed throughout the monitoring, and continue to this day. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html. Violations of WQO--waters of the New River at the International Boundary shall be free of domestic and industrial waste waters.
Spatial representation	Water body-specific monitoring performed by RWQCB at US-Mexico border.
Temporal representation	Monthly for over 5 years.
Data type	Numeric data.
Use of standard method	Standard lab method.
Potential Source(s) of Pollutant	5-20 million gallons per day of raw sewage from Mexico discharged to New River.
Alternative Enforceable Program	Mexican-American Water Treaty
RWQCB Recommendation	List for dissolved organic matter.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded, a pollutant contributes to or causes the problem, and there is no other known program that can effectively address the problem at this time. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable.

5. Data are both numerical and non-numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 7: New River
Trash

Water Body	New River
Stressor/Media/Beneficial Use	Trash/Water/WARM, WILD, REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	Numerous observations by RWQCB staff of trash in river. Quarterly removal of approximately 200 cubic yards of trash by county.
Linkage between measurement endpoint and benefical use or standard	Direct observations of trash accumulation in River. Linked to aesthetics-related beneficial use.
Utility of measure for judging if standards or uses are not attained	Observed violation of US-Mexico treaty. Beneficial uses are directly impacted. Photographs can indicate gross impacts on beneficial uses and whether standards have been exceeded. Measurements of the amounts of trash can provide a relative measure of the potential for nuisance.
Water Body-specific Information	Numerous observations by RWQCB staff of trash in river. Quarterly removal of approximately 200 cubic yards of trash by county.
Data used to assess water quality	Numerous violations (see "trigger" below) of the Basin Plan objectives for various chemicals were observed throughout the monitoring, and continue to this day. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html Numerous observations by RWQCB staff of trash in river. Quarterly removal of approximately 200 cubic yards of trash by county.
Spatial representation	Water body-specific observations made at US/Mexico border and a few miles north.
Temporal representation	Monthly 8-hour and quarterly 24-hour observations made.
Data type	Observations, trash removal.
Use of standard method	N/A
Potential Source(s) of Pollutant	Anthropogenic sources.
Alternative Enforceable Program	Mexican American Water Treaty.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded, a pollutant contributes to or causes the problem, and there is no other known program that can effectively address the problem at this time. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage.

3. Beneficial uses have been established for and apply to the water body.
4. Water quality standard used is applicable.
5. Data are both numerical and non-numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 7: New River
p-DCB

Water Body	New River
Stressor/Media/Beneficial Use	p-DCB/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	QA used by RWQCB staff.
Linkage between measurement endpoint and benefical use or standard	Results compared directly to narrative standards. No numeric guideline is available.
Utility of measure for judging if standards or uses are not attained	Basin Plan quantitative and qualitative standards from Minute Number 264 of the Mexican-American Water Treaty. The water quality objectives are: (1) The waters of the River shall be free of untreated domestic and industrial waste, and (2) The waters shall be free from substances that may be discharged into the River as a result of human activity in concentrations which are toxic or harmful to human, animal or aquatic life or which may significantly impair the beneficial uses of such waters.
Water Body-specific Information	Water body-specific data collected 5 to 12 times per year from 1995-2001 by Regional Board staff pursuant to an agreement between the United States Environmental Protection Agency and the State Water Resources Control Board.
Data used to assess water quality	This substance is detected in the River. None of the measurements in 19 data sets exceed the water quality criterion. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html.
Spatial representation	Water body-specific monitoring performed by RWQCB at US-Mexico border.
Temporal representation	1995-2001.
Data type	Numeric data.
Use of standard method	Standard lab method.
Potential Source(s) of Pollutant	Untreated and improperly treated industrial waste discharges from Mexico.
Alternative Enforceable Program	Mexican-American Water Treaty.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality

standards is adequate.
6. Data are numerical.
7. Standard methods were used.

Detections of this substance exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 7: New River
o-Xylenes

Water Body	New River
Stressor/Media/Beneficial Use	o-Xylenes/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	QA used by RWQCB staff.
Linkage between measurement endpoint and benefical use or standard	Results compared directly to narrative standards. No numeric guideline is available.
Utility of measure for judging if standards or uses are not attained	Basin Plan quantitative and qualitative standards from Minute Number 264 of the Mexican-American Water Treaty. The water quality objectives are: (1) The waters of the River shall be free of untreated domestic and industrial waste, and (2) The waters shall be free from substances that may be discharged into the River as a result of human activity in concentrations which are toxic or harmful to human, animal or aquatic life or which may significantly impair the beneficial uses of such waters.
Water Body-specific Information	Water body-specific data collected 2 to 11 times per year from 1996 - 2001 by Regional Board staff pursuant to an agreement between the United States Environmental Protection Agency and the State Water Resources Control Board.
Data used to assess water quality	o-Xylenes are detected frequently in the New River. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html.
Spatial representation	Water body-specific monitoring performed by RWQCB at US-Mexico border.
Temporal representation	1996-2001.
Data type	Numeric data.
Use of standard method	Standard lab method.
Potential Source(s) of Pollutant	Untreated and improperly treated industrial waste discharges from Mexico.
Alternative Enforceable Program	Mexican-American Water Treaty.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate.

6. Data are numerical.
7. Standard methods were used.

Detections of this substance exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 7: New River
m,p,-Xylenes

Water Body	New River
Stressor/Media/Beneficial Use	m,p,-Xylenes/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	QA used by RWQCB staff.
Linkage between measurement endpoint and benefical use or standard	Results compared directly to the narrative standard. An evaluation guideline is not available to assess if the numeric standards in achieved.
Utility of measure for judging if standards or uses are not attained	Basin Plan quantitative and qualitative standards from Minute Number 264 of the Mexican-American Water Treaty. The water quality objectives are: (1) The waters of the River shall be free of untreated domestic and industrial waste, and (2) The waters shall be free from substances that may be discharged into the River as a result of human activity in concentrations which are toxic or harmful to human, animal or aquatic life or which may significantly impair the beneficial uses of such waters.
Water Body-specific Information	Water body-specific data collected 2 to 12 times per year from 1995-2001 by Regional Board staff pursuant to an agreement between the United States Environmental Protection Agency and the State Water Resources Control Board.
Data used to assess water quality	Xylenes are detected frequently in the New River. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html.
Spatial representation	Water body-specific monitoring performed by RWQCB at US-Mexico border.
Temporal representation	1995-2001.
Data type	Numeric data.
Use of standard method	Standard lab method.
Potential Source(s) of Pollutant	Untreated and improperly treated industrial waste discharges from Mexico.
Alternative Enforceable Program	Mexican-American Water Treaty.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate.

6. Data are numerical.
7. Standard methods were used.

Detections of this substance exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 7: New River
1,2,4-trimethylbenzene

Water Body	New River
Stressor/Media/Beneficial Use	1,2,4-trimethylbenzene/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	QA used by RWQCB staff.
Linkage between measurement endpoint and benefical use or standard	Results compared directly to standards. An evaluation guideline is not available to assess if the numeric standards in achieved.
Utility of measure for judging if standards or uses are not attained	Basin Plan quantitative and qualitative standards from Minute Number 264 of the Mexican-American Water Treaty. The water quality objectives are: (1) The waters of the River shall be free of untreated domestic and industrial waste, and (2) The waters shall be free from substances that may be discharged into the River as a result of human activity in concentrations which are toxic or harmful to human, animal or aquatic life or which may significantly impair the beneficial uses of such waters.
Water Body-specific Information	Water body-specific data collected 1 to 4 times per year from1998-2001 by Regional Board staff pursuant to an agreement between the United States Environmental Protection Agency and the State Water Resources Control Board.
Data used to assess water quality	1,2,4-trimethylbenzene is detected frequently in the New River. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html.
Spatial representation	Water body-specific monitoring performed by RWQCB at US-Mexico border.
Temporal representation	1998-2001.
Data type	Numeric data.
Use of standard method	Standard lab method.
Potential Source(s) of Pollutant	Untreated and improperly treated industrial waste discharges from Mexico.
Alternative Enforceable Program	Mexican-American Water Treaty.
RWQCB Recommendation	List.
SWRCB *Staff Recommendation*	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality

standards is adequate.
6. Data are numerical.
7. Standard methods were used.

Detections of this substance exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 7: New River
p-Cymene

Water Body	New River
Stressor/Media/Beneficial Use	p-Cymene/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	QA used by RWQCB staff.
Linkage between measurement endpoint and benefical use or standard	Results compared directly to narrative standards. An evaluation guideline is not available to assess if the numeric standards in achieved.
Utility of measure for judging if standards or uses are not attained	Basin Plan quantitative and qualitative standards from Minute Number 264 of the Mexican-American Water Treaty. The water quality objectives are: (1) The waters of the River shall be free of untreated domestic and industrial waste, and (2) The waters shall be free from substances that may be discharged into the River as a result of human activity in concentrations which are toxic or harmful to human, animal or aquatic life or which may significantly impair the beneficial uses of such waters.
Water Body-specific Information	Water body-specific data collected 1 to 6 times per year from 1995 to 2001 by Regional Board staff pursuant to an agreement between the United States Environmental Protection Agency and the State Water Resources Control Board.
Data used to assess water quality	p-Cymene (p-isopropyltoluene) is detected frequently in the New River. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html.
Spatial representation	Water body-specific monitoring performed by RWQCB at US-Mexico border.
Temporal representation	1995-2001.
Data type	Numeric data.
Use of standard method	Standard lab method.
Potential Source(s) of Pollutant	Untreated and improperly treated industrial waste discharges from Mexico.
Alternative Enforceable Program	Mexican-American Water Treaty.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality

standards is adequate.
6. Data are numerical.
7. Standard methods were used.

Detections of this substance exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 7: New River
Toluene

Water Body	New River
Stressor/Media/Beneficial Use	Toluene/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	QA used by RWQCB staff.
Linkage between measurement endpoint and benefical use or standard	Results compared directly to narrative standards. An evaluation guideline is not available to assess if the numeric standards in achieved.
Utility of measure for judging if standards or uses are not attained	Basin Plan quantitative and qualitative standards from Minute Number 264 of the Mexican-American Water Treaty. The water quality objectives are: (1) The waters of the River shall be free of untreated domestic and industrial waste, and (2) The waters shall be free from substances that may be discharged into the River as a result of human activity in concentrations which are toxic or harmful to human, animal or aquatic life or which may significantly impair the beneficial uses of such waters.
Water Body-specific Information	Water body-specific data collected approximately monthly from 1995-2001 by Regional Board staff pursuant to an agreement between the United States Environmental Protection Agency and the State Water Resources Control Board.
Data used to assess water quality	Toluene is detected in the New River. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html.
Spatial representation	Water body-specific monitoring performed by RWQCB at US-Mexico border.
Temporal representation	1995-2001.
Data type	Numeric data.
Use of standard method	Standard lab method.
Potential Source(s) of Pollutant	Untreated and improperly treated industrial waste discharges from Mexico.
Alternative Enforceable Program	Mexican-American Water Treaty.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate.

6. Data are numerical.
7. Standard methods were used.

Detections of this substance exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 7: New River
Chloroform

Water Body	New River
Stressor/Media/Beneficial Use	Chloroform/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	QA used by RWQCB staff.
Linkage between measurement endpoint and benefical use or standard	Results compared directly to narrative standards.
Utility of measure for judging if standards or uses are not attained	Basin Plan quantitative and qualitative standards from Minute Number 264 of the Mexican-American Water Treaty. The water quality objectives are: (1) The waters of the River shall be free of untreated domestic and industrial waste, and (2) The waters shall be free from substances that may be discharged into the River as a result of human activity in concentrations which are toxic or harmful to human, animal or aquatic life or which may significantly impair the beneficial uses of such waters.
Water Body-specific Information	Water body-specific data collected 6 times per year from 1996-2001 by Regional Board staff pursuant to an agreement between the United States Environmental Protection Agency and the State Water Resources Control Board.
Data used to assess water quality	Toluene is detected in the New River. None of the measurements in 19 data sets exceeded the water quality criterion. All data is available for review at: http://www.swrcb.ca.gov/rwqcb7/newriver/dataindex.html.
Spatial representation	Water body-specific monitoring performed by RWQCB at US-Mexico border.
Temporal representation	1996-2001.
Data type	Numeric data.
Use of standard method	Standard lab method.
Potential Source(s) of Pollutant	Untreated and improperly treated industrial waste discharges from Mexico.
Alternative Enforceable Program	Mexican-American Water Treaty.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate.

6. Data are numerical.
7. Standard methods were used.

Detections of this substance exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 7: New River
Bacteria

Water Body	New River
Stressor/Media/Beneficial Use	Bacteria/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	TMDL Completed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been approved by USEPA.

Region 7: New River
Volatile Organics/VOCs

Water Body	New River
Stressor/Media/Beneficial Use	Volatile Organics-VOCs/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	Several specific VOCs have been recommended for the section 303(d) list. The general listing for VOCs is no longer necessary.
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Remove from the list.
SWRCB Staff Recommendation	Volatile Organics/VOCs should be removed from the section 303(d) list because several specific VOCs are proposed for the section 303(d) list.

Region 7: Palo Verde Outfall Drain
Pathogens (was bacteria)

Water Body	Palo Verde Outfall Drain
Stressor/Media/Beneficial Use	Pathogens (was bacteria)
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	
RWQCB Recommendation	Clarification.
SWRCB Staff Recommendation	Change pollutant description and source, and Alternative program description in Fact Sheet.

Reference List for Region 7

Staff Report

California Regional Water Quality Control Board. Colorado River Basin Region. 2001. Staff Report on the Proposed Update of Clean Water Act 303(d) List of Impaired Water Bodies within the Colorado River Basin Region. October 16, 2001.

Public Input

In a letter dated February 28, 2001, the Regional Board staff solicited information from the public for updating its 303(d) List (see Attachment Two). The following agencies and persons submitted data in response to the letter:

U.S. Bureau of Reclamation (USBOR). Fax and E-mails with water quality data on the Colorado River above Imperial Dam and on the Brawley Wetlands Projects.

US Geological Survey. A hard copy from the USGS "Water Resources Data, Arizona, Water Year 1999" regarding water quality data on the Colorado River and tributaries to the Colorado River.

California Department of Pesticide Regulation. Letter referring the Regional Board staff to the Department's Internet Databases that include water quality data on the region's surface waters.

US Department of Agriculture, Forest Service. Letter reporting that Department is updating its water quality records

Big Bear Regional Wastewater Agency . Letter reporting water quality data on Big Bear Lake.

Metropolitan Water District of Southern California . Letter reporting water quality data on Lake Havasu.

George Bernath at EarthLink. E-mail reporting water quality data on the Piute Spring.

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Regional Water Quality Control Board

SANTA ANA REGION (8)

SECTION 303 (d) LIST PROPOSALS

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Region 8: Anaheim Bay
Metals and Pesticides

Water Body	Anaheim Bay
Stressor/Media/Beneficial Use	Metals and organics/Tissue and Water/Fish Consumption, Human Health
Data quality assessment. Extent to which data quality requirements met.	QA used by CFCP, County.
Linkage between measurement endpoint and benefical use or standard	MTRLs from CFCP. WQOs for bacteria.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	Reviewed data from Coastal Fish Contamination Program (CFCP), Orange County PFRD. No exceedances for metals, endosulfans, 4 exceedances for pesticides. Concern was raised by RWQCB staff that because sample sizes are so small that these measurements do not represent water quality conditions in the Bay. While summarized in the record the actual data cannot be assessed to determine the spatial or temporal representation of the data.
Spatial representation	Targeted in waterbody. Locations unknown. The observations are few in number and, in this specific situation, the number of samples do not represent Bay conditions.
Temporal representation	1997-2001.
Data type	MTRLs, WQOs are numeric.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	More monitoring needed. Water Quality assessment underway.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Water quality standard used is applicable. 4. The evaluation guideline used to interpret narrative water quality standards is adequate. 5. Standard methods were used. 6. Other water body- or site-specific information including the age of the data were considered. An inadequate number of the water quality measurements exceeded the

water quality standard. The staff confidence that standards were exceeded is low.

Region 8: Bolsa Chica
Metals

Water Body	Bolsa Chica
Stressor/Media/Beneficial Use	Metals/Water/MAR, EST, REC-1
Data quality assessment. Extent to which data quality requirements met.	QA used for metals analyses by county.
Linkage between measurement endpoint and benefical use or standard	WQOs for metals.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Not enough information is available.
Data used to assess water quality	Orange County PFRD data for metals. For this assessment, it cannot be determined if standards are attained. Cadmium: 4 samples with 0 exceeding standards. Chromium: 4 samples with 0 exceeding standards. Copper: 4 samples with 4 exceeding standards. Lead: 4 samples with 0 exceeding standards. Nickel: 4 samples with 4 exceeding standards. Zinc: 4 samples with 0 exceeding standards. Concern was raised by RWQCB staff that because sample sizes are so small that these measurements do not represent water quality conditions in Bolsa Chica. While summarized in the record the actual data cannot be assessed to determine the spatial or temporal representation of the data. Bolsa Chica State Beach Life Guard Station posted one time in three years. Other Bolsa Chica beaches not posted in the last three years.
Spatial representation	Unknown.
Temporal representation	Unknown.
Data type	Data values are numeric.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage.

3. Water quality standards are applicable.
4. Data are numerical.
5. Standard methods were used.

An inadequate amount of water quality measurements are available to determine if water quality standards are exceeded.

Region 8: Buck Gully Creek
Total and Fecal coliform

Water Body	Buck Gully Creek
Stressor/Media/Beneficial Use	Total and Fecal coliform/Water/Beneficial uses not established in the Basin Plan for this water body but there are existing REC-1 and REC-2 beneficial uses downstream of Pacific Coast Highway.
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	No water quality standards established in the Basin Plan specifically for this water body. The guideline used by the RWQCB is appropriate for this type of water body.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical guidelines or standards established for other water bodies.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	Violations of fecal coliform in 18/56 samples for guidelines related to REC-2 and 13/56 samples for guidelines related to REC-1.
Spatial representation	All samples collected from creek, unknown number of sites, 239 samples
Temporal representation	Data were collected between 1997 and 2001.
Data type	Numerical data.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for total and fecal coliform.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because an existing beneficial use is impacted and a pollutant contributes to or causes the problem. The water body should be listed for total and fecal coliform on the portion of the Creek downstream of Pacific Coast Highway. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient temporal coverage. 3. Beneficial uses have not been established but there is an existing use downstream of Pacific Coast Highway. 4. The evaluation guideline is adequate. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered.

Region 8: Buck Gully Creek
Total and Fecal coliform

An adequate number of the water quality measurements showed impacts on an existing beneficial use. The staff confidence is high.

Region 8: Canyon Lake-East Bay
Sediment

Water Body	Canyon Lake-East Bay
Stressor/Media/Beneficial Use	Sediment/sediment/WARM/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	Suitt and Assoc. Report :QA used only for 1986 data, using standard geological methods for estimating water depth and sediment depth. 1997 information collected by non-standard method (fishfinder used by local resident) with no QA. UC Riverside 2nd Quarterly Report, 2001: QA used.
Linkage between measurement endpoint and benefical use or standard	Unknown.
Utility of measure for judging if standards or uses are not attained	Unknown.
Water Body-specific Information	Water depth, water elevation and lake bottom elevation data collected in 1986. Water depth collected in 1997. Sediment traps used in 2001 study by UCR.
Data used to assess water quality	Unknown for data reported in Suitt and Assoc., due to use of non-standard method for collecting data used to estimate sediment accumulation. Sediment trap results from UCR 2001 quarterly report provide more quantitative information.
Spatial representation	5 sample locations.
Temporal representation	Calculations from Suitt and Assoc. 1986 and 1997. Study by UC Riverside in 2001.
Data type	Estimates of sedimentation rate.
Use of standard method	Suitt and Assoc. report: 1986 data only. UCR Report: quantitative sedimentation rates.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List for impairment of REC-1, REC-2, and WARM beneficial uses.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because applicable water quality standards are not exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Water quality standard used is applicable. 4. The evaluation guideline used to interpret narrative water quality standards is adequate. 5. Data are numerical. 6. Non-standard methods were used.

Region 8: Canyon Lake-East Bay
Sediment

An adequate amount of the water quality measurements shows that the water quality standard is not exceeded.

Do not list for sedimentation. More recent data from UCR 2001 study indicates sedimentation rates not as large as estimated by earlier study. UCR analysis indicates that algae are the largest source of particulates. Canyon Lake is already listed for nutrients and studies for TMDL are underway.

Region 8: Chino Creek, Reach 1 and Reach 2
Metals

Water Body	Chino Creek, Reach 1 and Reach 2
Stressor/Media/Beneficial Use	Metals/Water/REC-1, REC-2, WARM, WILD
Data quality assessment. Extent to which data quality requirements met.	QA used by county.
Linkage between measurement endpoint and benefical use or standard	WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Insufficient data to make a determination.
Data used to assess water quality	Reviewed water quality data from Orange County Water District. The was insufficient data to make a determination that standards were exceeded. Of the 6 measurements of arsenic, copper, lead, and nickel, none exceeded any numerical standard.
Spatial representation	Insufficient data to make a determination.
Temporal representation	1997-2001.
Data type	Data are numeric values.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	Insufficient data to make a determination. More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Water quality standards are applicable. 4. Data are numerical. 5. Standard methods were used. An inadequate amount of water quality measurements are available to determine if water quality standards are exceeded.

Region 8: Cucamonga Creek, Mountain Reach
Metals

Water Body	Cucamonga Creek, Mountain Reach
Stressor/Media/Beneficial Use	Metals/Water/MUN, REC-1, REC-2, WILD, COLD
Data quality assessment. Extent to which data quality requirements met.	QA used by county.
Linkage between measurement endpoint and benefical use or standard	WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly
Water Body-specific Information	Insufficient data to make a determination.
Data used to assess water quality	Reviewed water quality data from Orange County Water District. There were insufficient data to make a determination of water quality standards attainment. There were single measurements of cadmium, copper, lead, nickel, selenium, and zinc. No standards were exceeded in any of these measurements.
Spatial representation	Insufficient data to make a determination.
Temporal representation	1997-2001.
Data type	Data are numeric values.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	Insufficient data to make a determination. More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Water quality standards are applicable. 4. Data are numerical. 5. Standard methods were used. An inadequate amount of water quality measurements are available to determine if water quality standards are exceeded.

Region 8: Huntington Beach at Magnolia Street
Enterococcus

Water Body	Huntington Beach at Magnolia Street
Stressor/Media/Beneficial Use	Enterococcus/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	Exceedances of single sample AB 411 standards may result in beach postings by Orange Count Health Care Agency. Bacterial water quality standards are linked to REC-1 beneficial use attainment.
Utility of measure for judging if standards or uses are not attained	Data can be compared directly to standards.
Water Body-specific Information	Data age = 1-4 Years. Data were collected during both wet and dry seasons.
Data used to assess water quality	109 samples exceeded standard out of a total of 712 samples.
Spatial representation	1 station. Sampling location represents 50 yards on either side of the sampling location.
Temporal representation	Data were collected between 1999 and August 2002.
Data type	Numerical data.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for enterococcus.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including season and the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 8: Huntington Harbour
Metals and pesticides

Water Body	Huntington Harbour
Stressor/Media/Beneficial Use	Metals and pesticides/Water and Tissue/Fish consumption
Data quality assessment. Extent to which data quality requirements met.	QA used by county, Mussel Watch.
Linkage between measurement endpoint and benefical use or standard	MTRLs, WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical guideline directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	Reviewed the Orange County PFRD and State Mussel Watch Program. For this type of assessment, it cannot be determined if standards are attained. No exceedances for SMW data except dieldrin. Huntington Harbor already listed for pesticides. There were 4 measurements each of cadmium, chromium, copper, lead, nickel, and zinc. None of these measurements exceeded applicable standards except nickel. The sample size was considered by RWQCB staff to be too small to be representative of water quality conditions in the Harbour.
Spatial representation	Targeted in waterbody.
Temporal representation	Data were collected between 1997 and 2001.
Data type	MTRLs, WQOs are numeric.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial coverage. 3. Water quality standards are applicable. 4. Data are numerical. 5. Standard methods were used. An inadequate amount of water quality measurements are available to determine if water quality standards are exceeded.

Region 8: Huntington Harbour
Caulerpa taxifolia

Water Body	Huntington Harbour
Stressor/Media/Beneficial Use	Caulerpa taxifolia (an invasive marine algae)/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	The information used to develop this listing is taken from two summary documents developed by the National Marine Fisheries Service.
Linkage between measurement endpoint and benefical use or standard	The Basin Plan contains narrative water quality objectives for the protection of bay and estuarine communities and populations of vertebrate, invertebrate, and plant species.
Utility of measure for judging if standards or uses are not attained	In areas where the Caulerpa has become well established, it has caused ecological and economic devastation by overgrowing and eliminating native seaweeds, seagrasses, and other communities. In the Mediterranean, it is reported to have harmed tourism and pleasure boating, devastated recreational diving, and had a costly impact on commercial fishing both by altering the distribution of fish as well as creating a considerable impediment to net fisheries. The dense carpet that this species can form on the bottom could inhibit the establishment of juveniles of many reef species, and its establishment offshore could seriously impact sport and commercial fisheries and navigation through quarantine restrictions to prevent the spread of this species.
Water Body-specific Information	This algae poses a substantial threat to marine ecosystems to Southern California, particularly to the extensive eelgrass meadows and other benthic environments that make coastal waters such a rich and productive environment for fish and birds. The eelgrass beds and other coastal resources that could be directly impacted by an invasion of Caulerpa are part of a food web that is critical to the survival of numerous native marine species including the commercially and recreationally important spiny lobster, California halibut, and sand basses.
Data used to assess water quality	The discovery of this species in southern California, recently reported in the journal Nature to be genetically identical to the strain in the Mediterranean, confirms that it nevertheless continues to invade marine ecosystems, such as the ecologically rich eelgrass beds that thrive in many of our coastal lagoons. It is likely that the algae was released from an aquarium at the locations in California where it has been discovered, a practice banned under California law. As of September 24, 2001 when Governor Gray Davis signed into law Assembly Bill 1334, it is now unlawful to sell, import, transport, transfer, or possess C. taxifolia and a number of look-alike species and other invasive Caulerpa species.
Spatial representation	The infestation of Huntington Harbour and Agua Hedionda are the first know infestations along the Pacific Coast of North America.
Temporal representation	Caulerpa was found in Huntington Harbour in August 2000. It is probable that Caulerpa has been present since 1996.
Data type	The information used was not numerical.
Use of standard method	N/A

Region 8: Huntington Harbour
Caulerpa taxifolia

Potential Source(s) of Pollutant	It is likely that the algae was released from an aquarium near the Harbour. This practice is now banned by State law (AB 1334 (2001)).
Alternative Enforceable Program	RWQCB staff is coordinating efforts to define the spatial extent of the infestation, working with other agencies and interested parties to confine the infestation, examining available technologies for Caulerpa removal potential and educating the public as to its source and impact to the harbor.
RWQCB Recommendation	Use existing activities to prevent and eradicate Caulerpa taxifolia.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because a pollutant does not contribute to or causes the problem.

Region 8: Lake Forest
Temperature, clarity, and dissolved oxygen

Water Body	Lake Forest
Stressor/Media/Beneficial Use	Temperature, clarity, and dissolved oxygen/Water/There are existing aquatic life beneficial uses.
Data quality assessment. Extent to which data quality requirements met.	The information provided for this water body was narrative descriptions of the types of water quality factors that can impact water quality (such as water clarity, aquatic vegetation growth, and fish kills.
Linkage between measurement endpoint and benefical use or standard	No water quality standards are established for this water body.
Utility of measure for judging if standards or uses are not attained	No measurements or observations were provided.
Water Body-specific Information	A description of the Lake and the characteristics of the Lake that could be influenced by runoff or other sources of pollutants is provided.
Data used to assess water quality	No data or visual observations from the Lake were provided. The information provided is a descriptive summary of the characteristics
Spatial representation	No water quality measurements provided.
Temporal representation	No water quality measurements provided.
Data type	Non-numerical information.
Use of standard method	N/A
Potential Source(s) of Pollutant	Runoff.
Alternative Enforceable Program	
RWQCB Recommendation	Basin Plan water quality objectives are met. Do not list.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because applicable water quality standards are not exceeded. No data were provided that indicate standards are not met or existing beneficial uses are impacted.

Region 8: Little Corona Beach
Bacteria

Water Body	Little Corona Beach
Stressor/Media/Beneficial Use	Bacteria/Water/MUN, REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	3 WQOs for total coliform (MUN) and fecal coliform (REC-1, REC-2).
***Utility of measure for judging if* standards or uses are not attained**	Measurement can be compared to numerical AB 411 standards directly.
Water Body-specific Information	
Data used to assess water quality	The following is a summary of the single sample exceedances for total coliform, fecal coliform, and enterococcus.

Measurements exceeding/total measurements

Year	1999	2000	2001	2002
Total	0/40	0/40	1/53	2/33
Fecal	1/40	1/40	1/53	2/33
Enterococcus	3/40	3/40	6/53	4/33

Spatial representation	One site.
Temporal representation	Data were collected between 10/27/1999 and 7/4/2001.
Data type	3 WQOs for total coliform, fecal coliform, and enterococcus for MUN, REC-1, REC-2
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	Insufficient data to make a determination. Place on high priority for monitoring.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because applicable water quality standards are not exceeded. The water body will be removed from the Monitoring List.

This conclusion is based on the staff findings that:
1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses apply to the water body.
4. Water quality standard used is applicable.
5. Data are numerical.
6. Standard methods were used.

An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is extremely moderate.

Region 8: Los Trancos Creek
Total and Fecal coliform

Water Body	Los Trancos Creek
Stressor/Media/Beneficial Use	Total and Fecal coliform/Water/Beneficial uses not established in the Basin Plan for this water body but there are existing REC-1 and REC-2 beneficial uses downstream of Pacific Coast Highway.
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	No water quality standards established in the Basin Plan specifically for this water body. The guideline used by the RWQCB is appropriate for this type of water body.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical guidelines or standards established for other water bodies.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	Over 450 violations of guidelines for total and fecal coliform.
Spatial representation	All samples collected from creek, at least 4 sample sites, approximately 500 samples.
Temporal representation	The data were collected between 1997 and 2001.
Data type	Numerical data.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	The Irvine Company is committed to diverting dry weather flows of the Creek. The problem is likely to only exist during the wet season.
RWQCB Recommendation	List for total and fecal coliform.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because an existing beneficial use is impacted and a pollutant contributes to or causes the problem. List for total and fecal coliform on the portion of the Creek downstream of Pacific Coast Highway during the wet season. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have not been established for the water body but there is an existing beneficial use downstream of the Pacific Coast Highway . 4. A water quality standard is not established. 5. The evaluation guideline used is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the season and

age of the data were considered.

Most of the water quality measurements indicate the beneficial use is impacted. The staff confidence is high.

Region 8: Mill Creek (Prado Area)
Metals

Water Body	Mill Creek (Prado Area)
Stressor/Media/Beneficial Use	Metals/Water/various beneficial uses
Data quality assessment. Extent to which data quality requirements met.	Reviewed water quality data from Orange County Water District. QA used by county.
Linkage between measurement endpoint and benefical use or standard	WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	
Data used to assess water quality	Antimony: 8 samples, with 0 exceeding. Copper: 8 samples with 0 exceeding. Mercury: 8 samples with 0 exceeding. Nickel: 8 samples with 0 exceeding.
Spatial representation	Insufficient data to make a determination.
Temporal representation	1997-2001.
Data type	Data are numeric values.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	
RWQCB Recommendation	Insufficient data to make a determination. More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate, inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. An inadequate amount of the water quality measurements were available to assess if the water quality standard was exceeded.

Region 8: Muddy Creek
Total and Fecal coliform

Water Body	Muddy Creek
Stressor/Media/Beneficial Use	Total and Fecal coliform/Water/Beneficial uses are not established in the Basin Plan for this water body.
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	No water quality objectives are established in the Basin Plan specifically for this water body.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical guidelines or standards established for other water bodies.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	77/110 samples exceeded the total coliform guideline related to MUN. 16/53 samples exceeded the fecal coliform guideline related to REC-2. 11/54 samples exceeded the fecal coliform guideline related to REC-1.
Spatial representation	Samples collected in creek or creek mouth.
Temporal representation	Data were collected between 1997 and 2001.
Data type	Numerical data.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for total and fecal coliform.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because there are no applicable beneficial uses and water quality standards. There is also no evidence of an existing beneficial use. This conclusion is based on the staff findings that: 1. Beneficial uses have not been established and do not apply to the water body. 2. Water quality standards are not established. RWQCB should consider adoption of beneficial uses and water quality objectives for this water body.

Region 8: Newport Bay
DDT, Mercury and endosulfans

Water Body	Newport Bay
Stressor/Media/Beneficial Use	DDT, Mercury and endosulfans/tissue/Fish consumption
Data quality assessment. Extent to which data quality requirements met.	QA used by CFCP.
Linkage between measurement endpoint and benefical use or standard	MTRLs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	Reviewed data from Coastal Fish Contamination Program. No exceedances for mercury, endosulfan. 11/19 fish tissue samples exceeded MTRL for DDT. Already listed for pesticides.
Spatial representation	5 sampling locations.
Temporal representation	1997-2001.
Data type	MTRLs are numeric.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body is already on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. The evaluation guideline used to interpret narrative water quality standards is adequate. 4. Data are numerical. 5. Standard methods were used. 6. Other water body- or site-specific information including the age of the data were considered. Most of the water quality measurements exceeded the water quality standard, but the water body is already listed for pesticides. The staff confidence that standards were exceeded is high.

Region 8: Newport Bay, Lower (was Lower Newport Bay)
Fecal coliform

Water Body	Newport Bay, Lower (was Lower Newport Bay)
Stressor/Media/Beneficial Use	Fecal coliform/Water/MUN, REC-1, REC-2.
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. This conclusion is based on the staff findings that the TMDL has been completed, has been incorporated into Basin Plan, and has been approved by USEPA.

Region 8: Newport Bay, Lower (was Lower Newport Bay) Siltation

Water Body	Newport Bay, Lower (was Lower Newport Bay)
Stressor/Media/Beneficial Use	Siltation/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. This conclusion is based on the staff findings that the TMDL has been completed, has been incorporated into Basin Plan, and has been approved by USEPA.

Region 8: Newport Bay, Lower (was Lower Newport Bay) Priority Organics

Water Body	Newport Bay, Lower (was Lower Newport Bay)
Stressor/Media/Beneficial Use	Priority Organics/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	USEPA has approved a TMDL for this water body-pollutant combination.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	None.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the TMDLs Completed List because a plan to implement the TMDL has not been adopted or approved even though the TMDL has been approved by USEPA.

Region 8: Newport Bay, Lower (was Lower Newport Bay) Metals

Water Body	Newport Bay, Lower (was Lower Newport Bay)
Stressor/Media/Beneficial Use	Metals/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	USEPA has approved a TMDL for this water body-pollutant combination.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	None.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the TMDLs Completed List because a plan to implement the TMDL has not been adopted or approved even though the TMDL has been approved by USEPA.

Region 8: Newport Bay, Lower (was Lower Newport Bay) Nutrients

Water Body	Newport Bay, Lower (was Lower Newport Bay)
Stressor/Media/Beneficial Use	Nutrients/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. This conclusion is based on the staff findings that the TMDL has been completed, has been incorporated into Basin Plan, and has been approved by USEPA.

Region 8: Newport Bay, Lower (was Lower Newport Bay) Pesticides

Water Body	Newport Bay, Lower (was Lower Newport Bay)
Stressor/Media/Beneficial Use	Pesticides/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	USEPA has approved a TMDL for this water body-pollutant combination.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	None.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the TMDLs Completed List because a plan to implement the TMDL has not been adopted or approved even though the TMDL has been approved by USEPA.

Region 8: Newport Bay, Upper (was Upper Newport Bay)
Fecal coliform

Water Body	Newport Bay, Upper (was Upper Newport Bay)
Stressor/Media/Beneficial Use	Fecal coliform/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been incorporated into Basin Plan and has been approved by USEPA.

Region 8: Newport Bay, Upper (was Upper Newport Bay) Siltation

Water Body	Newport Bay, Upper (was Upper Newport Bay)
Stressor/Media/Beneficial Use	Siltation/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin Plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been incorporated into Basin Plan and has been approved by USEPA.

Region 8: Newport Bay, Upper (was Upper Newport Bay) Nutrients

Water Body	Newport Bay, Upper (was Upper Newport Bay)
Stressor/Media/Beneficial Use	Nutrients/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been incorporated into Basin Plan and has been approved by USEPA.

Region 8: Newport Bay, Upper (was Upper Newport Bay)
Trash

Water Body	Newport Bay, Upper (was Upper Newport Bay)
Stressor/Media/Beneficial Use	Trash/Water/Human-related: REC-2; Aquatic Life: WILD, RARE, EST, MAR
Data quality assessment. Extent to which data quality requirements met.	No quality assurance information was provided.
Linkage between measurement endpoint and benefical use or standard	The narrative water quality objectives to prevent solids from causing nuisance or adversely affecting beneficial uses.
Utility of measure for judging if standards or uses are not attained	Photographs can indicate gross impacts on beneficial uses and whether standards have been exceeded. Measurements of the amounts of trash can provide a relative measure of the potential for nuisance.
Water Body-specific Information	Photographs appear to be taken on at least one occasion.
Data used to assess water quality	Cleanup crews have documented trash in Newport Bay. Large amounts of trash were collected in Upper Newport Bay as follows: Year — Amount (pounds) 1999 — 53,500 2000 — 46,500 2001 — 42,900 Twelve photographs were submitted depicting several locations in Newport Bay with trash scattered in several intertidal locations. The trash included plastic bottles, styrofoam cups, paper wrappers, wood debris, aluminum cans, plastic pipes, personal floatation device, and other unidentifiable debris.
Spatial representation	The photographs were taken at 11 locations in Upper Newport Bay. The locations cover a number of widely scattered stations.
Temporal representation	It cannot be determined when the photographs were taken.
Data type	The photographs are qualitative information. Data on trash collections from the Upper Newport Bay are numerical.
Use of standard method	Documentation methods are not described.
Potential Source(s) of Pollutant	Trash can enter the Bay from urban runoff or by being blown directly into the water body.
Alternative Enforceable Program	The North/Central Orange County Areawide Urban Stormwater Runoff Permit, Order No. R8-2002-0010 issued to Orange County and its incorporated cities has enforceable provisions in place to address litter, debris and trash in this water body.
RWQCB Recommendation	Use the provisions of the storm water permit to correct the trash problem in Upper Newport Bay.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB

documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded.

This conclusion is based on the staff findings that:
1. The data is considered to be of unknown quality.
2. The data exhibited sufficient spatial and unknown temporal coverage.
3. Water quality standard used is applicable.
4. Data are both numerical and not numerical.
5. Cannot tell if standard methods were used.
6. Other water body- or site-specific information including the effects of season, storm events, and age of the data were not considered.

An inadequate amount of the measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.

Region 8: Newport Bay, Upper Ecological Reserve (was Upper Newport Ba + Pesticides

Water Body	Newport Bay, Upper Ecological Reserve (was Upper Newport Bay Ecological Reserve)
Stressor/Media/Beneficial Use	Pesticides/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	USEPA has approved a TMDL for this water body-pollutant combination.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	None.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the TMDLs Completed List because a plan to implement the TMDL has not been adopted or approved even though the TMDL has been approved by USEPA.

Region 8: Newport Bay, Upper Ecological Reserve (was Upper Newport Ba + Metals

Water Body	Newport Bay, Upper Ecological Reserve (was Upper Newport Bay Ecological Reserve)
Stressor/Media/Beneficial Use	Metals/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	USEPA has approved a TMDL for this water body-pollutant combination.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	None.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the TMDLs Completed List because a plan to implement the TMDL has not been adopted or approved even though the TMDL has been approved by USEPA.

Region 8: Orange County Coastline
Trash

Water Body	Orange County Coastline
Stressor/Media/Beneficial Use	Trash/Water/REC-2, Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	The sampling procedures, collection approach, data analysis, and estimation procedures are described (Moore et al., 2000. Composition and distribution of beach debris in Orange County, California).
***Linkage between measurement endpoint* and benefical use or standard**	The California Ocean Plan designates the beneficial uses of the ocean waters of the State that shall be protected including water contact and non-contact recreation, including aesthetic enjoyment and marine habitat. The California Ocean Plan has applicable narrative water quality objectives as follows: - Floating particulates and grease and oil shall not be visible. - The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface. - The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.
Utility of measure for judging if *standards or uses are not attained*	The measures used in the study were abundance of trash particles and the weight of trash along the coastline. These data were compared to California Coastal Cleanup Day collection data.
Water Body-specific Information	Estimates were made of the percent of shoreline affected, types of habitat affected (sandy beach and rocky shore), Trash type (including plastics, cigarette butts, paper, wood metal glass rubber, pet and bird droppings, cloth, and other trash). Even thought the study measured the amounts of trash on the beaches for the water's edge to the first pavement or rocky cliff, this listing only applies to the portion of the beach regularly in contact with ocean water.
Data used to assess water quality	Estimated total abundance of trash was 106 million items weighing 13 tons. Pre-production plastic pellets, foamed plastics and hard plastics made up 99% of the total abundance and 51% of the total weight. Cigarette butts were fourth in total abundance and accounted for less than 1% of the abundance and weight. Data collected by volunteers during the annual California Coastal Cleanup Day (1998) was 50 times lower than the data collected in the trash survey. Information contained in the fact sheets for Santa Ana River, Reach 1; Upper Newport Bay; and the San Gabriel River provide additional information. Trash carried down the Santa Ana River generally finds its way onto beaches in the cities of Huntington Beach and Newport Beach. After storms, 929 tons of trash and debris were collected in 1999 along Huntington Beach city beaches. During the same period, approximately 970 tons of trash and debris were collected on Newport Beach city beaches.

Region 8: Orange County Coastline
Trash

Cleanup crews have documented trash in Newport Bay. Large amounts of trash were collected in Upper Newport Bay as follows:

Year	Amount (pounds)
1999	53,500
2000	46,500
2001	42,900

Cleanup crews have documented trash removal on beaches near the mouth of the San Gabriel River as follows:

January-December 2001	572.43 tons
January-June 2002	16 tons

Based on the photographs of trash in the Santa Ana River, Newport Bay, and the San Gabriel River it is probable that some of the trash comes from water-related sources like urban runoff.

Spatial representation

Beach debris was surveyed and collected at 43 sites from Seal Beach to San Clemente on the Orange County coast. The data were collected using a stratified random design, stratified by shoreline type.

Each sample site was delineated as an area 25 yards in length and extending from the water's edge to the first pavement or rocky cliff. This may include areas outside of 303(d) program jurisdiction.

The study assessed trash on beaches in both Region 8 and Region 9. The proposed listing in only for the water-associated portion of these beaches.

Temporal representation

Data were collected between August 2 and September 18, 1998. Additional monitoring is required in order to confirm impacts to beneficial uses from trash.

Data type

Numerical data.

Use of standard method

See Quality Assurance section above. Data were collected using approaches from other debris studies outside the U.S.

Potential Source(s) of Pollutant

Four sources were identified: (1) littering by beachgoers, (2) wind currents from upland sources, (3) runoff from land-based activities, and (4) overboard disposal form boating activities (including accidental spills). The data suggest that water-based sources (runoff and overboard disposal) were more important than direct littering or wind.

Alternative Enforceable Program

The North/Central Orange County Areawide Urban Stormwater Runoff Permit, Order No. R8-2002-0010 issued to Orange County and its incorporated cities has enforceable provisions in place to address litter, debris and trash in this water body.

During FY 2001-02, twenty-two permittee municipalities installed catch basin filters, six installed catch basin inlet screens to prevent trash and debris from entering the storm drain system, and eight installed in-line treatment systems to remove trash/debris from the storm drain system. Over 1,500 tons of trash and debris were removed from county maintained

	booms. Regular street sweeping programs throughout Orange County reported removing over 41,000 tons of material during the last year, an increase of over 25% from the previous year. The storm water permit addresses three of the four sources of trash identified above. Overboard disposal from boaters and shipping is beyond the scope of the program. While significant progress is being made to address trash, it can not be determined when or if the currently installed best management practices will fully address the trash problem.
RWQCB Recommendation	None.
SWRCB Staff Recommendation	On February 4, 2003 the SWRCB placed this water body segment on the Monitoring List. The study used had limited temporal coverage and additional monitoring is needed.

Region 8: Pelican Hill Waterfall
Total and Fecal coliform

Water Body	Pelican Hill Waterfall
Stressor/Media/Beneficial Use	Total and Fecal coliform/Water/beneficial uses are not established in the Basin Plan for this water body.
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	No water quality objectives are established in the Basin Plan specifically for this water body.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical guidelines directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	14/64 exceedances of fecal coliform WQO for REC-2. 208/220 exceedances of total coliform WQO. 11/56 exceedances of fecal coliform WQO for REC-1.
Spatial representation	Targeted in waterbody.
Temporal representation	Data were collected between 1997 and 2001.
Data type	Numerical data.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for total and fecal coliform.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because there are no applicable beneficial uses or water quality standards. There is no evidence in the record that there is an existing beneficial use. RWQCB should consider adoption of beneficial uses and water quality objectives for this water body. This conclusion is based on the staff findings that: 1. Beneficial uses have not been established and do not apply to the water body. 2. Water quality standards have not been established.

Region 8: Pelican Point Creek
Total and Fecal coliform

Water Body	Pelican Point Creek
Stressor/Media/Beneficial Use	Total and Fecal coliform/Water/Beneficial uses have not been established in the Basin Plan for this water body.
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	No water quality objectives are established in the Basin Plan specifically for this water body.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical guidelines directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	225/230 exceedances of total coliform guideline. 31/55 exceedances of fecal coliform guideline for REC-2. 48/56 exceedances of fecal coliform guideline for REC-1.
Spatial representation	Targeted in waterbody.
Temporal representation	Data collected between 1997 and 2001.
Data type	3 WQOs for total and fecal coliform for MUN, REC-1, REC-2.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for total and fecal coliform.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because there are no applicable beneficial uses or water quality standards. There is no evidence in the record that there is an existing beneficial use. RWQCB should consider adoption of beneficial uses and water quality objectives for this water body. This conclusion is based on the staff findings that: 1. Beneficial uses have not been established and do not apply to the water body. 2. Water quality standards have not been established.

Region 8: Pelican Point Middle Creek
Total and Fecal coliform

Water Body	Pelican Point Middle Creek
Stressor/Media/Beneficial Use	Total and Fecal coliform/Water/Beneficial uses are not established in the Basin Plan for this water body.
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	No water quality objectives are established in the Basin Plan specifically for this water body.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical guidelines directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	126/133 exceedances of total coliform guideline. 12/50 exceedances of fecal coliform WQO for REC-1 guideline. 11/50 exceedances of fecal coliform guideline for REC-2.
Spatial representation	Targeted in waterbody.
Temporal representation	Data were collected between 1997 and 2001.
Data type	Numerical data.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for total and fecal coliform.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because there are no applicable beneficial uses or water quality standards. There is no evidence in the record that there is an existing beneficial use. RWQCB should consider adoption of beneficial uses and water quality objectives for this water body. This conclusion is based on the staff findings that: 1. Beneficial uses have not been established and do not apply to the water body. 2. Water quality standards have not been established.

Region 8: San Diego Creek, Reach 1
Nutrients

Water Body	San Diego Creek, Reach 1
Stressor/Media/Beneficial Use	Nutrients/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been incorporated into Basin Plan and has been approved by USEPA.

Region 8: San Diego Creek, Reach 1
Siltation

Water Body	San Diego Creek, Reach 1
Stressor/Media/Beneficial Use	Siltation/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
***Linkage between measurement endpoint* and benefical use or standard**	N/A
***Utility of measure for judging if* standards or uses are not attained**	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been incorporated into Basin Plan and has been approved by USEPA.

Region 8: San Diego Creek, Reach 1
Metals

Water Body	San Diego Creek, Reach 1
Stressor/Media/Beneficial Use	Metals/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	USEPA has approved a TMDL for this water body-pollutant combination.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	None.
SWRCB Staff Recommendation	After reviewing the available data and information, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been established for this water body-pollutant combination by USEPA.

Region 8: San Diego Creek, Reach 1
Pesticides

Water Body	San Diego Creek, Reach 1
Stressor/Media/Beneficial Use	Pesticides/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	USEPA has approved a TMDL for this water body-pollutant combination.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	None.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the TMDLs Completed List because a plan to implement the TMDL has not been adopted or approved even though the TMDL has been approved by USEPA.

Region 8: San Diego Creek, Reach 1
Fecal coliform

Water Body	San Diego Creek, Reach 1
Stressor/Media/Beneficial Use	Fecal coliform/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	3 WQOs for total coliform (MUN) and fecal coliform (REC-1, REC-2).
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	22/22 exceedances of total and fecal coliform WQOs.
Spatial representation	Targeted in waterbody.
Temporal representation	1997-2001.
Data type	3 WQOs for total and fecal coliform for MUN, REC-1, REC-2
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for total and fecal coliform
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. All of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 8: San Diego Creek, Reach 2
Metals

Water Body	San Diego Creek, Reach 2
Stressor/Media/Beneficial Use	Metals/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	USEPA has approved a TMDL for this water body-pollutant combination.
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	None.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the TMDLs Completed List because a plan to implement the TMDL has not been adopted or approved even though the TMDL has been approved by USEPA.

Region 8: San Diego Creek, Reach 2
Siltation

Water Body	San Diego Creek, Reach 2
Stressor/Media/Beneficial Use	Siltation/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been incorporated into Basin Plan and has been approved by USEPA.

Region 8: San Diego Creek, Reach 2
Nutrients

Water Body	San Diego Creek, Reach 2
Stressor/Media/Beneficial Use	Nutrients/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Delist because TMDL has been incorporated into Basin plan, and has been approved by USEPA.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the TMDLs Completed List because a TMDL has been developed for the water body-pollutant combination. The TMDL has been incorporated into Basin Plan and has been approved by USEPA.

Region 8: San Jacinto River North Fork (Reach 7)
Metals

Water Body	San Jacinto River North Fork (Reach 7)
Stressor/Media/Beneficial Use	Metals/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	Reviewed water quality data from Lake Hemet Municipal Water District. QA used by water district.
Linkage between measurement endpoint and benefical use or standard	WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	
Data used to assess water quality	Aluminum: 4 samples with 1 exceeding MCL. Antimony: 4 samples with 0 exceeding MCL. Arsenic: 4 samples with 0 exceeding MCL. Barium: 4 samples with 0 exceeding MCL. Beryllium: 4 samples with 0 exceeding MCL. Cadmium: 4 samples with 0 exceeding MCL. Iron: 4 samples with 0 exceeding MCL.
Spatial representation	Insufficient data to make a determination.
Temporal representation	1997-2001.
Data type	Data are numeric values.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None
RWQCB Recommendation	Insufficient data to make a determination. More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. *This conclusion is based on the staff findings that:* 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Water quality standard used is applicable. The staff confidence that standards were exceeded is low.

Region 8: San Jacinto River South Fork (Reach 7)
Salinity, Total Dissolved Solids

Water Body	San Jacinto River South Fork (Reach 7)
Stressor/Media/Beneficial Use	Salinity, Total Dissolved Solids/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	Reviewed water quality data from Lake Hemet Municipal Water District. QA used by water district.
Linkage between measurement endpoint and benefical use or standard	WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	
Data used to assess water quality	Primary and secondary MCL: 4 samples with 0 exceeding. Sodium: 4 samples with 4 Basin Plan Objective. Sulfate: 4 samples with 0 exceeding BP Objective. Chloride: 4 samples with 3 exceeding BP Objective. TDS: 4 samples with 4 exceeding BP objective.
Spatial representation	Insufficient data to make a determination.
Temporal representation	1997-2001.
Data type	Data are numeric values.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	Insufficient data to make a determination. More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Water quality standard used is applicable. The staff confidence that standards were exceeded is low.

Region 8: Santa Ana Delhi Channel
Fecal coliform

Water Body	Santa Ana Delhi Channel
Stressor/Media/Beneficial Use	Fecal coliform/Water/Beneficial uses are not established in the basin Plan for this water body.
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	No water quality standards are established in the Basin Plan specifically for this water body.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical guidelines directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	11/11 exceedances of total coliform guidelines. 22/22 exceedances of total and fecal guidelines.
Spatial representation	Targeted in waterbody.
Temporal representation	Data collected between 1997 and 2001.
Data type	Numerical data.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for total and fecal coliform.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because there are no applicable beneficial uses or water quality standards. There is no evidence in the record that there is an existing beneficial use. RWQCB should consider adoption of beneficial uses and water quality objectives for this water body. This conclusion is based on the staff findings that: 1. Beneficial uses have not been established and do not apply to the water body. 2. Water quality standards have not been established.

Region 8: Santa Ana River (Reaches 4 and 5)
Metals

Water Body	Santa Ana River (Reaches 4 and 5)
Stressor/Media/Beneficial Use	Metals/Water/WARM, WILD, RARE
Data quality assessment. Extent to which data quality requirements met.	QA used by county.
Linkage between measurement endpoint and benefical use or standard	WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Insufficient data to make a determination.
Data used to assess water quality	Reviewed water quality data from Orange County Water District. Reach 4: Arsenic: 1 sample with 0 exceeding standard. Reach 4: Copper: 1 sample with 0 exceeding standard. Reach 4: Nickel: 1 sample with 0 exceeding standard. Reach 5: Copper: 3 sample with 0 exceeding standard. Reach 5: Lead: 1 sample with 0 exceeding standard. Reach 5: Nickel: 1 sample with 0 exceeding standard.
Spatial representation	Insufficient data to make a determination.
Temporal representation	1997-2001.
Data type	Data are numeric values.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	Insufficient data to make a determination. More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage.

Region 8: Santa Ana River, Reach 1
Trash

Water Body	Santa Ana River, Reach 1
Stressor/Media/Beneficial Use	Trash/Water/Human-related: REC-2; Aquatic Life: WARM, WILD, RARE
Data quality assessment. Extent to which data quality requirements met.	No quality assurance information was provided.
Linkage between measurement endpoint and benefical use or standard	The narrative water quality objectives to prevent floatables from causing nuisance or adversely affecting beneficial uses.
Utility of measure for judging if standards or uses are not attained	Photographs can indicate gross impacts on beneficial uses and whether standards have been exceeded. Measurements of the amounts of trash can provide a relative measure of the potential for nuisance.
Water Body-specific Information	Photographs appear to be taken on at least two occasions. The data for trash collection is for beaches in the cities of Newport Beach and Huntington Beach.
Data used to assess water quality	Trash carried down the Santa Ana River generally finds its way onto beaches in the cities of Huntington Beach and Newport Beach. After storms, 929 tons of trash and debris were collected in 1999 along Huntington Beach city beaches. During the same period, approximately 970 tons of trash and debris were collected on Newport Beach city beaches. Fifteen photographs were submitted depicting several locations in along the Santa Ana River with trash scattered in several locations. The trash included plastic bottles, styrofoam and paper cups, paper wrappers, plastic bags, a shopping cart, and other unidentifiable debris.
Spatial representation	The photographs were taken at seven locations along the Santa Ana River from McFadden to McAurthur Blvd.
Temporal representation	The date the photographs were taken is unknown but it is apparent from the time stamp on some of the photographs that they were taken on two different days.
Data type	The photographs are qualitative information. Data on trash collections from the Newport Beach and Huntington Beach city beaches are numerical.
Use of standard method	Documentation methods are not described.
Potential Source(s) of Pollutant	Trash can enter the River from urban runoff or by being blown directly into the water body.
Alternative Enforceable Program	The North/Central Orange County Areawide Urban Stormwater Runoff Permit, Order No. R8-2002-0010 issued to Orange County and its incorporated cities has enforceable provisions in place to address litter, debris and trash in this water body.
RWQCB Recommendation	Use the provisions of the storm water permit to correct the trash problem in Upper Newport Bay.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB

documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded.

This conclusion is based on the staff findings that:
1. The data is considered to be of unknown quality.
2. The data exhibited sufficient spatial and unknown temporal coverage.
3. Water quality standard used is applicable.
4. Data are both numerical and not numerical.
5. Cannot tell if standard methods were used.

An inadequate amount of the measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.

Region 8: Santa Ana River, Reach 3
Total Dissolved Solids

Water Body	Santa Ana River, Reach 3
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	QA used by Regional Board.
Linkage between measurement endpoint and benefical use or standard	WQO is 700 mg/L.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	17/18 samples did not exceed WQO (700 mg/L).
Spatial representation	Targeted in waterbody. Locations unknown.
Temporal representation	1997-2001.
Data type	Data values are numeric.
Use of standard method	Standard analytical methods used.
Potential Source(s) of Pollutant	None.
Alternative Enforceable Program	None.
RWQCB Recommendation	Delist because recent data indicate WQO is being met.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because applicable water quality standards are not exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including age of the data were considered. Most of the water quality measurements did not exceed the water quality standard. The staff confidence that standards were not exceeded is high.

Region 8: Santa Ana River, Reach 3
Nitrogen

Water Body	Santa Ana River, Reach 3
Stressor/Media/Beneficial Use	Nitrogen/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	QA used by Regional Board.
Linkage between measurement endpoint and benefical use or standard	WQO is 10 mg/L.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Data age = 1-4 Years.
Data used to assess water quality	54/55 samples did not exceed the WQO (10 mg/L).
Spatial representation	Targeted in waterbody.
Temporal representation	1997-2001.
Data type	Data values are numeric.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	None.
Alternative Enforceable Program	None.
RWQCB Recommendation	Delist because recent data indicate WQO is being met.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because applicable water quality standards are not exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including age of the data were considered. Most of the water quality measurements did not exceed the water quality standard. The staff confidence that standards were not exceeded is high.

Region 8: Seal Beach, Projection of First Street
Enterococcus

Water Body	Seal Beach, Projection of First Street
Stressor/Media/Beneficial Use	Enterococcus/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	QA used by county health agency.
Linkage between measurement endpoint and benefical use or standard	Exceedances of single sample AB 411 standards may result in beach postings by Orange Count Health Care Agency. Bacterial water quality standards are linked to REC-1 beneficial use attainment.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Data age = 1-4 Years. Data were collected during both wet and dry seasons.
Data used to assess water quality	25 samples exceeded standard out of a total of 150 samples.
Spatial representation	1 station. Sampling location represents 50 yards on either side of the sampling location.
Temporal representation	Data collected between 1999 and August 2002.
Data type	Numerical data.
Use of standard method	Standard bacteriological methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	List for enterococcus.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including season and the age of the data were considered. An adequate number of water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high. List for total and fecal coliform

Region 8: Strawberry Creek
Salinity, total dissolved solids

Water Body	Strawberry Creek
Stressor/Media/Beneficial Use	Salinity, total dissolved solids/Water/MUN, COLD WILD
Data quality assessment. Extent to which data quality requirements met.	Reviewed water quality data from Lake Hemet Municipal Water District. QA used by water district.
Linkage between measurement endpoint and benefical use or standard	WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Insufficient data to make a determination.
Data used to assess water quality	Reviewed water quality data from Lake Hemet Municipal Water District. Hardness: 4 samples with 0 exceeding the standard. Sodium: 4 samples with 4 exceeding the standard. Sulfate: 4 samples with 0 exceeding the standard. Chloride: 4 samples with 3 exceeding the standard. Total dissolved solids: 4 samples with 3 exceeding the standard.
Spatial representation	Insufficient data to make a determination.
Temporal representation	1997-2001.
Data type	Data are numeric values.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	Insufficient data to make a determination. More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage. An inadequate amount of the water quality measurements are available to determine if the water quality standards are exceeded.

Region 8: Temescal Creek
Metals

Water Body	Temescal Creek
Stressor/Media/Beneficial Use	Metals/Water/WARM, WILD, RARE
Data quality assessment. Extent to which data quality requirements met.	Reviewed water quality data from Orange County Water District. QA used by county.
Linkage between measurement endpoint and benefical use or standard	WQOs.
Utility of measure for judging if standards or uses are not attained	Measurement can be compared to numerical standard directly.
Water Body-specific Information	Measurements were compared to hardness-adjusted standards.
Data used to assess water quality	Reviewed water quality data from Orange County Water District. Arsenic: 4 sample with 0 exceeding standard. Cadmium: 4 samples with 0 exceeding standard. Copper: 4 samples with 0 exceeding standard. Lead: 4 samples with 0 exceeding standard. Nickel: 4 samples with 0 exceeding standard. Selenium: 4 samples with 0 exceeding standard. Zinc: 4 samples with 0 exceeding standard.
Spatial representation	Insufficient data to make a determination.
Temporal representation	1997-2000.
Data type	Data are numeric values.
Use of standard method	Standard analytical methods.
Potential Source(s) of Pollutant	Unknown.
Alternative Enforceable Program	None.
RWQCB Recommendation	Insufficient data to make a determination. More monitoring needed.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should be placed on the Monitoring List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited insufficient spatial and temporal coverage. An inadequate amount of the water quality measurements are available to determine if the water quality standards are exceeded.

Reference List for Region 8

Staff Report

California Regional Water Quality Control Board. Santa Ana Region. 2001. Staff Report on the Update of the Clean Water Act Section 303(d) List of Impaired Waterbodies within the Santa Ana Region. December 19, 2001.

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Big Bear Lake Municipal Water District, Water Column Chemistry, Grout Creek, 2000. Wet & Dry.

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Big Bear Lake Municipal Water District, Water Column Chemistry, Rathbun Creek, 2000. Wet & Dry.

City of Canyon Lake, Sediment, Canyon Lake, 1986-1997. Season not applicable.

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Orange County Health Care Agency , Water Column Chemistry, Buck Gully Creek, 1997- 2001. Wet & Dry.

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Orange County Health Care Agency, Water Column Chemistry, Newport Beaches, 1999-2001. Wet Only.

Orange County Health Care Agency, Water Column Chemistry, Pelican Point Creek, 1997-2001. Wet & Dry.

Orange County Health Care Agency, Water Column Chemistry, Pelican Point Middle Creek, 1997-2001. Wet & Dry.

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Orange County Water District, Water Column Chemistry, Cucamonga Creek, 1998,2000,2001. Wet Only

Orange County Water District, Water Column Chemistry, Chino Creek, 1997-2000. Wet & Dry.

Orange County Water District, Water Column Chemistry, *Mill Creek*, 1997-2000. Wet & Dry.

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Orange County Water District, Water Column Chemistry, Temescal Creek, 1997-2000. Dry Only

RWQCB 8 Nov 24, 1998 Newport Bay TMDL Problem Statement, Water Column Chemistry, San Diego Creek, 1997,1998. Wet & Dry.

State Water Resources Control Board, Coastal Fish Contamination Program, Fish Tissue, *Anaheim Bay*, 1999, 2000. Season not applicable.

State Water Resources Control Board, Coastal Fish Contamination Program , Fish Tissue, Huntington Beach State Park, 1999, 2000. Season not applicable.

State Water Resources Control Board, Coastal Fish Contamination Program, Fish Tissue, Newport Bay, 1999, 2000. Season not applicable.

State Water Resources Control Board, Coastal Fish Contamination Program , Fish Tissue , Newport Beaches, 1999, 2000. Season not applicable.

State Water Resources Control Board, Coastal Fish Contamination Program , Fish Tissue, Ocean Waters (oil platforms), 1999, 2000. Season not applicable.

State Water Resources Control Board, Coastal Fish Contamination Program , Fish Tissue, Seal Beach, 1999,2000. Season not applicable.

State Water Resources Control Board, Mussel Watch, Mussel Tissue , Huntington Harbour, 1998-2000. Season not applicable.

Yucaipa Valley Municipal Water District, No ambient data received only outfall data, San Timoteo Creek, Not applicable.

Regional Water Quality Control Board

SAN DIEGO REGION (9)

SECTION 303 (d) LIST PROPOSALS

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Region 9: Agua Hedionda Creek
Total Dissolved Solids

Water Body	Agua Hedionda Creek
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/MUN, AGR
Data quality assessment. Extent to which data quality requirements met.	NPDES permit monitoring.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (500 mg/L) used.
Water Body-specific Information	Data age = 1-3 years.
Data used to assess water quality	City of San Diego sampling showed exceedance of the Basin Plan objective for more than 10% of the time during a one-year period. At station AH1 from June 1998 to March 1999, 4 of 4 samples (100%) exceeded the objective, with a mean of 1268.0 mg/L and a median of 1251.5 mg/L. From January 2000 to March 2000, 1 of 3 samples (33%) exceeded the objective, with a mean of 684.3 mg/L and a median of 362.0 mg/L. One other station also demonstrated a TDS concentration to exceed the objective in June of 1998. The concentration at AHC-SA was 1372 mg/L. All non-detects were treated as 0.0 mg/L for statistical purposes. Regional Board TDS sampling in June of 1998 also show Agua Hedionda Creek to have concentrations above the Basin Plan objective. The concentration at Sycamore Avenue was 1372 mg/L, at El Camino Real the concentration was 1716 mg/L and 1624 mg/L.
Spatial representation	Two sample sites (top and bottom of reach).
Temporal representation	November 1998 to March 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage.

3. Beneficial uses have been established for and apply to the water body.
4. Water quality standard used is applicable.
5. Data are numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the effects of season and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Agua Hedionda Lagoon
Caulerpa taxifolia

Water Body	Agua Hedionda Lagoon
Stressor/Media/Beneficial Use	Caulerpa taxifolia (an invasive marine algae)/Water/Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	The information used to develop this listing is taken from two summary documents developed by the National Marine Fisheries Service.
Linkage between measurement endpoint and benefical use or standard	The Basin Plan contains narrative water quality objectives for the protection of bay and estuarine communities and populations of vertebrate, invertebrate, and plant species.
Utility of measure for judging if standards or uses are not attained	In areas where the Caulerpa has become well established, it has caused ecological and economic devastation by overgrowing and eliminating native seaweeds, seagrasses, and other communities. In the Mediterranean, it is reported to have harmed tourism and pleasure boating, devastated recreational diving, and had a costly impact on commercial fishing both by altering the distribution of fish as well as creating a considerable impediment to net fisheries. The dense carpet that this species can form on the bottom could inhibit the establishment of juveniles of many reef species, and its establishment offshore could seriously impact sport and commercial fisheries and navigation through quarantine restrictions to prevent the spread of this species.
Water Body-specific Information	This algae poses a substantial threat to marine ecosystems in Southern California, particularly to the extensive eelgrass meadows and other benthic environments that make coastal waters such a rich and productive environment for fish and birds. The eelgrass beds and other coastal resources that could be directly impacted by an invasion of Caulerpa are part of a food web that is critical to the survival of numerous native marine species including the commercially and recreationally important spiny lobster, California halibut, and sand basses.
Data used to assess water quality	The discovery of this species in southern California, recently reported in the journal Nature to be genetically identical to the strain in the Mediterranean, confirms that it nevertheless continues to invade marine ecosystems, such as the ecologically rich eelgrass beds that thrive in many of our coastal lagoons. It is likely that the alga was released from an aquarium at the locations in California where it has been discovered, a practice banned under California law. As of September 24, 2001 when Governor Gray Davis signed into law Assembly Bill 1334, it is now unlawful to sell, import, transport, transfer, or possess C. taxifolia and a number of look-alike species and other invasive Caulerpa species.
Spatial representation	The infestation of Huntington Harbour and Agua Hedionda are the first know infestations along the Pacific Coast of North America.
Temporal representation	Caulerpa was found in Agua Hedionda Lagoon in June 2000. It is probable that Caulerpa has been present since 1996.
Data type	The information used was not numerical.
Use of standard method	N/A

Region 9: Agua Hedionda Lagoon
Caulerpa taxifolia

Potential Source(s) of Pollutant	It is likely that the alga was released from an aquarium near the Lagoon. This practice is now banned by State law (AB 1334 (2001)).
Alternative Enforceable Program	RWQCB staff is coordinating efforts to define the spatial extent of the infestation, working with other agencies and interested parties to confine the infestation, examining available technologies for Caulerpa removal potential and educating the public as to its source and impact to the harbor.
RWQCB Recommendation	Do not add Aqua Hedionda Lagoon to the 303(d) list for Caulerpa taxifolia.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because a pollutant does not contribute to or cause the problem.

Region 9: Agua Hedionda Lagoon
Bacterial Indicators (was "high coliform count")

Water Body	Agua Hedionda Lagoon
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that the water quality problem was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial Indicators."

Region 9: Aliso Creek
Enterococci

Water Body	Aliso Creek
Stressor/Media/Beneficial Use	Enterococci/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	205(j) Planning Study used.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (>108 colonies/100 mL), for lightly/moderately used areas.
Water Body-specific Information	Data age = 2 years.
Data used to assess water quality	Aliso Creek Water Quality Planning Study (6-8/99), dry weather): Cooks Corner (44% exceedences [>108 coliform forming units/100 mL]), downstream of English Canyon Creek (33%), downstream of Dairy Fork Creek (78%), downstream of Sulphur Creek (44%) and at Pacific Coast Highway (33%). (6-8/99) tributaries, dry weather: English Canyon Creek (56%), Dairy Fork Creek (78%), Aliso Hills Channel (100%), Sulphur Creek (33%) and Wood Canyon Creek (22%).
Spatial representation	9 samples at each of 10 stations (Aliso Creek and tributaries combined) entire reach sampled.
Temporal representation	Sampling occurred in dry weather from June-August 1999.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. Place on section 303(d) list as "Bacterial Indicators." This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used.

8. Other water body- or site-specific information including the effects of age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Aliso Creek
Escherichia coli

Water Body	Aliso Creek
Stressor/Media/Beneficial Use	E. coli/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	205(j) Planning Study used.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (>406 colonies/100 mL), for lightly/moderately used areas.
Water Body-specific Information	Data age = 2 years.
Data used to assess water quality	Aliso Creek Water Quality Planning Study (6-8/99), dry weather: Cooks Corner (22% exceedences [>406 colonies/100 mL]), downstream of English Canyon Creek (56%), downstream of Dairy Fork Creek (89%), and downstream of Sulphur Creek (33%). (6-8/99) tributaries, dry weather: English Canyon Creek (44%), Dairy Fork Creek (78%), Aliso Hills Channel (67%), Sulphur Creek (22%) and Wood Canyon Creek (33%).
Spatial representation	9 samples at each of the 10 stations (Aliso Creek and tributaries combined) entire reach sampled.
Temporal representation	Sampling from June-August 1999.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. Place on section 303(d) list as "Bacterial Indicators." This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of age of the data were considered.

Region 9: Aliso Creek
Escherichia coli

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Aliso Creek
Fecal Coliform

Water Body	Aliso Creek
Stressor/Media/Beneficial Use	Fecal Coliform/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	205(j) Planning Study used.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
***Utility of measure for judging if* standards or uses are not attained**	WQO (Basin Plan) (for 5 samples or more, any 30-day period, log mean not >200 colonies/100 mL; no more than 10% total samples >400 colonies/100 mL) used.
Water Body-specific Information	Data age = 3 years.
Data used to assess water quality	Aliso Creek Water Quality Planning Study (10/98): 4 locations w/log mean concentrations >>WQO for 30-day log mean objective (200 colonies/100 mL). Locations: downstream of English Canyon Creek (1074 Most Probable Number (MPN)/100 mL), downstream of Dairy Fork Creek (4308 MPN/100 mL), downstream of Sulphur Creek (1410 MPN/100 mL) and at Pacific Coast Highway (3178 MPN/100 mL). (5 samples in a 30-day period)
Spatial representation	5 samples; lower 1 mile of Creek sampled.
Temporal representation	Samples collected in a 30-day period in October 1998.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. Place on section 303(d) list as "Bacterial Indicators." This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season, and age of the data were considered.

Region 9: Aliso Creek
Fecal Coliform

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Aliso Creek
Phosphorus

Water Body	Aliso Creek
Stressor/Media/Beneficial Use	Phosphorus/Water/WARM, WILD
Data quality assessment. Extent to which data quality requirements met.	NPDES permit monitoring.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan), narrative objective, also (biostimulatory objective = 0.1 mg/L) not to be exceeded >10% of the time.
Water Body-specific Information	Data age = 1-4 years.
Data used to assess water quality	Orange County NPDES Annual Progress Report (7/97 and 7/00): (data converted from PO4 to equivalent phosphorus value). 7/97-6/98: 5/5 (100%) > WQO, mean = 0.23 mg/L. 9/98-8/99: 20/22 (91%)> WQO, mean=0.26 mg/L. 10/99-6/00: 13/13 (100%)>WQO, mean=0.304 mg/L.
Spatial representation	40 samples; data good for lower 4 miles of the creek.
Temporal representation	Over 4 years (1997-2000).
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the effects of season and age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Aliso Creek
Toxicity (likely due to organophosphate pesticides)

Water Body	Aliso Creek
Stressor/Media/Beneficial Use	Organophosphate pesticides/Water/WARM, WILD
Data quality assessment. Extent to which data quality requirements met.	205(j) Planning Study used.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (narrative objective) used.
Water Body-specific Information	Data age = 2-3 years.
Data used to assess water quality	Aliso Creek Water Quality Planning Study: 9/98--no toxicity (low flow); 11/98 and 01/99--toxicity to juvenile fathead minnows and Ceriodaphnia dubia (flood events). For 11/20 toxicity tests, survival rates for both species <70%; for 10/11 of these survival <50%. Average survival rate (juvenile fathead minnows) = 79%. Average survival rate (Ceriodaphnia dubia) =22%.
Spatial representation	20 samples, 5 stations over entire reach (7.2 miles) covered
Temporal representation	Samples collected from 1998-1999.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Organophosphate pesticides are a significant component of the aquatic toxicity in storm water samples. Organophosphate pesticides are found in urban and agricultural run-off.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the effects of age of the data were considered.

Region 9: Aliso Creek
Toxicity (likely due to organophosphate pesticides)

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Aliso Creek (mouth) (was Aliso Creek Mouth of Orange) Bacterial Indicators (was "high coliform count")

Water Body	Aliso Creek (mouth) (was Aliso Creek Mouth of Orange)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "bacterial indicators."

Region 9: Buena Vista Lagoon
Bacterial Indicators (was "high coliform count")

Water Body	Buena Vista Lagoon
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Chollas Creek
Bacterial Indicators (was "high coliform count")

Water Body	Chollas Creek
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Cloverdale Creek
Phosphorus

Water Body	Cloverdale Creek
Stressor/Media/Beneficial Use	Phosphorus/Water/MUN, REC-1, REC-2, WARM, COLD, WILD, RARE
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan), narrative objective, also (biostimulatory objective = 0.1 mg/L) not to be exceeded >10% of the time.
Water Body-specific Information	Data age = 2 years.
Data used to assess water quality	Sampling by the City of San Diego at station CDC4 showed the Basin Plan objective for phosphorus to be exceeded for more than 10% of the time during the year. Eight of 8 samples exceeded the objective, with an average concentration was 0.45 mg/L and a median concentration was 0.34 mg/L.
Spatial representation	One sample site, 1/2 mile of Creek.
Temporal representation	Samples collected April 1999-March 2000.
Data type	Numerical data.
Use of standard method	NPDES procedures.
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Cloverdale Creek
Total Dissolved Solids

Water Body	Cloverdale Creek
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/MUN, AGR
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (500 mg/L) used.
Water Body-specific Information	Data age = 1-2 years.
Data used to assess water quality	Sampling by the City of San Diego at station CDC4 showed the Basin Plan objective for TDS to be exceeded for more than 10% of the time during the year. Eight of 8 samples exceeded the objective, with an average concentration of 1443.4 mg/L and a median concentration of 1500.0 mg/L.
Spatial representation	One sample site, 1/2 mile of Creek.
Temporal representation	Samples collected April 1999-March 2000.
Data type	Numerical data.
Use of standard method	NPDES procedures.
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season and age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Dana Point Harbor
Dissolved Copper

Water Body	Dana Point Harbor
Stressor/Media/Beneficial Use	Dissolved Copper/Water and sediment/WILD, RARE, MAR, MIGR, SPWN
Data quality assessment. Extent to which data quality requirements met.	The County of Orange's contracted lab used USEPA Method 200.8, an ICP/MS method commonly used for the detection of dissolved copper in drinking water. This method directs the analyst to correct for problems known to occur due to salt matrix interference. The contracted laboratory, however, did not remove salt matrices prior to testing for dissolved copper. It is therefore likely that the data reported in the RWQCB Fact Sheet (Table 1) are incorrect. USEPA (Region 9) performed intercalibration with Orange County's contracted lab to test accuracy and the recovery of metals within seawater/estuarine samples. Standard reference samples came from the National Research Council of Canada (NRCC). Intercalibration results demonstrated that Orange County's contracted lab reported much higher concentrations of copper than the NRCC reference contained when salt matrices are not removed. While this quality assurance check is preliminary, it suggests the Orange County contracted lab cannot produce a reliable dissolved copper result in seawater. The Dana Point Harbor data from the contracted lab must therefore be viewed with caution.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Water: CTR criteria used. Sediment: Effects Range Low, Effects Range Median (ERM).
Water Body-specific Information	Data age = 1-10 years.
Data used to assess water quality	Water chemistry data: 15/45 (33%) samples>CMC but data are suspect. Sediment data: 200-2001: 25/25 (100%) > ERL, 14/25 (56%) > ERM; all years ('99-'01): 37/62 (60%) > ERL, 18/62 (29%) >ERM. Summary: Limited direct evidence of elevated dissolved copper concentrations in Dana Point Harbor. One storm event resulted in all the direct evidence of exceedances and there is limited evidence that the data may not be valid due to analytical errors at the contracted laboratory. However, during the one storm event, 100% of the samples exceeded the CMC by a large margin. Considering all three-storm events, one-third of the samples exceeded the CMC. In addition, total copper concentrations are now above the ERM at over half the stations sampled and exceed the ERL at all the stations. Sediment toxicity data was not reported by the RWQCB staff.
Spatial representation	Five stations sampled within Harbor and just outside Harbor mouth.
Temporal representation	Two storm events sampled per year. No dry-weather, dissolved copper data was used.

Region 9: Dana Point Harbor
Dissolved Copper

Data type	Numerical data.
Use of standard method	RWQCB staff found that the lab used a non-standard method and that the data is probably unreliable.
Potential Source(s) of Pollutant	RWQCB staff has knowledge of antifouling (Cu-containing) paint use in Dana Point Harbor.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should not be placed on the section 303(d) list because existing data are inadequate to determine if applicable water quality standards are not exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. Non-standard methods were used. An inadequate number of the water quality measurements were scientifically valid or exceeded the water quality standard. The staff confidence that standards were exceeded is low.

Region 9: Dana Point Harbor (was Dana Point Harbor at Baby Beach [was + Bacterial Indicators (total/fecal coliform, enterococci)

Water Body	Dana Point Harbor (was Dana Point Harbor at Baby Beach [was "Dana Point Harbor"])
Stressor/Media/Beneficial Use	Bacterial Indicators (total/fecal coliform, enterococci)/Water/REC-1, SHELL
Data quality assessment. Extent to which data quality requirements met.	Orange County Environmental Health Care Agency.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan/Ocean Plan), via beach closures used. See entry for Pacific Ocean Shoreline (Ocean Beach).
Water Body-specific Information	Data age = 1 yr.
Data used to assess water quality	Re-analysis of applicable year-round 1999 through 2002 data by the RWQCB staff showed 39 usable exceedence days out of 153 usable samples, 32 exceedences out of 153 samples, 47 exceedences out of 153 samples, and 36 exceedences out of 153 samples at four separate locations (the West End, Buoy Line, Swim Area, and East End). (The "p" value used was 0.1.) The final RWQCB staff recommendation was to list the Dana Point Harbor at Baby Beach. The hydrologic sub-area 901.14 (Dana Point HSA) includes the entire Dana Point Harbor as well as the Beach segment. Dana Point Harbor is recommended to be listed for dissolved copper.
Spatial representation	Sampled within 400 yards (0.2 miles) of discharge point.
Temporal representation	
Data type	Numerical data.
Use of standard method	Orange County Environmental Health Care Agency.
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	A. After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that this water body should be added (as recommended by the RWQCB) to the section 303(d) list because applicable water quality standards are exceeded a significant amount of the time. The reason is that an adequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Dana Point Harbor (was Dana Point Harbor at Baby Beach [was + Bacterial Indicators (total/fecal coliform, enterococci)

This conclusion is based on the staff findings that:

1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses have been established for and apply to the water body.
4. Water quality standard used is applicable.
5. The evaluation guideline used to interpret narrative water quality standards is adequate.
6. Data are numerical.
7. Standard methods were used.
8. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

B. Change name (to agree with RWQCB staff's "Table 4" entry for hydrologic descriptor 901.14.

Region 9: Felicita Creek
Total Dissolved Solids

Water Body	Felicita Creek
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/MUN, AGR
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (500 mg/L) used.
Water Body-specific Information	Data age = 2 years.
Data used to assess water quality	Sampling by the City of San Diego showed the Basin Plan objective to be exceeded for more than 10% of the time during a one year period. Near Quiet Hills Farm Road, from April to June 1999, 3 of 3 samples (100%) exceeded the objective, with a mean of 1343.3 mg/L and a median of 1340.0 mg/L. Near East Mission Road, from April 1999 to April 2000, 10 of 11 samples (91%) exceeded the objective, with a mean of 1088.3 mg/L and a median of 1330.0 mg/L. From January 2001 to July 2001, 10 of 10 samples (100%) exceeded the objective, with a mean of 1308.1 mg/L and a median of 1365.0 mg/L. The data indicate TDS concentrations to be increasing over this time period, but the data represent only a short temporal span.
Spatial representation	Two stations; 2 miles of Creek covered.
Temporal representation	Sampling occurred between April 1999 and May 2001.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical.

6. Standard methods were used.
7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Forester Creek (was "Forrester Creek")
pH

Water Body	Forester Creek (was "Forrester Creek")
Stressor/Media/Beneficial Use	pH/Water/WARM, COLD, WILD
Data quality assessment. Extent to which data quality requirements met.	NPDES monitoring; City spill reports.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (6.5-8.5) used.
Water Body-specific Information	Data age = 1-4 years.
Data used to assess water quality	Data collected by the City of El Cajon show that 28 of 34 pH samples (82%) exceeded the Basin Plan objective. The average pH value was 9.0 and the median value was 8.9. In addition, spill reports from the City of El Cajon record a spill of approximately 1000 gallons of sodium hydroxide into Forrester Creek in July 2000. Measurements of pH were high before and after this reported spill. Existing regulatory actions may not be sufficient to protect Forrester Creek from high pH.
Spatial representation	Six drainage areas.
Temporal representation	Samples were collected between September 1994 and January 2001.
Data type	Numerical data.
Use of standard method	NPDES procedures.
Potential Source(s) of Pollutant	Industrial spills, urban runoff, other point sources, nonpoint sources, lack of shade cover, light penetration, (solar) heating of the water, increased photosynthesis, leached concrete components.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	A. After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season and age of the data were considered.

Region 9: Forester Creek (was "Forrester Creek")
pH

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

B. Change name from "Forrester" to "Forester Creek" (correct spelling).

Region 9: Forester Creek (was "Forrester Creek")
Fecal Coliform

Water Body	Forester Creek (was "Forrester Creek")
Stressor/Media/Beneficial Use	Fecal Coliform/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Padre Dam Municipal Water District Receiving Water Sampling/analysis
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan): For single samples, the Basin Plan1 objective states that no more than 10% of the total samples during any 30-day period shall exceed 400 colonies/100 mL.
Water Body-specific Information	Data age = 3 years.
Data used to assess water quality	Sampling was done by the Padre Dam Municipal Wastewater District intermittently. Data was taken once a month for October-March and twice a month for April-October. The data shows that 14 of 38 samples (37%) in both wet and dry weather had levels of fecal coliform in excess of 400 Most Probable Number (MPN)/mL.
Spatial representation	One monitoring site.
Temporal representation	Samples were collected between October 1997 and September 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources, nonpoint sources, and sewage spills.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	A. After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Forester Creek (was "Forrester Creek")
Fecal Coliform

B. Change name from "Forrester" to "Forester Creek" (correct spelling).

Region 9: Forester Creek (was "Forrester Creek")
Total Dissolved Solids

Water Body	Forester Creek (was "Forrester Creek")
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	Padre Dam Municipal Water District Receiving Water Sampling/analysis.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	The Basin Plan1 objective for surface waters in the lower portion of hydrologic unit sub area 907.12 is 1500 mg/L. This objective is not to be exceeded more than 10% of the time during any one-year period.
Water Body-specific Information	Data age = 1-4 years.
Data used to assess water quality	Basin Plan objective was exceeded for more than 10% of the time during a one-year period from September 1997 to September 1998. 17 of 18 samples (94%) exceeded the objective, with a mean of 1667.3 mg/L and a median of 1738.0 mg/L (15.9% above the objective). From October 1998 to October 1999, 16 of 20 samples (80%) exceeded the objective, with a mean of 1647.6 mg/L and a median of 1706.0 mg/L (13.7% above the objective). From November 1999 to December 2000, 19 of 21 samples (95%) exceeded the objective, with a mean of 1589.7 mg/L and a median of 1656.0 mg/L (10.4% above the objective).
Spatial representation	One sample site.
Temporal representation	Samples were collected between September 1997 and December 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	A. After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical.

6. Standard methods were used.
7. Other water body- or site-specific information including the age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderately high.

B. Change name from "Forrester" to "Forester Creek" (correct spelling).

Region 9: Green Valley Creek
Sulfate

Water Body	Green Valley Creek
Stressor/Media/Beneficial Use	Sulfate/Water/MUN
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (250 mg/L) used.
Water Body-specific Information	Data age = 1-2 years.
Data used to assess water quality	Data from the City of San Diego Water Quality Lab from April 1999 to July 2001 show the Basin Plan objective to be exceeded for more than 10% of the time during a one-year period. From April 1999 to April 2000, 8 of 13 samples (62%) exceeded the objective, with a mean of 305.1 mg/L and a median of 313.0 mg/L. From January 2001 to July 2001, 6 of 10 samples (60%) exceeded the objective, with a mean of 355.7 mg/L and a median of 447.0 mg/L.
Spatial representation	Only one station.
Temporal representation	Samples collected between April 1999 and July 2001. It should be noted that the majority of the sampling occurred during the months of January, February, March and April. This is generally considered to be the rainy season in San Diego.
Data type	Numerical data.
Use of standard method	NPDES procedures.
Potential Source(s) of Pollutant	Urban runoff, other point sources, nonpoint sources, and natural sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

Region 9: Green Valley Creek
Sulfate

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Hodges, Lake (was Lake Hodges [was Hodges Reservoir]) Total Dissolved Solids

Water Body	Hodges, Lake (was Lake Hodges [was Hodges Reservoir])
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/AGR
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (500 mg/L) used.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Data from the City of San Diego Water Quality Lab from September 1998 to December 2000 show the Basin Plan objective to be exceeded for more than 10% of time during a one-year period. From September 98 to September 99, 5 of 5 samples (100%) exceeded the objective, with a mean of 653.6 mg/L and a median of 659.0 mg/L. From December 99 to December 00, 5 of 5 samples (100%) exceeded the objective, with a mean of 770.2 mg/L and a median of 754.0 mg/L.
Spatial representation	Two representative sampling stations.
Temporal representation	September 1998-December 2000.
Data type	Numerical data.
Use of standard method	City of San Diego WQ Laboratory.
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

Region 9: Hodges, Lake (was Lake Hodges [was Hodges Reservoir]) Total Dissolved Solids

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Hodges, Lake (was Lake Hodges [was Hodges Reservoir]) Phosphorus

Water Body	Hodges, Lake (was Lake Hodges [was Hodges Reservoir])
Stressor/Media/Beneficial Use	Phosphorus/Water/WARM, COLD, WILD, RARE, MUN, IND, PROC, AGR, REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory, (narrative) descriptions by SDWD.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) used.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Data from the City of San Diego Water Quality Lab from July 1997-May 2001 show that 5 locations exceeded the Basin Plan objective for more than 10% of the time during a one-year period. A total of 60 exceedences were recorded for 97 samples collected at the five locations in 1997 through 2001 (62%).
Spatial representation	The first sampling location is near the boat launch ramp. The rest of the sampling points are located at various depths at Station A, which is in front of the reservoir dam and outfall structure to the flume delivering water to Badger Filtration Plant.
Temporal representation	July 1997-May 2001.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, local dairies, agriculture, orchards, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

Region 9: Hodges, Lake (was Lake Hodges [was Hodges Reservoir]) Phosphorus

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Hodges, Lake (was Lake Hodges [was Hodges Reservoir]) Nitrogen

Water Body	Hodges, Lake (was Lake Hodges [was Hodges Reservoir])
Stressor/Media/Beneficial Use	Nitrogen/Water/WARM, COLD, WILD, RARE, MUN, IND, PROC, AGR, REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory, (narrative) descriptions by SDWD.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Measurements are related to the Basin Plan WQO.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Data from the City of San Diego Water Quality Lab from July 1997-May 2001 show that 5 locations exceeded the Basin Plan objective for more than 10% of the time during a one-year period.
Spatial representation	The first sampling location is near the boat launch ramp. The rest of the sampling points are located at various depths at Station A, which is in front of the reservoir dam and outfall structure to the flume delivering water to Badger Filtration Plant.
Temporal representation	July 1997-May 2001.
Data type	Numerical data.
Use of standard method	City of San Diego WQ Laboratory, (narrative) descriptions by SDWD.
Potential Source(s) of Pollutant	Urban runoff, local dairies, agriculture, orchards, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is high.

Region 9: Hodges, Lake (was Lake Hodges [was Hodges Reservoir]) Color

Water Body	Hodges, Lake (was Lake Hodges [was Hodges Reservoir])
Stressor/Media/Beneficial Use	Color/Water/MUN, REC-2
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (15 color units) used.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Data from the City of San Diego Water Quality Lab from September 1997 to December 2000 show the Basin Plan objective to be exceeded for more than 10% of the time during a one-year period. From March 1998 to March 1999, 4 of 4 samples (100%) exceeded the objective, with a mean of 53.6 color units and a median of 37.3 color units. From June 1999 to June 2000, 5 of 5 samples (100%) exceeded the objective, with a mean of 65.8 color units and a median of 78.0 color units. In September and December of 2000, 2 of 2 samples (100%) exceeded the objective, with a mean and median of 64.0 color units.
Spatial representation	One station.
Temporal representation	Samples collected between September 1997 and December 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

Region 9: Hodges, Lake (was Lake Hodges [was Hodges Reservoir]) Color

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Kit Carson Creek
Total Dissolved Solids

Water Body	Kit Carson Creek
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/AGR
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (500 mg/L) used.
Water Body-specific Information	Data age = 3 years.
Data used to assess water quality	Data from the City of San Diego Water Quality Lab from April 1999 to May 2001 show the Basin Plan objective to be exceeded for more than 10% of the time during a one-year period. From April 1999 to April 2000, 10 of 11 samples (91%) exceeded the objective, with a mean of 990.5 mg/L and a median of 1200.0 mg/L. From January 2001 to July 2001, 10 of 10 samples (100%) exceeded the objective, with a mean of 1170.9 mg/L and a median of 1300.0 mg/L.
Spatial representation	One sampling station, 1/2 mile of Creek.
Temporal representation	Samples collected between April 1999 and May 2001. It should be noted that the majority of the sampling occurred during the months of January, February, March and April. This is generally considered to be the rainy season in San Diego.
Data type	Numerical data.
Use of standard method	NPDES procedures.
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used.

7. Other water body- or site-specific information including the effects of season, storm events, and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Loma Alta Slough
Bacterial Indicators (was "high coliform count")

Water Body	Loma Alta Slough
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Mission Bay Shoreline (was Mission Bay, at Rose Creek Mouth + Eutrophic (no change), Lead (no change), Bacterial Indicators (was hig +

Water Body	Mission Bay Shoreline (was Mission Bay, at Rose Creek Mouth and Tecolote Creek Mouth)
Stressor/Media/Beneficial Use	Eutrophic (no change), Lead (no change), Bacterial Indicators (was high coliform count)
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	A. The specific locations of impacts to water quality due to lead and eutrophication in Mission Bay should be specified as "Rose and Tecolote Creek Mouths." Each location accounts for one-half of the one acre listed as impacted. These specifications come from interpretation of the 1996 Section 303(d) Fact Sheet in support of that years' listing of Mission Bay. B. All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	A. Change name from "Mission Bay" to "Mission Bay, at Rose Creek Mouth and Tecolote Creek Mouth." B. Change pollutant designation from "high coliform count" to "bacterial indicators."

Region 9: Murrieta Creek
Phosphorus

Water Body	Murrieta Creek
Stressor/Media/Beneficial Use	Phosphorus/Water/REC-1, REC-2, WARM, COLD
Data quality assessment. Extent to which data quality requirements met.	Final WQ Studies and Proposed Watershed Monitoring Program Report, SDRWQCB Monitoring data.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (biostimulatory objective = 0.1 mg/ml) used.
Water Body-specific Information	Data age = 2 years.
Data used to assess water quality	12/97-11/98: 4/5 (80%) exceedences, mean=0.28 mg/ml; 02 and 05/99: 2/2 (100%) violations, mean=0.21 mg/ml.
Spatial representation	Samples at start and finish of reach.
Temporal representation	Sampling from November 1997 to May 1999.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Orange County Coastline
Trash

Water Body	Orange County Coastline
Stressor/Media/Beneficial Use	Trash/Water/REC-2, Aquatic Life
Data quality assessment. Extent to which data quality requirements met.	The sampling procedures, collection approach, data analysis, and estimation procedures are described (Moore et al., 2000. Composition and distribution of beach debris in Orange County, California).
Linkage between measurement endpoint and benefical use or standard	The California Ocean Plan designates the beneficial uses of the ocean waters of the State that shall be protected including water contact and non-contact recreation, including aesthetic enjoyment; and marine habitat. The California Ocean Plan has applicable narrative water quality objectives as follows: - Floating particulates and grease and oil shall not be visible. - The discharge of waste shall not cause aesthetically undesirable discoloration of the ocean surface. - The rate of deposition of inert solids and the characteristics of inert solids in ocean sediments shall not be changed such that benthic communities are degraded.
Utility of measure for judging if standards or uses are not attained	The measures used in the study were abundance of trash particles and the weight of trash along the coastline. These data were compared to California Coastal Cleanup Day collection data.
Water Body-specific Information	Estimates were made of the percent of shoreline affected, types of habitat affected (sandy beach and rocky shore), Trash type (including plastics, cigarette butts, paper, wood metal glass rubber, pet and bird droppings, cloth, and other trash). Even thought the study measured the amounts of trash on the beaches for the water's edge to the first pavement or rocky cliff, this listing only applies to the portion of the beach regularly in contact with ocean water.
Data used to assess water quality	Estimated total abundance of trash was 106 million items weighing 13 tons. Pre-production plastic pellets, foamed plastics and hard plastics made up 99% of the total abundance and 51% of the total weight. Cigarette butts were fourth in total abundance and accounted for less than 1% of the abundance and weight.
Spatial representation	Beach debris was surveyed and collected at 43 sites from Seal Beach to San Clemente on the Orange County coast. The data were collected using a stratified random design, stratified by shoreline type. Each sample site was delineated as an area 25 yards in length and extending from the water's edge to the first pavement or rocky cliff. This may include areas outside of 303(d) program jurisdiction. The study assessed trash on beaches in both Region 8 and Region 9. The proposed listing in only for the water-associated portion of these beaches.

Region 9: Orange County Coastline
Trash

Temporal representation	Data were collected between August 2 and September 18, 1998. Additional monitoring is required in order to confirm impacts to beneficial uses from trash.
Data type	Numerical data.
Use of standard method	See Quality Assurance section above. Data were collected using approaches from other debris studies outside the U.S.
Potential Source(s) of Pollutant	Four sources were identified: (1) littering by beachgoers, (2) wind currents from upland sources, (3) runoff from land-based activities, and (4) overboard disposal form boating activities (including accidental spills). The data suggest that water-based sources (runoff and overboard disposal) were more important than direct littering or wind.
Alternative Enforceable Program	The Orange County Areawide Urban Stormwater Runoff Permit, Order No. R9-2002-0001 issued to Orange County and its incorporated cities does not have enforceable provisions in place to address litter, debris, and trash in this water body. The permit contains no specific provisions addressing trash, except trash is mentioned as a pollutant and the permit requires the permittee to clean storm water controls of trash before the rainy season.
RWQCB Recommendation	Do not list.
SWRCB Staff Recommendation	On February 4, 2003 the SWRCB placed this water body segment on the Monitoring List. The study used had limited temporal coverage and additional monitoring is needed.

Region 9: Pacific Ocean Shoreline, Aliso HSA (was Pacific Ocean, Alis + Bacterial Indicators (was "high coliform count").

Water Body	Pacific Ocean Shoreline, Aliso HSA (was Pacific Ocean, Aliso HSA 901.13)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count").
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, Buena Vista (Creek) HA (was Pacifi + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, Buena Vista (Creek) HA (was Pacific Ocean, Buena Vista HA 901.20)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, Coronado (Beach)
Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, Coronado (Beach)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	City of Coronado NPDES monitoring.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Bacterial standards are linked to REC-1 beneficial use.
Water Body-specific Information	Data age = 2 years.
Data used to assess water quality	Cease-and-Desist Orders 97-69 and 98-74 issued to City of Coronado. City implemented wet/dry weather diversion systems and ultra-violet (UV) treatment to reduce sewage discharge problems. City began semi-annual WDRs reporting based on weekly monitoring at four Coronado Beach sites. Surf Zone C (1/13/00-1/2/01): 7/153 (5%) possible exceedences. Surf Zone A (5/26/99-12/28/00): 7/249 (3%) possible exceedences. Central Beach (11/1/99-1/2/01): 7/183 (4%) possible exceedences. Ave. del Sol (4/3/00-1/2/01): 6/120 (5%) possible exceedences. Total: 27/705 (4%) possible exceedences.
Spatial representation	Four sample sites covering the extent of the to-be-delisted area.
Temporal representation	Weekly samples.
Data type	Numerical data.
Use of standard method	City of Coronado NPDES monitoring.
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	Cease-and-Desist Orders led to WDRs and appropriate steps to reduce pollution. City has taken appropriate initial steps.
RWQCB Recommendation	Delist.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff conclude that the water body should not be placed on the section 303(d) list because applicable water quality standards are not exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Water quality standard used is applicable. 4. Data are numerical. 5. Standard methods were used. 6. Other water body- or site-specific information including the effects of season and age of the data were considered.

Region 9: Pacific Ocean Shoreline, Coronado (Beach)
Bacterial Indicators (was "high coliform count")

An inadequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were not exceeded is high.

Region 9: Pacific Ocean Shoreline, Dana Point HSA (was Pacific Ocean, + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, Dana Point HSA (was Pacific Ocean, Dana Point HSA 901.14)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, Escondido Creek HSA (was Pacific O + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, Escondido Creek HSA (was Pacific Ocean, Escondido HSA 904.60)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, Laguna Beach HSA (was Pacific Ocea + Bacterial Indicators (originally high coliform count)

Water Body	Pacific Ocean Shoreline, Laguna Beach HSA (was Pacific Ocean Shoreline, Laguna Beach and San Joaquin Hills [was Pacific Ocean, Laguna Beach HSA])
Stressor/Media/Beneficial Use	Bacterial Indicators (originally high coliform count)
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	A. Specific segments described in the 1998 list were inadvertently placed within incorrect hydrologic boundaries. The RWQCB recommends that these individual segments be placed into the correct hydrologic boundaries, correcting the extents of impairment for several coastal bacterial listings. Specifically, the "Pacific Ocean, Laguna Beach HSA" listing should be renamed the "Pacific Ocean, Laguna Beach and San Joaquin Hills HSAs." This change will correctly define the hydrologic sub-area where the impairment was found. B. All previous (1998) listings of "High Coliform Count" should be changed to "Bacterial Indicators" in order to ensure consistency between the 1998 List and the 2002 Updated List. In 1998 listings, "bacterial indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "bacterial indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	A. Rename water body from "Pacific Ocean, Laguna Beach HSA" and "Pacific Ocean Shoreline, Laguna Beach and San Joaquin Hills" to "Pacific Ocean Shoreline, Laguna Beach HSA." B. Change "pollutant" designation from "high coliform count" to "Bacterial Indicators."

Region 9: Pacific Ocean Shoreline, Loma Alta HA (was Pacific Ocean, L + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, Loma Alta HA (was Pacific Ocean, Loma Alta HSA 904.10)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, Lower San Juan HSA (was Pacific Oc + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, Lower San Juan HSA (was Pacific Ocean, Lower San Juan HSA)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
***Linkage between measurement endpoint* and benefical use or standard**	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, Miramar Reservoir HA (was Pacific + Bacterial Indicators

Water Body	Pacific Ocean Shoreline, Miramar Reservoir HA (was Pacific Ocean Shoreline, Torrey Pines State Beach at Los Penasquitos Lagoon outlet)
Stressor/Media/Beneficial Use	Bacterial Indicators/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	San Diego County Department of Environmental Health.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Bacterial standards are linked to REC-1 beneficial use.
Water Body-specific Information	Data age = 1 year.
Data used to assess water quality	Analysis of applicable 2000, 2001, and 2002 data by the RWQCB staff showed 10 exceedence days out of 89 samples, 0 exceedences out of 34 samples, and 1 exceedence out of 21 samples, from dry season and year-round sampling events. (The "p" values used were 0.04 and 0.1.) The final RWQCB staff recommendation is not to list the Pacific Ocean Shoreline, Torrey Pines State Beach at Los Penasquitos Lagoon outlet. Hydrologic Sub-area 906.10, which includes the Pacific Ocean Shoreline, Torrey Pines State Beach at Los Penasquitos Lagoon outlet, is a portion of the larger area "Los Penasquitos Lagoon" This larger area was not listed for bacterial problems in 1998, but was listed for sedimentation/siltation. Not specifically listing the Pacific Ocean Shoreline, Torrey Pines State Beach at Los Penasquitos Lagoon outlet, is not intended to negate or otherwise affect the prior listing of the Los Penasquitos Lagoon for sedimentation/siltation.
Spatial representation	Sampled within 400 yards (0.2 miles) of discharge point.
Temporal representation	32 days of closures/advisories.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	This is a correction of an earlier RWQCB recommendation. Torrey Pines State Beach at Del Mar (Anderson Canyon) was incorrectly placed in 905.00 HU. It belongs in the 906.10 HA. This is not a new recommendation.
SWRCB Staff Recommendation	Rename "Pacific Ocean Shoreline, Torrey Pines State Beach at Los Penasquitos Lagoon outlet" entry (a prior RWQCB recommendation). After reviewing the available data and information and the RWQCB

documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

This conclusion is based on the staff findings that:

1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses have been established for and apply to the water body.
4. Water quality standard used is applicable.
5. The evaluation guideline used to interpret narrative water quality standards is adequate.
6. Data are numerical.
7. Standard methods were used.
8. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

An adequate number of water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Pacific Ocean Shoreline, Ocean Beach at Bermuda Avenue Bacterial Indicators

Water Body	Pacific Ocean Shoreline, Ocean Beach at Bermuda Avenue
Stressor/Media/Beneficial Use	Bacterial Indicators/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	San Diego County Department of Environmental Health.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Bacterial standards are linked to REC-1 beneficial use.
Water Body-specific Information	Data collected in 1999, 2000, and 2001.
Data used to assess water quality	Analysis of applicable 1999, 2000, and 2001 data by the RWQCB staff showed 1 usable exceedence day out of 13 usable samples, 3 exceedences out of 21 samples, 1 exceedence out of 21 samples (all from dry season sampling events), and 7 out of 7 exceedences during wet months. (The "p" values used were 0.04 and 0.1.) The final RWQCB staff recommendation is not to list the Pacific Ocean Shoreline at Ocean Beach. Hydrologic Sub-area 907.11, which includes the Pacific Ocean Shoreline, Ocean Beach at Bermuda Avenue, also encompasses the Lower San Diego River, which discharges near Ocean Beach. This area is also called San Diego River mouth, a.k.a. Dog Beach (907.11). The San Diego River (lower) is recommended for listing for bacterial indicators. The San Diego River mouth a.k.a. Dog Beach (907.11) was listed, albeit titled "Pacific Ocean, San Diego HU 907.00) in 1998. Excluding the Pacific Ocean Shoreline at Ocean Beach from the 2002 303(d) list does not negate or otherwise affect the decision to list the San Diego River (lower) or the previous (1998) listing of the San Diego River mouth at Dog Beach (907.11)/Pacific Ocean, San Diego HU 907.00.
Spatial representation	Sampled within 400 yards (0.2 miles) of discharge point.
Temporal representation	*1999 - 2001 data.*
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	Do Not List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that this water body should not be specifically added (as originally recommended) to the section 303(d) list because applicable water quality standards are not exceeded a significant amount of the time. This determination does NOT

eliminate the decision to list the lower San Diego River, which shares the same hydrologic sub-area number (907.11), for bacterial indicators.

This conclusion is based on the staff findings that:

1. The data is considered to be of adequate quality.
2. Too few samples exceeded the water quality standard.

The reason is that an inadequate amount of the water quality measurements exceeded the water quality standard (see information under "data used"). The staff confidence that standards were exceeded is extremely low.

Region 9: Pacific Ocean Shoreline, San Clemente HA (was Pacific Ocean + Bacterial Indicators (originally high coliform count)

Water Body	Pacific Ocean Shoreline, San Clemente HA (was Pacific Ocean Shoreline, San Clemente, San Mateo Canyon, and San Onofre [was "Pacific Ocean, San Clemente HA 901.30"])
Stressor/Media/Beneficial Use	Bacterial Indicators (originally high coliform count)
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	A. Specific segments described in the 1998 list were inadvertently placed within incorrect hydrologic boundaries. The RWQCB recommends that these individual segments be placed into the correct Hydrologic boundaries, correcting the extents of impairment for several coastal bacterial listings. Specifically, the "Pacific Ocean, San Clemente HA" listing should be renamed the "Pacific Ocean, San Clemente, San Mateo and San Onofre HSA." This change will correctly define the hydrologic sub-area where the impairment was found. B. All previous (1998) listings of "High Coliform Count" should be changed to "Bacterial Indicators" in order to ensure consistency between the 1998 List and the 2002 Updated List. In 1998 listings, "bacterial indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "bacterial indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	A. Rename water body from "Pacific Ocean, San Clemente HA 901.30" to "Pacific Ocean Shoreline, San Clemente, San Mateo Canyon, and San Onofre." B. Change "pollutant" designation from "high coliform count" to

Region 9: Pacific Ocean Shoreline, San Clemente HA (was Pacific Ocean + Bacterial Indicators (originally high coliform count)

"bacterial indicators."

Region 9: Pacific Ocean Shoreline, San Diego HU (was Pacific Ocean, S + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, San Diego HU (was Pacific Ocean, San Diego HU 907.00)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, San Dieguito HU (was Pacific Ocean + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, San Dieguito HU (was Pacific Ocean, San Dieguito HU 905.00)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, San Joaquin Hills HSA (was Pacific + Bacterial Indicators

Water Body	Pacific Ocean Shoreline, San Joaquin Hills HSA (was Pacific Ocean Shoreline, Laguna Beach and San Joaquin Hills [was Pacific Ocean, Laguna Beach HSA])
Stressor/Media/Beneficial Use	Bacterial Indicators/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Measurements can be compared to bacterial standards directly.
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	Split existing, 1998, listing into two in order to more precisely indicate extent/location of impact of pollution.
SWRCB Staff Recommendation	Per RWQCB recommendation, split existing, 1998, listing into two in order to more precisely indicate extent/location of impact of pollution.

Region 9: Pacific Ocean Shoreline, San Luis Rey HU (was Pacific Ocean + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, San Luis Rey HU (was Pacific Ocean, San Luis Rey HU 903.00)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, San Marcos HA (was Pacific Ocean, + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, San Marcos HA (was Pacific Ocean, San Marcos HA 904.50)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, San Onofre State Beach/San Mateo C + Bacterial Indicators

Water Body	Pacific Ocean Shoreline, San Onofre State Beach/San Mateo Creek Outlet
Stressor/Media/Beneficial Use	Bacterial Indicators/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	San Diego County Department of Environmental Health.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Measurements can be compared to bacterial standards directly.
Water Body-specific Information	Data age = 1 year.
Data used to assess water quality	Analysis of applicable 1999, 2000, and 2001 data by the RWQCB staff showed 0 usable exceedence days out of 10 usable samples, 2 exceedences out of 36 samples, and 0 exceedences out of 24 samples, all from dry or mostly dry season sampling events. (The "p" value used was 0.04.) Hydrologic Sub-area 901.51, which includes the Pacific Ocean Shoreline, San Onofre State Beach/San Mateo Creek Outlet, is a portion of the larger area "San Clemente HA (901.30), San Mateo Canyon HA (901.40) and San Onofre HA (901.50)." This larger area was listed for bacterial problems in 1998 under the title "Pacific Ocean Shoreline, San Clemente HA 901.30." The RWQCB requested that the name be changed/expanded to correctly include the "San Mateo Canyon" and "San Onofre" portions. Not specifically listing the Pacific Ocean Shoreline at San Onofre State Beach, is not intended to negate or otherwise affect the prior listing of the Pacific Ocean Shoreline, San Clemente, San Mateo Canyon, and San Onofre (i.e., .Pacific Ocean Shoreline, San Clemente).
Spatial representation	Sampled within 400 yards (0.2 miles) of discharge point.
Temporal representation	1999-2001 data.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	Do Not List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that this water body should not be specifically added to the section 303(d) list because applicable water quality standards are not exceeded a significant amount of the time. This determination is NOT intended to affect or change any other water body segment of sub-area numbers 901.51, 901.40, or 901.30.

Region 9: Pacific Ocean Shoreline, San Onofre State Beach/San Mateo C + Bacterial Indicators

This conclusion is based on the staff findings that:

1. The data is considered to be of adequate quality.
2. Too few samples exceeded the water quality standard.

The reason is that an inadequate amount of the water quality measurements exceeded the water quality standard (see information under "data used"). The staff confidence that standards were exceeded is extremely low.

Region 9: Pacific Ocean Shoreline, Scripps HA (was Pacific Ocean, Scr + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, Scripps HA (was Pacific Ocean, Scripps HA 906.30)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pacific Ocean Shoreline, South Capistrano Beach at Beach Ro + NA

Water Body	Pacific Ocean Shoreline, South Capistrano Beach at Beach Road
Stressor/Media/Beneficial Use	NA
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
Utility of measure for judging if standards or uses are not attained	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	The hydrologic sub-area 901.27 (Lower San Juan HSA) was previously listed in 1998. Reference to the specific segment of South Capistrano Beach at Beach Road (also HSA 901.27) should be added to increase in the extent of impairment of the previously listed water body.
SWRCB Staff Recommendation	Previous listing of this water body by the SWRCB resulted from a misunderstanding. Per the actual RWQCB recommendation, do not add this water body as a separate listing. Instead, reference it in a note within the listing for "Pacific Ocean Shoreline, Lower San Juan HSA."

Region 9: Pacific Ocean Shoreline, Tijuana HU (was Pacific Ocean, Tij + Bacterial Indicators (was "high coliform count")

Water Body	Pacific Ocean Shoreline, Tijuana HU (was Pacific Ocean, Tijuana HU 911.00)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Pine Valley Creek (Upper)
Enterococci

Water Body	Pine Valley Creek (Upper)
Stressor/Media/Beneficial Use	Enterococci/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	SR: USDA Forest Service, FS: City of San Diego Water Dept.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (108 colonies/100 mL) for lightly-moderately used areas.
Water Body-specific Information	Data age = 3 years.
Data used to assess water quality	6/11 (55%) violations of Basin Plan objective, log mean = 223 coliform-forming units.
Spatial representation	Five sampling locations along Creek.
Temporal representation	Unknown.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	From horse stables, cattle grazing in and near the creek, and human encampments.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the effects of the age of the data was considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Prima Deshecha Creek
Phosphorus

Water Body	Prima Deshecha Creek
Stressor/Media/Beneficial Use	Phosphorus/Water/REC-1, REC-2, WARM, WILD
Data quality assessment. Extent to which data quality requirements met.	NPDES permit monitoring.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (biostimulatory substance index = 0.1 mg/L) used.
Water Body-specific Information	Data age = 1-4 years.
Data used to assess water quality	7/97-6/98: 13/16 (81%) exceedences, mean=1.01 mg/mL; 8/98-7/99: 24/29 (83%) exceedences, mean=0.69 mg/mL; 10/99-6/00: 9/9 (100%) exceedences, mean=1.37 mg/mL, all from wet months.
Spatial representation	One sample site.
Temporal representation	July 1997 to June 2000 during wet weather months.
Data type	Numerical data.
Use of standard method	NPDES permit monitoring.
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Prima Deshecha Creek
Turbidity

Water Body	Prima Deshecha Creek
Stressor/Media/Beneficial Use	Turbidity/Water/WARM, WILD
Data quality assessment. Extent to which data quality requirements met.	NPDES permit monitoring.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (20 Nephelometric Turbidity Units [NTU]) used.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	7/97-6/98: 14/16 (88%) exceedences, mean=553.3 NTU; 8/98-7/99: 18/29 (62%) exceedences, mean=268.3 NTU; 10/99-6/00: 9/9 (100%) exceedences, mean=962.4 NTU, all from wet months.
Spatial representation	One sample site.
Temporal representation	Sampling from July 1997 to June 2000.
Data type	Numerical data.
Use of standard method	NPDES permit monitoring.
Potential Source(s) of Pollutant	Channelization, increased water velocity, undercutting of banks; increased turbidity; current/historic construction.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Rainbow Creek
Nitrate, Phosphorus (was "eutrophic")

Water Body	Rainbow Creek
Stressor/Media/Beneficial Use	Nitrate, Phosphorus (was "eutrophic")/water/MUN, AGR, IND, REC-1, REC-2, WARM, COLD, WILD
***Data quality assessment. Extent to* which data quality requirements met.**	*Data was properly collected and analyzed as part of the Final Report of* Water Quality Studies & Proposed Watershed Monitoring Program for Portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.
Linkage between measurement endpoint and benefical use or standard	Measurements are directly related to Region 9's Basin Plan water quality objectives.
Utility of measure for judging if standards or uses are not attained	RWQCB (Region 9) basin plan water quality objectives for nitrogen, phosphorus: The Basin Plan states that Inland surface waters "shall not contain biostimulatory substances in concentrations that promote aquatic growth to the extent that such growths cause nuisance or adversely affect beneficial uses." Additionally, threshold phosphorus levels shall not exceed 0.1 mg/L in flowing surface waters.1 Analogous threshold values for nitrogen compounds have not been set, however; it is stated that a ratio of N:P=10:1 shall be used. In the case of flowing surface waters, the threshold nitrogen level is therefore set at 1.0 mg/L. These objectives are not to be exceeded more than 10% of the time during any one-year period.
Water Body-specific Information	Data from Creek sampled and analyzed in 2000.
Data used to assess water quality	Nitrogen: Sampling and analysis conducted in 2000 and as compiled in the draft Total Maximum Daily Load (TMDL) for Rainbow Creek showed frequent exceedances of the Basin Plan Water Quality Objective. At Jubilee Way, 4 of 4 samples (100%) exceeded the Basin Plan objective, with a mean of 6.0 mg/L and a median of 5.9 mg/L. At Hines Nursery, 1 of 1 samples (100%) exceeded the Basin Plan objective, with a mean and median of 22.0 mg/L. At Oak Crest, 9 of 9 samples (100%) exceeded the Basin Plan objective, with a mean of 11.0 mg/L and a median of 12.0 mg/L. At Willow Glen, 25 of 25 samples exceeded the Basin Plan objective, with a mean of 9.7 mg/L and a median of 9.4 mg/L. At Riverhouse, 25 of 25 samples exceeded the Basin Plan objective, with a mean of 14.5 mg/L and a median of 15.0 mg/L. At Stage Coach, 9 of 9 samples exceeded the Basin Plan objective, with a mean of 13.7 mg/L and a median of 14.0 mg/L. Phosphorus: Sampling and analysis conducted in 2000 and as compiled in the draft TMDL for Rainbow Creek showed frequent exceedances of the Basin Plan Water Quality Objective. At Jubilee Way, 0 of 4 samples exceeded the Basin Plan objective. At Hines Nursery, 1 of 1 samples (100%) exceeded the Basin Plan objective, with a mean and median of 1.7 mg/L. At Oak Crest, 9 of 9 samples (100%) exceeded the Basin Plan objective, with a mean of 1.13 mg/L and a median of 0.99 mg/L. At Willow Glen, 25 of 25 samples exceeded the Basin Plan objective, with a mean of 0.43 mg/L and a median of 0.43 mg/L. At Riverhouse, 25 of 25 samples exceeded the Basin Plan objective, with a mean of 0.28 mg/L and a median of 0.25 mg/L. At Stage Coach, 9 of 9 samples exceeded the

	Basin Plan objective, with a mean of 0.30 mg/L and a median of 0.20 mg/L.
Spatial representation	The stations monitored in 2000 extend from just above the confluence with the Santa Margarita River (Stagecoach) to approximately 1.5 miles downstream of the headwaters (Jubilee Way). Therefore, the entire reach of the stream is proposed for listing for both nitrate and phosphorus.
Temporal representation	One year of sampling.
Data type	Numerical data was used.
Use of standard method	Standard collection and sampling procedures were used as part of the Final Report of Water Quality Studies & Proposed Watershed Monitoring Program for Portions of San Mateo & Santa Margarita River Watershed. Marine Corps Base, Camp Pendleton, CA. Contract No. N68711-95-D-7573, D.O. 0021.
Potential Source(s) of Pollutant	Sources include agriculture runoff, septic system discharges, nursery discharges, other urban runoff, and other point and non-point sources.
Alternative Enforceable Program	None.
RWQCB Recommendation	The specific impairment for Rainbow Creek should be changed from "eutrophic" to "nitrate" and "phosphorus." The original designation was based upon a faulty assumption that eutrophic conditions existed because of the elevated levels of nutrients. Data collected for development of the TMDL has revealed that eutrophic conditions do not exist, but concentrations of nitrate and phosphorus in excess of Basin Plan objectives do exist.
SWRCB Staff Recommendation	Change pollutant designation from "eutrophic" to "nitrate" and "phosphorus." After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should remain on the section 303(d) list under the new pollutant designations--"Nitrate" and "phosphorus"--because applicable water quality standards are exceeded and pollutants contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego Bay Shoreline, 32nd St San Diego Naval Station (w + Benthic Community Effects, Sediment Toxicity

Water Body	San Diego Bay Shoreline, 32nd St San Diego Naval Station (was San Diego Bay, San Diego Naval Station)
Stressor/Media/Beneficial Use	Benthic Community Effects, Sediment Toxicity/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
***Utility of measure for judging if* standards or uses are not attained**	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	Revise name of previous, 1998, listing: San Diego Bay, San Diego Naval Station.
SWRCB Staff Recommendation	Per RWQCB recommendation, revise name of existing, 1998, listing. This is not a new listing (but does identify specific location within larger, general 1998 listing for all of San Diego Bay).

Region 9: San Diego Bay Shoreline, at B Street Pier (was San Diego Ba + Lindane

Water Body	San Diego Bay Shoreline, at B Street Pier (was San Diego Bay at B Street Pier)
Stressor/Media/Beneficial Use	Lindane
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Remove entire listing from Watch List because "at B Street Pier" was erroneously listed in the original RWQCB Staff report table.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should not be placed on any 303(d)-related list because the original recommendation referenced the water body in error.

Region 9: San Diego Bay Shoreline, at Kellogg Street Beach (Pueblo Sa + Bacterial Indicators

Water Body	San Diego Bay Shoreline, at Kellogg Street Beach (Pueblo San Diego HU [908.00] and Sweetwater HU [909.00])
Stressor/Media/Beneficial Use	Bacterial Indicators/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	San Diego County Department of Environmental Health.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Closures a measure of impacts on beneficial use. Listing recommendation: >10 days/year beach closures or advisories.
Water Body-specific Information	Data age = 1 year.
Data used to assess water quality	Analysis of applicable 1999, 2000, and 2001 data by the RWQCB staff showed 1 usable exceedence day out of 17 usable samples, 1 exceedence out of 33 samples, 3 exceedences out of 31 samples (all from dry season sampling events), (The "p" value used was 0.04.).
Spatial representation	Sampled within 400 yards (0.2 miles) of discharge point.
Temporal representation	1999, 2000, and 2001 data.
Data type	Numerical data.
Use of standard method	San Diego County Department of Environmental Health procedures followed.
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	Unknown
RWQCB Recommendation	Do not list.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that this water body should not be specifically added to the section 303(d) list, and should be specifically de-listed from the 303(d) list, because applicable water quality standards are not exceeded a significant amount of the time. This determination is NOT meant to affect other San Diego Bay areas for bacterial indicators. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. However, 2. Too few samples exceeded the water quality objective. The reason is that an inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is extremely low.

Region 9: San Diego Bay Shoreline, at Kellogg Street Beach (Pueblo Sa + Bacterial Indicators

Hydrologic Sub-area 908.10, the San Diego Shoreline at Point Loma, also encompasses the San Diego Bay Shoreline, at Kellogg Street Beach. Not specifically listing the San Diego Bay Shoreline, at Kellogg Street Beach is not intended to affect other waters in this sub-area, unless stated elsewhere.

Region 9: San Diego Bay Shoreline, at South Bay Power Plant (was San + Turbidity

Water Body	San Diego Bay Shoreline, at South Bay Power Plant (was San Diego Bay at South Bay Power Plant)
Stressor/Media/Beneficial Use	Turbidity/water/IND, NAV, REC-1, REC-2, COMM, BIOL, EST, WILD, RARE, MAR, MIGR, SHELL
Data quality assessment. Extent to which data quality requirements met.	A report submitted by concerned citizens, "Deadly Power," sites NPDES monitoring data, personal and agency communications, SWRCB and RWQCB orders, refereed journal articles, agency reports, and contractual studies. However, most information is non-numeric and the level of quality control/assurance is unknown.
Linkage between measurement endpoint and benefical use or standard	The information cited in the "Deadly Power" report directly relates to aquatic beneficial uses (e.g., SPWN) of the south San Diego Bay.
Utility of measure for judging if standards or uses are not attained	Numeric and narrative Basin Plan water quality objectives apply to the Plant's discharge.
Water Body-specific Information	The Information cited in the "Deadly Power" report relates directly to south San Diego Bay waters.
Data used to assess water quality	Available information in citizen-supplied reports is for the most part non-numeric. The report contains general descriptions of the potential impact of the power plant discharge, temperature effects, loss of wetlands, impacts on entrained and impinged organisms, possible impacts on sea turtles and halibut, the use of chlorine and the possible impacts, the loading of copper and zinc, and possible impacts on increased turbidity on eelgrass beds. Further study is required to verify conclusions reached.
Spatial representation	The water body area of concern is adequately covered by the information provided.
Temporal representation	Studies from the 1960s through 2000 are discussed. No dates of sample collection is provided.
Data type	Narrative information is cited.
Use of standard method	For the most part no information is report on the methods used.
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	The South Bay Power Plant facility is subject to an NPDES permit. Prompted by citizen complaints, Duke Power, manager of the South Bay Power Plant, is actively considering bolstering its monitoring program. For example: - Modifications to sampling locations to eliminate compensation for selected pollutants. - Monitoring for dissolved oxygen and metals (copper, zinc, nickel, etc.). - Total chlorine residual monitoring on a daily level, perhaps at the time of day when the plant is operating at highest capacity.

	- An increase in the number of monitoring stations (from 11). Changes to the monitoring program are scheduled to begin in the summer of 2003. Quarterly progress reports will start May of 2003. The final reports are due in February 2004.
RWQCB Recommendation	RWQCB staff recommends placing South Bay on the watch list.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the volume of supporting data are inadequate to determine if applicable water quality standards are truly exceeded. Further study, including monitoring, is necessary to confirm the possibility of impacts to beneficial uses caused by discharges from the South Bay Power Plant.

Region 9: San Diego Bay Shoreline, at South Bay Power Plant (was San + Thermal Warming

Water Body	San Diego Bay Shoreline, at South Bay Power Plant (was San Diego Bay at South Bay Power Plant)
Stressor/Media/Beneficial Use	Thermal Warming/water/IND, NAV, REC-1, REC-2, COMM, BIOL, EST, WILD, RARE, MAR, MIGR, SHELL
Data quality assessment. Extent to which data quality requirements met.	A report submitted by concerned citizens, "Deadly Power," sites NPDES monitoring data, personal and agency communications, SWRCB and RWQCB orders, refereed journal articles, agency reports, and contractual studies. However, most information is non-numeric and the level of quality control/assurance is unknown.
Linkage between measurement endpoint and benefical use or standard	The information cited in the "Deadly Power" report directly relates to aquatic beneficial uses (e.g., SPWN) of the south San Diego Bay.
Utility of measure for judging if standards or uses are not attained	Numeric and narrative Basin Plan water quality objectives apply to the Plant's discharge.
Water Body-specific Information	The Information cited in the "Deadly Power" report relates directly to south San Diego Bay waters.
Data used to assess water quality	Available information in citizen-supplied reports is for the most part non-numeric. The report contains general descriptions of the potential impact of the power plant discharge, temperature effects, loss of wetlands, impacts on entrained and impinged organisms, possible impacts on sea turtles and halibut, the use of chlorine and the possible impacts, the loading of copper and zinc, and possible impacts on increased turbidity on eelgrass beds. Further study is required to verify conclusions reached.
Spatial representation	The water body area of concern is adequately covered by the information provided.
Temporal representation	Studies from the 1960s through 2000 are discussed. No dates of sample collection is provided.
Data type	Narrative information is cited.
Use of standard method	For the most part no information is report on the methods used.
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	The South Bay Power Plant facility is subject to an NPDES permit. Prompted by citizen complaints, Duke Power, manager of the South Bay Power Plant, is considering bolstering its monitoring program. For example: - Modifications to sampling locations to eliminate compensation for selected pollutants. - Monitoring for dissolved oxygen and metals (copper, zinc, nickel, etc.). - Total chlorine residual monitoring on a daily level, perhaps at the time of day when the plant is operating at highest capacity. - An increase in the number of monitoring stations (from 11).

	Changes to the monitoring program are scheduled to begin in the summer of 2003. Quarterly progress reports will start May of 2003. The final reports are due in February 2004.
RWQCB Recommendation	RWQCB staff recommends placing South Bay on the watch list.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the volume of supporting data are inadequate to determine if applicable water quality standards are truly exceeded. Further study, including monitoring, is necessary to confirm the possibility of impacts to beneficial uses caused by discharges from the South Bay Power Plant.

Region 9: San Diego Bay Shoreline, at South Bay Power Plant (was San + Chlorine, Copper, Zinc

Water Body	San Diego Bay Shoreline, at South Bay Power Plant (was San Diego Bay at South Bay Power Plant)
Stressor/Media/Beneficial Use	Chlorine/Water/IND, NAV, REC-1, REC-2, COMM, BIOL, EST, WILD, RARE, MAR, MIGR, SHELL
Data quality assessment. Extent to which data quality requirements met.	A report submitted by concerned citizens, "Deadly Power," sites NPDES monitoring data, personal and agency communications, SWRCB and RWQCB orders, refereed journal articles, agency reports, and contractual studies. However, most information is non-numeric and the level of quality control/assurance is unknown.
Linkage between measurement endpoint and benefical use or standard	The information cited in the "Deadly Power" report directly relates to aquatic beneficial uses of the south San Diego Bay. Most of the reported information is difficult to relate to existing water quality objectives.
Utility of measure for judging if standards or uses are not attained	Numeric and narrative Basin Plan water quality objectives apply to these San Diego Bay waters.
Water Body-specific Information	The Information cited in the "Deadly Power" report relates to south San Diego Bay waters. Many of the studies cited are from the scientific literature describe the general impacts of metals, electric generating facility discharge, etc.
Data used to assess water quality	Available information in citizen-supplied reports is for the most part non-numeric. The report contains general descriptions of the potential impact of the power plant discharge, temperature effects, loss of wetlands, impacts on entrained and impinged organisms, possible impacts on sea turtles and halibut, the use of chlorine and the possible impacts, the loading of copper and zinc, and possible impacts on increased turbidity on eelgrass beds. Further study is required to verify conclusions reached.
Spatial representation	The water body area of concern is adequately covered by the information provided. No station or sampling data is provided.
Temporal representation	Studies from the 1960s through 2000 are discussed. No dates of sample collection is provided.
Data type	Narrative information is cited.
Use of standard method	For the most part no information is available on the methods used.
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	The South Bay Power Plant facility is subject to an NPDES permit. Prompted by citizen complaints, Duke Power, manager of the South Bay Power Plant, is considering bolstering its monitoring program. For example: - Modifications to sampling locations to eliminate compensation for selected pollutants. - Monitoring for dissolved oxygen and metals (copper, zinc, nickel, etc.).

	- Total chlorine residual monitoring on a daily level, perhaps at the time of day when the plant is operating at highest capacity. - An increase in the number of monitoring stations (from 11). Changes to the monitoring program are scheduled to begin in the summer of 2003. Quarterly progress reports will start May of 2003. The final reports are due in February 2004.
RWQCB Recommendation	RWQCB staff recommends placing South Bay on the Monitoring ("watch") List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the Monitoring List because the volume of supporting data are inadequate to determine if applicable water quality standards are truly exceeded. Further study, including monitoring, is necessary to confirm the possibility of impacts to beneficial uses caused by discharges from the South Bay Power Plant.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets Copper

Water Body	San Diego Bay Shoreline, between Sampson and 28th Streets
Stressor/Media/Beneficial Use	Copper/Sediment/MAR, WILD, BIOL, EST, RARE, MIGR, SHELL
Data quality assessment. Extent to which data quality requirements met.	High quality for sediment data (See BPTCP report and NASSCO/SWM Technical Memorandum 1.
Linkage between measurement endpoint and benefical use or standard	Degraded benthic community and toxicity may be associated to pollutant concentration (no toxics in toxic amounts).
Utility of measure for judging if standards or uses are not attained	Use of the "Triad Approach" (i.e., sediment chemistry, toxicity, and benthic community) is a well-established weight of evidence approach that provides an integrated assessment of the sediment.
Water Body-specific Information	BPTCP regional monitoring program conducted by SWRCB (1992-1994). Sediment quality investigation conducted by NASSCO and SWM shipyards (August 2001).
Data used to assess water quality	- BPTCP Sediment Chemistry: Station >4x ERM or >5.9x PEL = 93211. Stations > 0.85 ERMq or >1.29 PELq = 93210, 93211, 90030, and 93181. Copper is one of several contaminants used to calculate the quotient values. - NASSCO/SWM Sediment Chemistry: Stations >4x ERM or > 5.9x PEL = NA17, SW01, SW02, SW04, SW08, SW09, and SW13. - BPTCP Toxicity: Stations < 48% amphipod survival rate = 93210, 93181, and 90030. Stations that exhibited toxicity to the sea urchin = 93210, and 93211. - BPTCP Benthic Community Structure: Stations with a degraded benthic community = 93210, 93211, and 90021. - BPTCP Station 93210 had synoptic "hits" on all three components of the Triad Approach. - BPTCP Stations 93211 and 90030 had synoptic "hits" on two of three components of the Triad Approach.
Spatial representation	Spatial representation provides adequate coverage of the area of concern. BPTCP sampled 9 stations within the area of concern. NASSCO/SWM study sampled 35 stations within the area of concern.
Temporal representation	2 sampling periods (1993 by BPTCP and 2001 by NASSCO/SWM).
Data type	Numerical sediment chemistry, toxicity, and benthic community data.
Use of standard method	Standard Methods were used for data analysis.
Potential Source(s) of Pollutant	Point and non-point sources.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets
Copper

Alternative Enforceable Program	NPDES program.
RWQCB Recommendation	List. The weight of evidence from the samples collected from the area of concern indicates that the benthic community is being adversely affected in San Diego Bay between Sampson and 28th Streets. This level of benthic degradation, sediment toxicity, and sediment chemistry is direct evidence of impairment of the following beneficial uses: BIOL, EST, WILD, RARE, MAR, MIGR, and SHELL.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets Mercury

Water Body	San Diego Bay Shoreline, between Sampson and 28th Streets
Stressor/Media/Beneficial Use	Mercury/Sediment/MAR, WILD, BIOL, EST, RARE, MIGR, SHELL
Data quality assessment. Extent to which data quality requirements met.	High quality for sediment data (See BPTCP report and NASSCO/SWM Technical Memorandum 1.
Linkage between measurement endpoint and benefical use or standard	Degraded benthic community and toxicity may be associated to pollutant concentration (no toxics in toxic amounts).
Utility of measure for judging if standards or uses are not attained	Use of the "Triad Approach" (i.e., sediment chemistry, toxicity, and benthic community) is a well-established weight of evidence approach that provides an integrated assessment of the sediment.
Water Body-specific Information	BPTCP regional monitoring program conducted by SWRCB (1992-1994). Sediment quality investigation conducted by NASSCO and SWM shipyards (August 2001).
Data used to assess water quality	- BPTCP Sediment Chemistry: Station >4x ERM or >5.9x PEL = None. Stations > 0.85 ERMq or >1.29 PELq = 93210, 93211, 90030, and 93181. Mercury is one of several contaminants used to calculate the quotient values. - NASSCO/SWM Sediment Chemistry: Stations >4x ERM or > 5.9x PEL = NA06 and SW02. - BPTCP Toxicity: Stations < 48% amphipod survival rate = 93210, 93181, and 90030. Stations that exhibited toxicity to the sea urchin = 93210, and 93211. - BPTCP Benthic Community Structure: Stations with a degraded benthic community = 93210, 93211, and 90021. - BPTCP Station 93210 had synoptic "hits" on all three components of the Triad Approach. - BPTCP Stations 93211 and 90030 had synoptic "hits" on two of three components of the Triad Approach.
Spatial representation	Spatial representation provides adequate coverage of the area of concern. BPTCP sampled 9 stations within the area of concern. NASSCO/SWM study sampled 35 stations within the area of concern.
Temporal representation	2 sampling periods (1993 by BPTCP and 2001 by NASSCO/SWM).
Data type	Numerical sediment chemistry, toxicity, and benthic community data.
Use of standard method	Standard methods were used for data analysis.
Potential Source(s) of Pollutant	Point and non-point sources.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets Mercury

Alternative Enforceable Program	NPDES program.
RWQCB Recommendation	List. The weight of evidence from the samples collected from the area of concern indicates that the benthic community is being adversely affected in San Diego Bay between Sampson and 28th Streets. This level of benthic degradation, sediment toxicity, and sediment chemistry is direct evidence of impairment of the following beneficial uses: BIOL, EST, WILD, RARE, MAR, MIGR, and SHELL.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets Total PAHs

Water Body	San Diego Bay Shoreline, between Sampson and 28th Streets
Stressor/Media/Beneficial Use	Total PAHs/Sediment/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	High quality for sediment data (See BPTCP report and NASSCO/SWM Technical Memorandum 1.
Linkage between measurement endpoint and benefical use or standard	Degraded benthic community and toxicity may be associated to pollutant concentration (no toxics in toxic amounts).
Utility of measure for judging if standards or uses are not attained	Use of the "Triad Approach" (i.e., sediment chemistry, toxicity, and benthic community) is a well-established weight of evidence approach that provides an integrated assessment of the sediment.
Water Body-specific Information	BPTCP regional monitoring program conducted by SWRCB (1992-1994). Sediment quality investigation conducted by NASSCO and SWM shipyards (August 2001).
Data used to assess water quality	- BPTCP Sediment Chemistry: Station >4x ERM or >5.9x PEL = 90030. Stations > 0.85 ERMq or >1.29 PELq = 93210, 93211, 90030, and 93181. Total PAHs is one of several contaminants used to calculate the quotient values. - NASSCO/SWM Sediment Chemistry: Stations >4x ERM or > 5.9x PEL = None. - BPTCP Toxicity: Stations < 48% amphipod survival rate = 93210, 93181, and 90030. Stations that exhibited toxicity to the sea urchin = 93210, and 93211. - BPTCP Benthic Community Structure: Stations with a degraded benthic community = 93210, 93211, and 90021. - BPTCP Station 93210 had synoptic "hits" on all three components of the Triad Approach. - BPTCP Stations 93211 and 90030 had synoptic "hits" on two of three components of the Triad Approach.
Spatial representation	Spatial representation provides adequate coverage of the area of concern. BPTCP sampled 9 stations within the area of concern. NASSCO/SWM study sampled 35 stations within the area of concern.
Temporal representation	2 sampling periods (1993 by BPTCP and 2001 by NASSCO/SWM).
Data type	Numerical sediment chemistry, toxicity, and benthic community data.
Use of standard method	Standard methods were used for data analysis.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets
Total PAHs

Potential Source(s) of Pollutant	Point and non-point.
Alternative Enforceable Program	NPDES program.
RWQCB Recommendation	List. The weight of evidence from the samples collected from the area of concern indicates that the benthic community is being adversely affected in San Diego Bay between Sampson and 28th Streets. This level of benthic degradation, sediment toxicity, and sediment chemistry is direct evidence of impairment of the following beneficial uses: BIOL, EST, WILD, RARE, MAR, MIGR, and SHELL.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets
Zinc

Water Body	San Diego Bay Shoreline, between Sampson and 28th Streets
Stressor/Media/Beneficial Use	Zinc/Sediment/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	High quality for sediment data (See BPTCP report and NASSCO/SWM Technical Memorandum 1.
Linkage between measurement endpoint and benefical use or standard	Degraded benthic community and toxicity may be associated to pollutant concentration (no toxics in toxic amounts).
Utility of measure for judging if standards or uses are not attained	Use of the "Triad Approach" (i.e., sediment chemistry, toxicity, and benthic community) is a well-established weight of evidence approach that provides an integrated assessment of the sediment.
Water Body-specific Information	BPTCP regional monitoring program conducted by SWRCB (1992-1994). Sediment quality investigation conducted by NASSCO and SWM shipyards (August 2001).
Data used to assess water quality	- BPTCP Sediment Chemistry: Station >4x ERM or >5.9x PEL = None. Stations > 0.85 ERMq or >1.29 PELq = 93210, 93211, 90030, and 93181. Zinc is one of several contaminants used to calculate the quotient values. - NASSCO/SWM Sediment Chemistry: Stations >4x ERM or > 5.9x PEL = SW04. - BPTCP Toxicity: Stations < 48% amphipod survival rate = 93210, 93181, and 90030. Stations that exhibited toxicity to the sea urchin = 93210, and 93211. - BPTCP Benthic Community Structure: Stations with a degraded benthic community = 93210, 93211, and 90021. - BPTCP Station 93210 had synoptic "hits" on all three components of the Triad Approach. - BPTCP Stations 93211 and 90030 had synoptic "hits" on two of three components of the Triad Approach.
Spatial representation	Spatial representation provides adequate coverage of the area of concern. BPTCP sampled 9 stations within the area of concern. NASSCO/SWM study sampled 35 stations within the area of concern.
Temporal representation	2 sampling periods (1993 by BPTCP and 2001 by NASSCO/SWM).
Data type	Numerical sediment chemistry, toxicity, and benthic community data.
Use of standard method	Standard methods were used for data analysis.
Potential Source(s) of Pollutant	Point and non-point sources.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets
Zinc

Alternative Enforceable Program	NPDES program.
RWQCB Recommendation	List. The weight of evidence from the samples collected from the area of concern indicates that the benthic community is being adversely affected in San Diego Bay between Sampson and 28th Streets. This level of benthic degradation, sediment toxicity, and sediment chemistry is direct evidence of impairment of the following beneficial uses: BIOL, EST, WILD, RARE, MAR, MIGR, and SHELL.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the effects of age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets Total PCBs

Water Body	San Diego Bay Shoreline, between Sampson and 28th Streets
Stressor/Media/Beneficial Use	Total PCBs/Sediment/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	High quality for sediment data (See BPTCP report and NASSCO/SWM Technical Memorandum 1.
Linkage between measurement endpoint and benefical use or standard	Degraded benthic community and toxicity may be associated to pollutant concentration (no toxics in toxic amounts).
Utility of measure for judging if standards or uses are not attained	Use of the "Triad Approach" (i.e., sediment chemistry, toxicity, and benthic community) is a well-established weight of evidence approach that provides an integrated assessment of the sediment.
Water Body-specific Information	BPTCP regional monitoring program conducted by SWRCB (1992-1994). Sediment quality investigation conducted by NASSCO and SWM shipyards (August 2001).
Data used to assess water quality	- BPTCP Sediment Chemistry: Station >4x ERM or >5.9x PEL = 93211. Stations > 0.85 ERMq or >1.29 PELq = 93210, 93211, 90030, and 93181. Total PCBs is one of several contaminants used to calculate the quotient values. - NASSCO/SWM Sediment Chemistry: Stations >4x ERM or > 5.9x PEL = SW01, SW02, SW04, SW05, SW08, SW20, SW21, and SW28. - BPTCP Toxicity: Stations < 48% amphipod survival rate = 93210, 93181, and 90030. Stations that exhibited toxicity to the sea urchin = 93210, and 93211. - BPTCP Benthic Community Structure: Stations with a degraded benthic community = 93210, 93211, and 90021. - BPTCP Station 93210 had synoptic "hits" on all three components of the Triad Approach. - BPTCP Stations 93211 and 90030 had synoptic "hits" on two of three components of the Triad Approach.
Spatial representation	Spatial representation provides adequate coverage of the area of concern. BPTCP sampled 9 stations within the area of concern. NASSCO/SWM study sampled 35 stations within the area of concern.
Temporal representation	2 sampling periods (1993 by BPTCP and 2001 by NASSCO/SWM).
Data type	Numerical sediment chemistry, toxicity, and benthic community data.
Use of standard method	Standard methods were used for data analysis.

Region 9: San Diego Bay Shoreline, between Sampson and 28th Streets
Total PCBs

Potential Source(s) of Pollutant	Point and non-point sources.
Alternative Enforceable Program	NPDES program.
RWQCB Recommendation	List. The weight of evidence from the samples collected from the area of concern indicates that the benthic community is being adversely affected in San Diego Bay between Sampson and 28th Streets. This level of benthic degradation, sediment toxicity, and sediment chemistry is direct evidence of impairment of the following beneficial uses: BIOL, EST, WILD, RARE, MAR, MIGR, and SHELL.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego Bay Shoreline, Chula Vista Marina (was San Diego + Bacterial Indicators (was "high coliform count")

Water Body	San Diego Bay Shoreline, Chula Vista Marina (was San Diego Bay Shoreline, Telegraph HSA 909.11)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
***Utility of measure for judging if* standards or uses are not attained**	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	A. Revise name. B. Change "high coliform count: to "bacterial indicators."
SWRCB Staff Recommendation	Per RWQCB recommendation, (A) revise name, and (B) change pollutant to "bacterial indicators." This is not a new listing.

Region 9: San Diego Bay Shoreline, Downtown Anchorage (was San Diego + Benthic Community Effects, Sediment Toxicity

Water Body	San Diego Bay Shoreline, Downtown Anchorage (was San Diego Bay, Downtown Anchorage [was "San Diego Bay, near grape Street"])
Stressor/Media/Beneficial Use	Benthic Community Effects, Sediment Toxicity/sediment/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	N/A
Linkage between measurement endpoint and benefical use or standard	N/A
Utility of measure for judging if standards or uses are not attained	N/A
Water Body-specific Information	N/A
Data used to assess water quality	N/A
Spatial representation	N/A
Temporal representation	N/A
Data type	N/A
Use of standard method	N/A
Potential Source(s) of Pollutant	N/A
Alternative Enforceable Program	N/A
RWQCB Recommendation	Existing listing (from 1998 303(d) List). (Was included within "San Diego Bay" listing (HU 900.00). RWQCB staff request for name change is made to provide a more accurate descriptive name, avoid confusion, and to name the segment consistent with the name used in previous reports. This segment is referred to in a SWRCB et. al report as "Downtown Anchorage." The segment is not near Grape Street and the descriptive name "Grape Street" is being applied to a different site in the SWRCB report.
SWRCB Staff Recommendation	Change name from "San Diego Bay, near Grape Street" to "San Diego Bay Shoreline, Downtown Anchorage."

Region 9: San Diego Bay Shoreline, G Street Pier (was, in part, San D + Bacterial Indicators (was "high coliform count")

Water Body	San Diego Bay Shoreline, G Street Pier (was, in part, San Diego Bay Shoreline, Lindbergh HSA 908.21.)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
Utility of measure for judging if standards or uses are not attained	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	A. Revise 1998 list to more correctly identify specific water body segments affected by pollution. Split up the "San Diego Bay Shoreline, Lindbergh HSA 908.21" water body, which is not entirely polluted, into specific segments, which are polluted. B. All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	A. The original 1998 listing was titled "San Diego Bay, Lindbergh HSA 908.21." However, not all of that water body is impacted by pollution. For 2002, the RWQCB recommended that 1998 titles be refined to identify those water body segments specifically affected by pollution. For example, the Lindbergh HSA includes the "San Diego Bay Shoreline, G Street Pier" area. (Other segments, such as "San Diego Bay Shoreline, vicinity of B Street and Broadway Piers," have been identified separately.) This is not a new listing. The original pollution-impacted segments, that were included within the Lindbergh listing, remain on the list, albeit with new, more specific titles.

Region 9: San Diego Bay Shoreline, G Street Pier (was, in part, San D + Bacterial Indicators (was "high coliform count")

B. Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: San Diego Bay Shoreline, near Chollas Creek (was San Diego + Benthic Community Effects, Sediment Toxicity

Water Body	San Diego Bay Shoreline, near Chollas Creek (was San Diego Bay, near Chollas Creek)
Stressor/Media/Beneficial Use	Benthic Community Effects, Sediment Toxicity/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
Utility of measure for judging if standards or uses are not attained	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	Revise name of previous, 1998, listing: San Diego Bay, near Chollas Creek.
SWRCB Staff Recommendation	Per RWQCB recommendation, revise name of existing, 1998, listing. This is not a new listing (but does identify specific location within larger, general 1998 listing for all of San Diego Bay).

Region 9: San Diego Bay Shoreline, near Coronado Bridge (was San Dieg + Benthic Community Effects, Sediment Toxicity

Water Body	San Diego Bay Shoreline, near Coronado Bridge (was San Diego Bay, near Coronado Bridge)
Stressor/Media/Beneficial Use	*Benthic Community Effects, Sediment Toxicity/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL*
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
Utility of measure for judging if standards or uses are not attained	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	Revise name of previous, 1998, listing: San Diego Bay, near Coronado Bridge.
SWRCB Staff Recommendation	Per RWQCB recommendation, revise name of existing, 1998, listing. This is not a new listing (but does identify specific location within larger, general 1998 listing for all of San Diego Bay).

Region 9: San Diego Bay Shoreline, near Crosby Street (Cesar Chavez) + Sediment Toxicity

Water Body	San Diego Bay Shoreline, near Crosby Street (Cesar Chavez) Park (will become part of the "San Diego Bay Shoreline, near Coronado Bridge" listing)
Stressor/Media/Beneficial Use	Sediment Toxicity
Data quality assessment. Extent to which data quality requirements met.	BPTCP methodology (for some data).
Linkage between measurement endpoint and benefical use or standard	The 1998 Section 303(d) Listing Criteria developed by the RWQCB for BPTCP data in San Diego Bay required both elevated chemical levels and evidence of a degraded benthic community. Elevated sediment chemistry had to be higher than the Effects Range Median (ERM) Summary Quotient, the Probable Effects Limit (PEL) Summary Quotient, or individual chemistry elevated to 4xERM or 5.9xPEL.
Utility of measure for judging if standards or uses are not attained	RWQCB water quality objective (toxicity).
Water Body-specific Information	While data are not available at this specific location, concern has been raised that the Crosby Street location is impacted like nearby locations. It is likely that impacts at this location will be better assessed in the development of the TMDL.
Data used to assess water quality	Samples from site 93177 did contain a chemical constituent above the criteria as developed in 1998: low Molecular Weight (MW) Polyaromatic Hydrocarbons (PAHs) concentrations were greater than the "5.9xPEL" criteria. However, the site 93177 was given low priority by the BPTCP Study and did not receive analysis of its benthic community. Therefore, it does not qualify for inclusion on the Section 303(d) list based on the criteria developed in 1998 by the RWQCB. Two new sources of information were provided: a sediment data collected in 1988, and written testimonials on the value and condition of this area of the Bay. Nine sediment cores were taken and two were analyzed for bioaccumulative metals and chemicals in 1988. None of the results would qualify this site for the Section 303(d) list under the criteria as developed by the RWQCB for the 1998 listing. Sixty-nine community members sent in support for listing San Diego Bay near Crosby Street Park. The commenters want clean water for fishing and swimming, believe (sediments under) the area to be contaminated, and report a foul odor. However, no data is presented and these comments must be considered as unsubstantiated opinion.
Spatial representation	Two sites from the BPTCP Study (90018 and 93177) are adjacent to Crosby Park, but only site 93177 had analysis of sediment chemistry performed.
Temporal representation	Unknown.
Data type	Numeric data and narrative information.

Region 9: San Diego Bay Shoreline, near Crosby Street (Cesar Chavez) + Sediment Toxicity

Use of standard method	BPTCP procedures used (for some data). Unknown for Woodward-Clyde samples, but SWRCB staff assume that standard procedures were used.
Potential Source(s) of Pollutant	Sediment-containing pollutants probably originated with prior industrial and maritime activities along the shoreline, and from nearby urban discharges.
Alternative Enforceable Program	None.
RWQCB Recommendation	Watch List. Bay Protection and Toxic Cleanup Program data for this site does not meet the RWQCB's specific 1998 criteria for listing contaminated sediment bay sites. Although close, the sample data failed to trigger the need for a benthic community analysis. Elevated chemical levels and a degraded benthic community are both needed in order to list. Several other bay sites were also "close" and not listed. These criteria has been rigidly and consistently applied in the past. New data (submitted during the extended acceptance period in 2002 also does not meet the RWQCB's 1998 criteria. Although there are high public interest, extensive recreational use, and environmental justice concerns, RWQCB staff feels that there is not adequate data to support 303(d) listing of this site. RWQCB staff recommends placing this site on the watch list.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be included within an already (1998) listed water body on the section 303(d) list because the evidence suggests that water quality standards are not being achieved and protected at the site. This conclusion is based on the staff findings that: 1. Beneficial uses have been established for and apply to the water body. 2. Water quality standard used is applicable. 3. Other water body- or site-specific information including the effects of season, and age of the data were considered. The beneficial uses at the site exist and are of such importance as to justify including this water body within the area covered by the San Diego Bay Shoreline, Coronado Bridge listing. The confidence SWRCB staff have that beneficial uses at the site are being harmed is moderate.

Region 9: San Diego Bay Shoreline, near Sub Base (was San Diego Bay, + Benthic Community Effects, Sediment Toxicity

Water Body	San Diego Bay Shoreline, near Sub Base (was San Diego Bay, near Sub Base)
Stressor/Media/Beneficial Use	Benthic Community Effects, Sediment Toxicity/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
Utility of measure for judging if standards or uses are not attained	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	Revise name of previous, 1998, listing: San Diego Bay, near Sub Base.
SWRCB Staff Recommendation	Per RWQCB recommendation, revise name of existing 1998 listing. This is not a new listing (but does identify specific location within larger, general 1998 listing for all of San Diego Bay).

Region 9: San Diego Bay Shoreline, near Switzer Creek (was San Diego + Chlordane, Lindane, PAHs

Water Body	San Diego Bay Shoreline, near Switzer Creek (was San Diego Bay at Mouth of Switzer Creek)
Stressor/Media/Beneficial Use	Chlordane, Lindane, PAHs/sediment/BIOL, EST, WILD, RARE, MAR, MIGR, SHELL
Data quality assessment. Extent to which data quality requirements met.	The Bay Protection and Toxic Cleanup Program (BPTCP) employed appropriate quality control/quality assurance procedures. Department of Fish and Game staff and analytical laboratories performed sampling and analyses. Quality control was tested using National Research Council of Canada Marine Sediment Reference Materials at the start and end of each sample analysis set. Quality assurance was monitored be re-calibration of analytical instruments every 20 samples and by analyses of (unknown) standards. Solid-phase and sediment-water interface toxicity was assessed using USEPA 1994 sediment toxicity test guidelines. Negative and positive control testing was employed.
Linkage between measurement endpoint and benefical use or standard	Pollutants have a direct impact on aquatic life beneficial uses.
Utility of measure for judging if standards or uses are not attained	Sediment chemistry sample results were compared against appropriate Probable Effects Levels and Threshold Effects Levels. Toxicity tests used narrative Basin Plan objective.
Water Body-specific Information	Data came specifically from San Diego Bay directly at the Mouth of Switzer Creek. Data age = 6 years.
Data used to assess water quality	High levels of high molecular weight PAHs (6676-56,500 ppb), low molecular weight PAHs (1442-27,200 ppb), total PCBs (21-188 ppb), and total chlordane (5-160 ppb) were found in sampled sediment. Toxicity tests found less than 48% survival of amphipods. A relative benthic community test index calculated for the site indicated a "degraded" condition.
Spatial representation	BPTCP sampling occurred at specific sites. The Mouth of Switzer Creek was sampled so as to be fully representative of the local area (at the mouth of the Creek as it emptied into San Diego Bay).
Temporal representation	BPTCP sediment data was collected a limited number of times. However, results were not expected to vary greatly over a season.
Data type	Numeric data used.
Use of standard method	Standard BPTCP methods used.
Potential Source(s) of Pollutant	Elevated concentrations of chlordane, lindane, DDT, polynuclear aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs), current/historic shipyard activity, historic PAH and garbage dumping, urban runoff, other point sources, and nonpoint sources.

Region 9: San Diego Bay Shoreline, near Switzer Creek (was San Diego + Chlordane, Lindane, PAHs

Alternative Enforceable Program	No alternate program is available at this time. Standard RWQCB procedure when developing a TMDL is to first perform a TIE (investigation for cause/source of toxicity) to accurately confirm the source and extent of the toxicity at a site.
RWQCB Recommendation	List separately for "toxicity" and "degraded benthos."
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. The evaluation guideline used to interpret narrative water quality standards is adequate. 6. Data are numerical. 7. Standard methods were used. 8. Other water body- or site-specific information including the effects of age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego Bay Shoreline, near Switzer Creek (was San Diego + Toxicity

Water Body	San Diego Bay Shoreline, near Switzer Creek (was San Diego Bay at Mouth of Switzer Creek)
Stressor/Media/Beneficial Use	Toxicity/sediment/BIOL, EST, WILD, RARE, MAR, MIGR, SHELL
Data quality assessment. Extent to which data quality requirements met.	BPTCP; 1998 Addendum.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Toxicity tests used narrative Basin Plan objective.
Water Body-specific Information	Data age = 5 years.
Data used to assess water quality	<48% amphipod survival.
Spatial representation	1 sample, 5 replicates; sampled at outlet of the Creek.
Temporal representation	Unknown.
Data type	Numerical data.
Use of standard method	BPTCP methods used
Potential Source(s) of Pollutant	Elevated concentrations of chlordane, lindane, polynuclear aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs), current/historic shipyard activity, historic PAH and garbage dumping, urban runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	This water body/pollutant combination is now listed under "San Diego Bay Shoreline, near Switzer Creek" for "Chlordane, Lindane, PAHs, and Other Unknown Pollutants Causing Sediment Toxicity and Degraded Benthic Conditions."

Region 9: San Diego Bay Shoreline, near Switzer Creek (was San Diego + Degraded Benthos

Water Body	San Diego Bay Shoreline, near Switzer Creek (was San Diego Bay at Mouth of Switzer Creek)
Stressor/Media/Beneficial Use	Degraded Benthos/Sediment/BIOL, EST, WILD, RARE, MAR, MIGR, SHELL
Data quality assessment. Extent to which data quality requirements met.	BPTCP; 1998 Addendum.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Narrative Basin Plan objective used. Indicator organisms, species diversity, population density, growth anomalies, bioassays, and other information used.
Water Body-specific Information	Data age = 5 years.
Data used to assess water quality	RBI = 0.02 (75 samples); Chemical concentrations >4 times the ERM and 5.9 times the PEL
Spatial representation	1 Core, sampled 3 times compared against 75 cores from all of SD Bay; sampled at outlet of the Creek.
Temporal representation	Unknown.
Data type	Numerical data.
Use of standard method	BPTCP methods used.
Potential Source(s) of Pollutant	Elevated concentrations of chlordane, lindane, polynuclear aromatic hydrocarbons (PAHs), and polychlorinated biphenyls (PCBs), current/historic shipyard activity, historic PAH and garbage dumping, urban runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	This water body/pollutant combination is now listed under "San Diego Bay Shoreline, near Switzer Creek" for "Chlordane, Lindane, PAHs, and Other Unknown Pollutants Causing Sediment Toxicity and Degraded Benthic Conditions."

Region 9: San Diego Bay Shoreline, near Switzer Creek (was San Diego + Lindane

Water Body	San Diego Bay Shoreline, near Switzer Creek (was San Diego Bay at Mouth of Switzer Creek)
Stressor/Media/Beneficial Use	Lindane
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Remove entire listing from Watch List. Switzer Creek constituents will be investigated further as part of the "San Diego Bay, Mouth of Switzer Creek" TMDL development.
SWRCB Staff Recommendation	This water body/pollutant combination is now listed under "San Diego Bay Shoreline, near Switzer Creek" for "Chlordane, Lindane, PAHs, and Other Unknown Pollutants Causing Sediment Toxicity and Degraded Benthic Conditions."

Region 9: San Diego Bay Shoreline, near Switzer Creek (was San Diego + PAH

Water Body	San Diego Bay Shoreline, near Switzer Creek (was San Diego Bay at Mouth of Switzer Creek)
Stressor/Media/Beneficial Use	PAH
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Remove entire listing from Watch List. Switzer Creek constituents will be investigated further as part of the "San Diego Bay, Mouth of Switzer Creek" TMDL development.
SWRCB Staff Recommendation	This water body/pollutant combination is now listed under "San Diego Bay Shoreline, near Switzer Creek" for "Chlordane, Lindane, PAHs, and Other Unknown Pollutants Causing Sediment Toxicity and Degraded Benthic Conditions."

Region 9: San Diego Bay Shoreline, near Switzer Creek (was San Diego + Chlordane

Water Body	San Diego Bay Shoreline, near Switzer Creek (was San Diego Bay at Mouth of Switzer Creek)
Stressor/Media/Beneficial Use	Chlordane
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Remove entire listing from Watch List. Switzer Creek constituents will be investigated further as part of the "San Diego Bay, Mouth of Switzer Creek" TMDL development.
SWRCB Staff Recommendation	This water body/pollutant combination is now listed under "San Diego Bay Shoreline, near Switzer Creek" for "Chlordane, Lindane, PAHs, and Other Unknown Pollutants Causing Sediment Toxicity and Degraded Benthic Conditions."

Region 9: San Diego Bay Shoreline, north of 24th Street Marine Termin + Benthic Community Effects, Sediment Toxicity

Water Body	San Diego Bay Shoreline, north of 24th Street Marine Terminal (was San Diego Bay, north of 24th Street Marine Terminal)
Stressor/Media/Beneficial Use	Benthic Community Effects, Sediment Toxicity/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
Utility of measure for judging if standards or uses are not attained	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	Revise name of previous, 1998, listing: San Diego Bay, north of 24th Street Marine Terminal.
SWRCB Staff Recommendation	Per RWQCB recommendation, revise name of existing 1998 listing. This is not a new listing (but does identify specific location within larger, general 1998 listing for all of San Diego Bay).

Region 9: San Diego Bay Shoreline, Seventh Street Channel (was San D + Benthic Community Effects, Sediment Toxicity

Water Body	San Diego Bay Shoreline, Seventh Street Channel (was San Diego Bay, Seventh Street Channel)
Stressor/Media/Beneficial Use	Benthic Community Effects, Sediment Toxicity
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
Utility of measure for judging if standards or uses are not attained	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	Revise name of previous, 1998, listing: San Diego Bay, Seventh Street Channel
SWRCB Staff Recommendation	Per RWQCB recommendation, revise name of existing 1998 listing. This is not a new listing (but does identify specific location within larger, general 1998 listing for all of San Diego Bay).

Region 9: San Diego Bay Shoreline, Shelter Island Shoreline Park (Pue + Bacterial Indicators (was "high coliform count")

Water Body	San Diego Bay Shoreline, Shelter Island Shoreline Park (Pueblo San Diego 908.00 and Sweetwater)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	San Diego County Department of Environmental Health.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Closures a measure of impacts on beneficial use. Listing recommendation: >10 days/year beach closures or advisories.
Water Body-specific Information	Data age = 1 year.
Data used to assess water quality	Analysis of applicable 1999 through 2002 data by the RWQCB staff showed 2 usable exceedence day out of 18 usable samples, 6 exceedences out of 34 samples, and 23 exceedences out of 72 samples, from dry-season and year-round samples (The "p" values used were 0.04 and 0.1.).
Spatial representation	Sampled within 400 yards (0.2 miles) of discharge point.
Temporal representation	1999-2002 data.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	A. Add specific location (not new HA) to 1998 listing. B. Change "high coliform count: to "bacterial indicators."
SWRCB Staff Recommendation	A. After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be specifically recognized (and remain) on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate amount of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is high.

The hydrologic sub-area 908.10 (Point Loma HA) includes other San Diego Bay segments (i.e., Near Sub Base, at Shelter Island Yacht Basin) listed for other pollutants in 1998, and one segment (at Kellogg Street) recommended for not listing in 2002. Continuing to list San Diego Bay Shoreline, at Shelter Island Shoreline Park (Pueblo San Diego 908.00 and Sweetwater) is not intended to affect in any way other water body segments.

B. Change pollutant designation from "high coliform count: to "bacterial indicators."

Region 9: San Diego Bay Shoreline, Tidelands Park
Bacterial Indicators (was "high coliform count")

Water Body	San Diego Bay Shoreline, Tidelands Park
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")/Water/REC-1, REC-2
Data quality assessment. Extent to which data quality requirements met.	San Diego County Department of Environmental Health.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Closures a measure of impacts on beneficial use. Listing recommendation: >10 days/year beach closures or advisories.
Water Body-specific Information	Data age = 1 year.
Data used to assess water quality	Analysis of applicable 1999 through 2002 data by the RWQCB staff showed 1 usable exceedence day out of 16 usable samples, 6 exceedences out of 33 samples, 7 exceedences out of 33 samples, and 2 exceedences out of 16 samples, all from dry seasons. (The "p" value used was 0.04.)
Spatial representation	Sampled within 400 yards (0.2 miles) of discharge point.
Temporal representation	1999-2002 data.
Data type	Numerical data
Use of standard method	
Potential Source(s) of Pollutant	Sewage spills/leaks, urban runoff, other point sources, nonpoint sources, and domestic/wild animals.
Alternative Enforceable Program	
RWQCB Recommendation	A. Add specific location (not new HA) to 1998 Listing B. Change "high coliform count: to "bacterial indicators"
SWRCB Staff Recommendation	A. After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be specifically recognized (and remain) on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the age of the data were considered. An adequate amount of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is high.

The hydrologic sub-area 910.10 (Coronado HA) was previously listed in 1998. However, the segment San Diego Bay Shoreline, at Tidelands Park (also HSA 910.10) was not specifically mentioned.

B. Change pollutant designation from "high coliform count: to "bacterial indicators."

Region 9: San Diego Bay Shoreline, Vicinity of B Street and Broadway + Benthic Community Effects, Sediment Toxicity (no change)

Water Body	San Diego Bay Shoreline, Vicinity of B Street and Broadway Piers (was San Diego Bay, Vicinity of B Street and Broadway Piers [was "San Diego Bay, Downtown Piers 10 acres"])
Stressor/Media/Beneficial Use	Benthic Community Effects, Sediment Toxicity (no change)/MAR, WILD, BIOL, EST, RARE, MIGR, and SHELL
Data quality assessment. Extent to which data quality requirements met.	NA
Linkage between measurement endpoint and benefical use or standard	NA
Utility of measure for judging if standards or uses are not attained	NA
Water Body-specific Information	NA
Data used to assess water quality	NA
Spatial representation	NA
Temporal representation	NA
Data type	NA
Use of standard method	NA
Potential Source(s) of Pollutant	NA
Alternative Enforceable Program	NA
RWQCB Recommendation	The 1998 "San Diego Bay, Downtown Piers" listing should be changed to "San Diego Bay, Vicinity of B Street and Broadway Piers." This change adds clarification to the location of impairment as evidenced by degraded benthic communities and sediment toxicity.
SWRCB Staff Recommendation	Change existing ('98) water body name from "San Diego Bay, Downtown Piers 10 acres" to "San Diego Bay, Vicinity of B Street and Broadway Piers."

Region 9: San Diego River (lower)
Fecal Coliform

Water Body	San Diego River (lower)
Stressor/Media/Beneficial Use	Fecal Coliform/Water/REC-1
Data quality assessment. Extent to which data quality requirements met.	Padre Dam Municipal Water District Receiving Water Sampling/analysis.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan): For single samples, the Basin Plan objective states that no more than 10% of the total samples during any 30-day period shall exceed 400 colonies/100 ml.
Water Body-specific Information	Data age = 1 year.
Data used to assess water quality	Sampling was done by the Padre Dam Municipal Wastewater District intermittently from November 1998 to September 2000. Data was taken once a month for October-March and twice a month for April-October. The data shows that 11 of 18 samples (61%) in both wet and dry weather had levels of fecal coliform in excess of 400 Most Probable Number (MPN)/ml.
Spatial representation	6 miles of River sampled.
Temporal representation	Sampling completed between November 1998 and September 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources, nonpoint sources, and sewage.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season, and age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego River (lower)
Total Dissolved Solids

Water Body	San Diego River (lower)
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/AGR
Data quality assessment. Extent to which data quality requirements met.	Padre Dam Municipal Water District Receiving Water Sampling/analysis.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (1500 mg/L) used; This objective is not to be exceeded more than 10% of the time during any one-year period.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Sampling between September 1997 and December 2000 by the Padre Dam Municipal Water District shows three locations along the San Diego River to exceed the Basin Plan TDS objective for more than 10% of the time during a one-year period. From 1997 to 1998, 3 out of 16 samples and 2/5 samples exceeded the water quality objective (at two locations). From 1998 to 1999, 3/20, 11/20, and 10/19 samples (at 3 locations) exceeded the objective. And from 1999 to 2000, 9/21, 14/21, and 15/21 samples (at 3 locations) exceeded the basin plan objective. The total number of exceedences was 67 out of 153 samples (44%). All 3 locations show a seasonal and an increasing trend over the 3 years reviewed.
Spatial representation	Three sample sites (15 miles of River).
Temporal representation	September 1997 to December 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body.

4. Water quality standard used is applicable.
5. Data are numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the effects of season and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderately high.

Region 9: San Diego River (lower)
Dissolved Oxygen

Water Body	San Diego River (lower)
Stressor/Media/Beneficial Use	*Dissolved Oxygen/Water/WARM, COLD, WILD*
Data quality assessment. Extent to which data quality requirements met.	Padre Dam Municipal Water District Receiving Water Sampling/analysis.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
***Utility of measure for judging if* standards or uses are not attained**	WQO (Basin Plan) (6.0 mg/L) used; annual mean concentration not to be <7 mg/L more than 10% of the time.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Sampling in September 1997 and from April to December 2000 by the Padre Dam Municipal Wastewater District showed dissolved oxygen concentrations to be below the Basin Plan Objective of 6.0 mg/L in 76 of 84 samples (90%). Concentrations below the objective were measured at all 5 sampling points along the river. The average measured concentration was 4.87 mg/L and the median concentration was 4.48 mg/L. In addition, during the year 2000, all 5 stations were below the annual Basin Plan Objective of 7.0 mg/L for more than 10% of the time.
Spatial representation	20 miles of River sampled.
Temporal representation	Sampling completed between September 1997 and December 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Bacterial loading, subsequent decomposition of organic matter, urban runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used.

7. Other water body- or site-specific information including the effects of season and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Diego River (lower)
Phosphorus

Water Body	San Diego River (lower)
Stressor/Media/Beneficial Use	Phosphorus/Water/REC-1, REC-2, WARM, COLD
Data quality assessment. Extent to which data quality requirements met.	Padre Dam Municipal Water District Receiving Water Sampling/analysis.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (biostimulatory substances objective) (0.1 mg/L) used.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Sampling in September 1997 and from April to December 2000 by the Padre Dam Municipal Wastewater District showed phosphorus concentrations to exceed the Basin Plan Objective for more than 10% of the time during a one-year period. Numbers of exceedences per samples were found to be 2 out of 5, 5/5, 3/3, 2/2, 2/2, 3/19, 16/19, 19/19, 18/19, and 17/19 at 10 locations in 1997 and 2000. A total of 87 exceedences were recorded for 112 samples (78%).
Spatial representation	5 sample sites (20 miles of River).
Temporal representation	September 1997 to December 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season, and age of the data were considered. An adequate number of the water quality measurements exceeded the water

quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: San Elijo Lagoon
Bacterial Indicators (was "high coliform count")

Water Body	San Elijo Lagoon
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
***Data quality assessment. Extent to* which data quality requirements met.**	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: San Juan Creek
Bacterial Indicators (was "high coliform count")

Water Body	San Juan Creek
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: San Juan Creek (mouth)
Bacterial Indicators (was "high coliform count")

Water Body	San Juan Creek (mouth)
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: San Luis Rey River
Calcium

Water Body	San Luis Rey River
Stressor/Media/Beneficial Use	Calcium
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	Remove from Watch List. No exceedance of appropriate objectives found.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should not be placed on any 303(d)-related list because the data are inadequate to determine if applicable water quality standards are or may be exceeded.

Region 9: San Luis Rey River
Chloride

Water Body	San Luis Rey River
Stressor/Media/Beneficial Use	Chloride/Water/IND, WARM, WILD, RARE
Data quality assessment. Extent to which data quality requirements met.	City of Oceanside Water Utilities Laboratory.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (250 mg/L) used.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Bonsall Bridge: 11/97-06/98: 1/3 (33%) exceedences, mean=281.0 mg/l; 09/98-09/99:3/3 (100%) exceedences, mean=321.0 mg/l; 12/99-11/00: 4/5 (80%) exceedences, mean=314.0 mg/l. Douglas Bridge: 11/97-09/98: 2/4 (50%) exceedences, mean=272.5 mg/l; 03/99-09/99:2/2 (100%) exceedences, mean=310.5 mg/l; 04/00-11/00: 3/4 (75%) exceedences, mean=312.5 mg/l. Benet Road: 11/97-09/98: 2/4 (50%) exceedences, mean=401.5 mg/l; 03 and 12/99: 2/2 (100%) exceedences, mean=444.5 mg/l; 04/00-11/00: 4/4 (100%) exceedences, mean=410.0 mg/l.
Spatial representation	Lower 13 miles of River, nearest City of Oceanside, was sampled at three locations.
Temporal representation	November 1997 to November 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB *Recommendation*	*List.*
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season, and age of the data were considered.

Region 9: San Luis Rey River
Chloride

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: San Luis Rey River
Total Dissolved Solids

Water Body	San Luis Rey River
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/AGR
Data quality assessment. Extent to which data quality requirements met.	City of Oceanside Water Utilities Laboratory.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (500 mg/L) used.
Water Body-specific Information	Data age = 1-4 years.
Data used to assess water quality	City of Oceanside sampling: Bonsall Bridge: 11/97-06/98: 3/3 (100%) exceedences, mean=1577 mg/l; 09/98-09/99: 3/3 (100%) exceedences, mean=1512.7 mg/l; 12/99-11/00: 5/5 (100%) exceedences, mean=1694 mg/l. Douglas Bridge: 11/97-09/98: 4/4 (100%) exceedences, mean=1328 mg/l; 03/99-09/99:2/2 (100%) exceedences, mean=1466 mg/l; 04/00-11/00: 4/4 (100%) exceedences, mean=1613 mg/l. Benet Road: 11/97-09/98: 4/4 (100%) exceedences, mean=1572 mg/l; 03/99-12/99: 2/2 (100%) exceedences, mean=1695 mg/l; 04/00-11/00: 4/4 (100%) exceedences, mean=1835 mg/l. RWQCB sampling: samples of 395 and 850 mg/l.
Spatial representation	Lower 13 miles of River, nearest City of Oceanside, was sampled at three locations. Two additional samples were also taken another 4 miles upstream.
Temporal representation	November 1997 to November 2000.
Data type	Numerical data.
Use of standard method	NPDES procedures.
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	Unknown.
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body.

4. Water quality standard used is applicable.
5. Data are numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the effects of season and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Sandia Creek (was Sandia Canyon)
Total Dissolved Solids

Water Body	Sandia Creek (was Sandia Canyon)
Stressor/Media/Beneficial Use	Total Dissolved Solids/Water/MUN, AGR
Data quality assessment. Extent to which data quality requirements met.	WQ Studies and Proposed Watershed Monitoring Program Report, SDRWQCB Monitoring data.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (750 mg/L) used.
Water Body-specific Information	Data age = 1-4 years.
Data used to assess water quality	11/11 (100%) violations of WQO, average = 917.7 mg/L.
Spatial representation	Two samples, at top and bottom of Reach.
Temporal representation	Unknown.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Anthropogenic sources, imported water, evaporation, and natural salt sources. Also, urban runoff, agriculture runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Santa Margarita River (Upper)
Phosphorus

Water Body	Santa Margarita River (Upper)
Stressor/Media/Beneficial Use	Phosphorus/Water/MUN, REC-1, REC-2, WARM, COLD, WILD, RARE
Data quality assessment. Extent to which data quality requirements met.	Final WQ Studies and Proposed Watershed Monitoring Program Report, SDRWQCB Monitoring data, RCWD Annual Receiving Water Monitoring Report (2000).
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (biostimulatory substance index = 0.1 mg/L) used.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	Camp Pendleton sampling: (near Temecula) 12/97-11/98: 4/5 (80%) violations, average = 0.24 mg/L; 02/99 and 05/99: 1/2 (50%) violations, mean=0.17 mg/mL. (near Fallbrook) 12/97-11/98: 4/5 (80%) violations, mean=0.25 mg/m; 02/99 and 05/99: 1/2 (50%) violations, mean = 0.12 mg/mL. RWQCB sampling: 1/1 (100%) and 1/1 (100%); 0.62 mg/L (at Willow Glen Road). RCWD sampling: 1/8 (13%) > WQO, (near Willow Glen Road) 1/8 (13%) violations, mean = 0.029 mg/L; (near De Luz Road) 1/6 (17%) violations, mean = 0.043 mg/L.
Spatial representation	32 total samples at 4 stations along segment.
Temporal representation	December 1997 to November 1998.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season and age of the data were considered.

Region 9: Santa Margarita River (Upper)
Phosphorus

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Segunda Deshecha Creek
Phosphorus

Water Body	Segunda Deshecha Creek
Stressor/Media/Beneficial Use	Phosphorus/Water/REC-1, REC-2, WARM, WILD
Data quality assessment. Extent to which data quality requirements met.	NPDES permit monitoring.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (biostimulatory substance index = 0.1 mg/L) used.
Water Body-specific Information	Data age = 4 years.
Data used to assess water quality	7/97-6/98: 13/16 (81%) exceedences, mean=0.73 mg/mL; 8/98-7/99: 15/20 (75%) exceedences, mean=0.25 mg/mL; 10/99-6/00: 6/7 (86%) exceedences, mean=0.37 mg/mL, all from wet months.
Spatial representation	One sample site.
Temporal representation	July 1997 to June 1998.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Urban runoff, other point sources and nonpoint sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of season and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Segunda Deshecha Creek
Turbidity

Water Body	Segunda Deshecha Creek
Stressor/Media/Beneficial Use	Turbidity/Water/WARM, WILD
Data quality assessment. Extent to which data quality requirements met.	NPDES permit monitoring.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (20 Nephelometric Turbidity Units [NTU]) used.
Water Body-specific Information	Data age = 1-4 years.
Data used to assess water quality	7/97-6/98: 9/16 (56%) exceedences, mean=295.2 NTU; 8/98-7/99: 10/20 (50%) exceedences, mean=43.4 NTU; 10/99-6/00: 2/7 (100%) exceedences, mean=14.0 NTU, all from wet months.
Spatial representation	One sample site.
Temporal representation	July 1997 to June 2000.
Data type	Numerical data.
Use of standard method	
Potential Source(s) of Pollutant	Channelization, increased water velocity, undercutting of banks; increased turbidity, current/historic construction.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem. This conclusion is based on the staff findings that: 1. The data is considered to be of adequate quality. 2. The data exhibited sufficient spatial and temporal coverage. 3. Beneficial uses have been established for and apply to the water body. 4. Water quality standard used is applicable. 5. Data are numerical. 6. Standard methods were used. 7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered. An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is high.

Region 9: Sutherland Reservoir (was Lake Sutherland)
Color

Water Body	Sutherland Reservoir (was Lake Sutherland)
Stressor/Media/Beneficial Use	Color/Water/MUN, REC-2
Data quality assessment. Extent to which data quality requirements met.	City of San Diego WQ Laboratory, (narrative) descriptions by SDWD.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	WQO (Basin Plan) (15 color units) used.
Water Body-specific Information	Data age = 1-5 years.
Data used to assess water quality	Data from the City of San Diego Water Quality Lab from March 1997 to June 2000 show the Basin Plan objective to be exceeded for more than 10% of the time during a one-year period. From March 1998 to March 1999, 3 of 3 samples (100%) exceeded the objective, with a mean of 33.7 color units and a median of 34.0 color units. From June 1999 to June 2000, 5 of 5 samples exceeded the objective, with a mean of 25.2 color units and a median of 26.0 color units. From September 2000 to December 2000, 3 of 3 samples exceeded the objective, with a mean of 22.3 color units and a median of 28.0 color units. In addition, staff at the San Diego Water Department have noticed a persistent odor problem as well as excessive algae growth at the reservoir. Odor, color, and excessive algae growth in the reservoir are typically due to excessive nutrients (nitrogen and phosphorous). However, actual concentrations of nitrogen and phosphorous do not currently exceed Basin Plan objectives. This may be due to the fact that the algae are using a majority of the available nutrients. Nutrient data from City of San Diego Water Quality Lab from March 1997 to July 2001 showed only 1 of 17 samples (6%) to have a detectable concentration of phosphate or nitrate.
Spatial representation	3 to 5 samples were used, indicative of the entire reservoir.
Temporal representation	March 1997 to July 2001.
Data type	Numerical data.
Use of standard method	City of San Diego WQ Laboratory, (narrative) descriptions by SDWD.
Potential Source(s) of Pollutant	Excessive algae growth, urban runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable water quality standards are exceeded and a pollutant contributes to or causes the problem.

Region 9: Sutherland Reservoir (was Lake Sutherland)
Color

This conclusion is based on the staff findings that:

1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses have been established for and apply to the water body.
4. Water quality standard used is applicable.
5. Data are numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the effects of natural sources, season, storm events, and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

Region 9: Tecolote Creek
Bacterial Indicators (was "high coliform count")

Water Body	Tecolote Creek
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Tijuana River
Bacterial Indicators (was "high coliform count")

Water Body	Tijuana River
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Tijuana River Estuary
Bacterial Indicators (was "high coliform count")

Water Body	Tijuana River Estuary
Stressor/Media/Beneficial Use	Bacterial Indicators (was "high coliform count")
Data quality assessment. Extent to which data quality requirements met.	
Linkage between measurement endpoint and benefical use or standard	
Utility of measure for judging if standards or uses are not attained	
Water Body-specific Information	
Data used to assess water quality	
Spatial representation	
Temporal representation	
Data type	
Use of standard method	
Potential Source(s) of Pollutant	
Alternative Enforceable Program	
RWQCB Recommendation	All previous (1998) listings for "High Coliform Count" should be changed to "Bacterial Indicators." This will ensure consistency between the 1998 List and the 2002 Updated List. For 1998 listings, "Bacterial Indicators" implies that impairment was due to fecal coliform, total coliform, or both. For the 2002 update, "Bacterial Indicators" implies impairment was due to fecal coliform, total coliform, enterococci or a combination of any of the three. In the San Diego Region, enterococci measurements commenced in 1999.
SWRCB Staff Recommendation	Change pollutant designation from "high coliform count" to "Bacterial indicators."

Region 9: Tijuana River Estuary
Dissolved Oxygen

Water Body	Tijuana River Estuary
Stressor/Media/Beneficial Use	Dissolved Oxygen/Water/COMM, BIOL, EST, WILD, RARE, MAR, MIGR
Data quality assessment. Extent to which data quality requirements met.	Tijuana Estuary monitoring.
Linkage between measurement endpoint and benefical use or standard	Pollutant can have a direct impact on beneficial uses.
Utility of measure for judging if standards or uses are not attained	Basin Plan objective, dissolved oxygen concentration: 5.0 mg/L, any waterbody designated with MAR beneficial use. In addition, Basin Plan sets an annual objective of 7mg/L that shall not be exceeded more than 10% of the time during a one-year period.
Water Body-specific Information	Data age = 3-4 years.
Data used to assess water quality	Dissolved oxygen concentration (DO) measurements were collected every 30 minutes for the entire years of 1997 and 1998. 1997 data followed trends similar to those in 1998, summarized below. DO was generally below the objective between 10 p.m. and 8 a.m. almost every day of the month. Although it is typical for DO to decrease at night, DO declines in the Estuary were excessive (concentrations generally below 3 mg/L). The median concentrations for 6 of the 12 months (50%) were below 5 mg/L and the median concentrations for 7 of 12 months (58%) were below 7.0 mg/L. This high percentage of median concentrations below 7.0 mg/L is considered as evidence of violation of the annual Basin Plan objective for dissolved oxygen. These low DO conditions are expected to impair the COMM, BIOL, EST, WILD, RARE, MAR and MIGR beneficial uses.
Spatial representation	One sample station used. RWQCB staff found it to be representative of entire estuary.
Temporal representation	Sampled every 30 minutes for two years.
Data type	Numerical data.
Use of standard method	Tijuana Estuary monitoring procedures used.
Potential Source(s) of Pollutant	Massive bacterial loading from raw sewage flows cause oxygen depletion, decaying organic matter, urban runoff, other point sources, and nonpoint sources.
Alternative Enforceable Program	
RWQCB Recommendation	List.
SWRCB Staff Recommendation	After reviewing the available data and information and the RWQCB documentation for this recommendation, SWRCB staff concludes that the water body should be placed on the section 303(d) list because applicable

water quality standards are exceeded and a pollutant contributes to or causes the problem.

This conclusion is based on the staff findings that:
1. The data is considered to be of adequate quality.
2. The data exhibited sufficient spatial and temporal coverage.
3. Beneficial uses have been established for and apply to the water body.
4. Water quality standard used is applicable.
5. Data are numerical.
6. Standard methods were used.
7. Other water body- or site-specific information including the effects of season, storm events, and age of the data were considered.

An adequate number of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is moderate.

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Water Bodies Proposed for the Monitoring List in Region 9

Water Body	Pollutant/Stressor	Rationale
Agua Hedionda Creek		
	Benthic Community Degradation	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Diazinon	Information, new since the original 2001 submittal, revealed poor quality assurance (QA) for the original data. The reported values are estimates that fall outside of the calibration range. Additionally, four of the positive detections had significant differences between the primary and confirmatory columns. Of the six data points used in the original assessment, only the sample collected on January 25, 2000 does not have significant QA concerns. This sample is reported to have a concentration of <0.50 ug/L and therefore, cannot be assessed against the water quality criteria of 0.05 ug/L.
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Incised Channel	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body. However, no data was readily available to support a Section 303(d) listing during the 2002 listing review process.
Agua Hedionda Lagoon		
	Copper (dissolved)	Data from "Report of Waste Discharge Agua Hedionda Lagoon and Fish Hatchery" from the year 2000 indicate possible exceedance of the "CTR Enclosed Bays and Estuaries Saltwater Aquatic Life Protection CMC and CCC" as found in "A Compilation of Water Quality Goals" by J. B. Marshack, 2000. Additional monitoring is necessary to confirm this possibility.
	Selenium	Data from "Report of Waste Discharge Agua Hedionda Lagoon and Fish Hatchery" from the year 2000 indicate possible exceedance of the "CTR Enclosed Bays and Estuaries Saltwater Aquatic Life Protection CCC" as found in "A Compilation of Water Quality Goals" by J.B. Marshack, 2000. Additional monitoring is necessary to confirm this possibility.
Aliso Creek		
	Chlordane	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value for Subsistence Fishers, but too few data were collected for validity.
	Dieldrin	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value, but too few data were collected for validity.
	Heptachlorepoxide	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value, but too few data were collected for validity.
	PCBs	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value for Recreational Fishers, but too few data were collected for validity.
Alvarado Creek		
	Benthic Community Degradation	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	Trash	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Beach and Bay Shorelines displaying a permanent health risk sign		
	Unknown constituents that may effect human health	Underlying data/information exists to warrant warnings posted by health care agencies. However, additional monitoring/research is necessary to verify the presence and extent of impacts to water quality standards.
Boulder Creek		
	Exotic Vegetation (Tamarisk sp.)	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/waterbody, but no data was readily available to support a Section 303(d) listing.
	Hydromodification (scour from reservoir release)	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Buena Vista Creek		
	Benthic Community Degradation	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
Chocolate Creek		
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Chollas Creek		
	Total Chlordane	*Toxic Substances Monitoring Program data indicated a possible exceedance of the* USEPA Screening value for Subsistence Fishers, but too few data were collected for validity.
	Total PCBs	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value for Subsistence Fishers, but too few data were collected for validity.
	Trash	Photographs of trash collected at a U.S. Navy boom show a significant amounts of trash following wet weather events. RWQCB staff observed large amounts of trash during dry weather in June 2002. Further monitoring and quantification of trash amounts is necessary.

Water Body	Pollutant/Stressor	Rationale
	Turbidity	Sampling by the City of San Diego from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to verify this possibility.
Cloverdale Creek		
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Cottonwood Creek		
	Diazinon	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	Eutrophication	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	Exotic Vegetation (Tamarisk sp.)	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	Hydromodification (scour from reservoir release)	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Deluz Creek		
	Sulfate	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to confirm this possibility.
	Total Dissolved Solids	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to confirm this possibility.
Delzura Creek		
	Erosion, Incised Channel	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Encinitas Creek		
	Diazinon	Data from the City of Encinitas Municipal Storm Water Permit Compliance Report indicated possible exceedance of both the chronic and acute California Department of Fish and Game Water Quality Criteria in 2000. Further monitoring is necessary to confirm this possibility.
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
	Malathion	Data from the City of Encinitas Municipal Storm Water Permit Compliance Report indicated possible exceedance of both the chronic and acute California Department of Fish and Game Water Quality Criteria in 2000. Further monitoring is necessary to confirm this possibility.
Escondido Creek		
	Benthic Community Degradation	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Diazinon	Data from the City of Encinitas Municipal Storm Water Permit Compliance Report indicated possible exceedance of both the chronic and acute California Department of Fish and Game Water Quality Criteria in 2000. Further monitoring is necessary to confirm this possibility.
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Sulfate	Sampling by the Department of Water Resources from 1999 to 2000 indicated possible exceedance of the Basin Plan Objective. Further monitoring is necessary to confirm this possibility.
	Total Dissolved Solids	Sampling by the Department of Water Resources from 1999 to 2000 indicated possible exceedance of the Basin Plan Objective. Further monitoring is necessary to confirm this possibility.
Fallbrook Creek		
	Iron	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to confirm this possibility.
	Manganese	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to confirm this possibility.
	Phosphorus	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to confirm this possibility.
Famosa Slough and Channel (was Famosa Slough)		
	Dieldrin	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value for Recreational Fishers, but too few data were collected for validity.
	Total Chlordane	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value for Subsistence Fishers, but too few data were collected for validity.
	Total DDT	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value for Subsistence Fishers, but too few data were collected for validity.
	Total PCB	Toxic Substances Monitoring Program data indicated a possible exceedance of the USEPA Screening value for Recreational Fishers, but too few data were collected for validity.
Forester Creek (was "Forrester Creek")		
	Eutrophication	Photographic evidence was submitted by a concerned citizen suggesting that water quality standards could not be met. Further study is necessary to confirm this possibility.

Water Body	Pollutant/Stressor	Rationale
	Trash	Photographic evidence was submitted by a concerned citizen suggesting that water quality standards could not be met. Further study is necessary to confirm this possibility.
Green Valley Creek		
	Benthic Community Degradation	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Phosphorus	Sampling by the City of San Diego from 1999 to 2000 indicated possible exceedance of the Basin Plan Objective for Biostimulatory Substances. Additional monitoring is required to verify this possibility.
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	Trash	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Hatfield Creek		
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Incised Channel	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Hodges, Lake (was Lake Hodges [was Hodges Reservoir])		
	MTBE	Sampling by the City of San Diego from 1997 to 2001 indicated possible exceedances of the "California Department of Health Service's Primary and Secondary MCL" and of "OEHHA's California Public Health Goal" (both as found in "A Compilation of Water Quality Goals" by J.B. Marshack, 2000). Additional monitoring is required to verify this possibility.
King Creek		
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
Laguna Lakes		
	Bacterial Indicators	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
Loma Alta Creek		
	Benthic Community Degradation	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.

Water Body	Pollutant/Stressor	Rationale
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
Los Penasquitos Creek		
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Murray Reservoir		
	Bromodichloromethane	Data collected by the City of San Diego indicate possible exceedance of the "CTR Inland Surface Waters Human Health 30-day Average Drinking Water Sources (consumption of water and aquatic organisms) goal" as found in "A Compilation of Water Quality Goals" by J.B. Marshack, 2000. Additional monitoring is required to confirm this possibility.
	Phosphorus	Samples collected by the City of San Diego from 1997 to 1998 indicated possible exceedance of the Basin Plan Objective for biostimulatory substances. Additional monitoring is necessary to confirm this possibility.
	Sodium	Sampling by the City of San Diego from 1996 to 2000 indicate possible exceedance of the USEPA "Suggested No Adverse Effects Level" as found in "A Compilation of Water Quality Goals" by J.B. Marshack, 2000. Additional monitoring is required to confirm this possibility.
Murrieta Creek		
	Iron	Quarterly sampling by Camp Pendleton from 1997 to 2000 and one-time sampling by RWQCB staff in 1998, indicated possible exceedance of the Basin Plan Objective). Additional monitoring is required to confirm this possibility.
	Manganese	Quarterly sampling by Camp Pendleton from 1997 to 2000 and one-time sampling by RWQCB staff in 1998, indicated possible exceedance of the Basin Plan Objective). Additional monitoring is required to confirm this possibility.
	Total Dissolved Solids	Quarterly sampling by Camp Pendleton from 1997 to 2000 and one-time sampling by RWQCB staff in 1998, indicated possible exceedance of the Basin Plan Objective). Additional monitoring is required to confirm this possibility.
Oceanside Harbor		
	Copper (dissolved)	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
Oso Creek		
	Chloride	Data collected by the Santa Margarita Water District between 1998 and 2001 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to confirm this possibility.
	Phosphorus	Data collected by the Santa Margarita Water District between 1998 and 2001 indicated possible exceedance of the Basin Plan Objective for Biostimulatory Substances. Additional monitoring is required to confirm this possibility.
	Sulfate	Data collected by the Santa Margarita Water District between 1998 and 2001 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to confirm this possibility.
	Total Dissolved Solids	Data collected by the Santa Margarita Water District between 1998 and 2001 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is required to confirm this possibility.
	Turbidity	2000 Annual NPDES (MS4) Progress Report from the County of Orange indicated possible exceedance of Basin Plan Objective. Additional monitoring is required to confirm this possibility.

Water Body	Pollutant/Stressor	Rationale
Otay Reservoir, Lower (was Lower Otay Reservoir)		
	Color	Sampling by the City of San Diego from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility.
	Odor	Sampling by the City of San Diego from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility.
Pacific Ocean Shoreline, Miramar Reservoir HA (was Miramar Reservoir)		
	Bromodichloromethane	Data collected by the City of San Diego indicate possible exceedance of the "CTR Inland Surface Waters Human Health 30-day Average Drinking Water Sources (consumption of water and aquatic organisms) goal" as found in "A Compilation of Water Quality Goals" by J.B. Marshack, 2000. Additional monitoring is required to confirm this possibility.
	Total Dissolved Solids	Samples collected by the City of San Diego from 1999 to 2001 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility.
Padre Barona Creek		
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Incised Channel	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Prima Deshecha Creek (was Prima Deshecha Channel)		
	Cadmium	2000 Annual NPDES (MS4) Progress Report from the County of Orange indicated possible exceedance of California Toxics Rule CMC for Freshwater Aquatic Life. Additional monitoring is required to confirm this possibility.
	Nickel	2000 Annual NPDES (MS4) Progress Report from the County of Orange indicated possible exceedance of California Toxics Rule CCC for Freshwater Aquatic Life. Additional monitoring is required to confirm this possibility.
Proctor Valley Creek		
	Trash	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Rainbow Creek		
	Sediment Toxicity	Sediment Toxicity Tests conducted in 1996 indicated possible toxic conditions. Additional monitoring is required to confirm this possibility.
	Sulfate	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective (Table 3.2). Additional monitoring is required to confirm this possibility.
	Total Dissolved Solids	Quarterly sampling by Camp Pendleton from 1997 to 2000 and one-time sampling by the Regional Board in 1998, indicated possible exceedance of the Basin Plan Objective (Table 3.2). Additional monitoring is required to confirm this possibility.
	Trash	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.

Water Body	Pollutant/Stressor	Rationale
Reidy Creek		
	Nitrogen	One sampling event in 2001 by the RWQCB staff indicated possible exceedance of the Basin Plan Objective for Biostimulatory Substances. Additional monitoring is necessary to confirm this possibility.
	Phosphorus	One sampling event in 2001 by the RWQCB staff indicated possible exceedance of the Basin Plan Objective for Biostimulatory Substances. Additional monitoring is necessary to confirm this possibility.
Rose Creek		
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
San Diego Bay Shoreline, at America's Cup Harbor (was San Diego Bay at America's Cup Harbor)		
	Copper (dissolved)	Sampling by the U.S. Navy and RWQCB staff indicated possible exceedance of the California Toxics Rule criteria for copper. Additional monitoring is necessary to confirm this possibility.
San Diego Bay Shoreline, at Harbor Island (East Basin) (was San Diego Bay at Harbor Island [East Basin])		
	Arsenic	1997-98 State Mussel Watch data showed possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is necessary to confirm the possibility that beneficial uses are being impacted.
	Cadmium	1997-98 State Mussel Watch data showed possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is necessary to confirm the possibility that beneficial uses are being impacted.
	Copper (dissolved)	1997-98 State Mussel Watch data showed possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is necessary to confirm the possibility that beneficial uses are being impacted.
San Diego Bay Shoreline, at Harbor Island (West Basin) (was San Diego Bay at Harbor Island [West Basin])		
	Copper (dissolved)	Sampling by the U.S. Navy and RWQCB staff indicated possible exceedance of the California Toxics Rule criteria for copper. Additional monitoring is necessary to confirm this possibility.
San Diego Bay Shoreline, at Laurel Street (was San Diego Bay at Laurel Street)		
	Arsenic	1997-98 State Mussel Watch data showed possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is necessary to confirm the possibility that beneficial uses are being impacted.
	Cadmium	1997-98 State Mussel Watch data showed possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is necessary to confirm the possibility that beneficial uses are being impacted.
	Copper (dissolved)	1997-98 State Mussel Watch data showed possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is necessary to confirm the possibility that beneficial uses are being impacted.

Water Body	Pollutant/Stressor	Rationale
San Diego Bay Shoreline, at Marriott Marina (was San Diego Bay at Marriott Marina)		
	Copper (dissolved)	Sampling by the Port of San Diego indicated possible exceedance of the California Toxics Rule criteria for copper. Additional monitoring is necessary to confirm this possibility.
San Diego Bay Shoreline, at North Island Aircraft Platform (was San Diego Bay at North Island Aircraft Platform)		
	Arsenic	1997-98 State Mussel Watch data showed a possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is needed to confirm whether beneficial uses are being significantly impacted.
	Cadmium	1997-98 State Mussel Watch data showed a possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is needed to confirm whether beneficial uses are being significantly impacted.
	Copper (dissolved)	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
San Diego Bay Shoreline, Shelter Island Yacht Basin (was San Diego Bay at Shelter Island Yacht Harbor)		
	Arsenic	1997-98 State Mussel Watch data showed possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is necessary to confirm the possibility that beneficial uses are being impacted.
	Cadmium	1997-98 State Mussel Watch data showed possible exceedance of the MTRL for inland surface waters (edible portion). Further monitoring is necessary to confirm the possibility that beneficial uses are being impacted.
San Diego River (upper and lower) (was San Diego River)		
	Benthic Community Degradation	1999 Benthic Macroinvertebrate Index indicated possible degraded benthic community. Further research is needed to determine whether beneficial uses are truly impacted.
	Benzene	Area university research paper found benzene and MTBE groundwater contamination impacting the San Diego River. Further study is needed to confirm this possibility.
	Chlordane	1978 to 2000 Toxic Substances Monitoring Program data indicated possible exceedance of MTRLs in fish tissue. Further study is necessary to confirm the possibility that beneficial uses are being significantly impacted.
	Eutrophication	Photographic evidence submitted by a concerned citizen suggest that there is a significant water quality problem due to eutrophication. Further monitoring is necessary to confirm this possibility.
	Exotic Vegetation (Water Hyacinth, Arundo sp., Tamarisk sp.)	Photographic evidence submitted by a concerned citizen suggest that there is a significant water quality problem due to exotic vegetation. Further monitoring is necessary to confirm this possibility.
	Methyl Tertiary-butyl Ether (MTBE)	Area university research paper found MTBE groundwater contamination impacting the San Diego River. Further study is needed to confirm this possibility.
	Trash	Photographic evidence submitted by a concerned citizen suggest that there is a significant water quality problem due to trash. Further monitoring is necessary to confirm this possibility.

Water Body	Pollutant/Stressor	Rationale
San Juan Creek		
	Erosion	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	Incised Channel	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	PCBs	2000 Toxic Substances Monitoring Program data indicated possible exceedance of USEPA Screening Value for Recreational Fishers. Further sampling is needed to confirm whether water quality standards are being significantly impacted.
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
San Luis Rey River		
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Magnesium	Data collected by the City of Oceanside from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility.
	Phosphorus	Data collected by the City of Oceanside in 2000 and in 1998 by the Regional Board indicated possible exceedance of the Basin Plan Objective for Biostimulatory Substances. Additional monitoring is necessary to confirm this possibility.
San Marcos Lake		
	Dissolved oxygen	Community-group letter claims that fish kills occur due to low oxygen. However, no data were submitted. Additional study is required to investigate the possibility that beneficial uses are significantly impacted.
San Mateo Creek		
	Introduced (non-native) Amphibian Species: Bullfrogs	These non-native fauna and flora have been identified by the RWQCB staff in the Creek and are expected to negatively impact native populations through direct competition and predation and indirectly through habitat alteration. Additional study is needed to determine if beneficial uses of water are being significantly impacted.
	Introduced (non-native) Fish Species: Black Bullhead, Bluegill, Channel Catfish, Green Sunfish, Largemouth Bass, Mosquito Fish.	These non-native fauna and flora have been identified by the RWQCB staff in the Creek and are expected to negatively impact native populations through direct competition and predation and indirectly through habitat alteration. Additional study is needed to determine if beneficial uses of water are being significantly impacted.
	Introduced (non-native) Invertebrate Species: Non-native Crayfish	These non-native fauna and flora have been identified by the RWQCB staff in the Creek and are expected to negatively impact native populations through direct competition and predation and indirectly through habitat alteration. Additional study is needed to determine if beneficial uses of water are being significantly impacted.
	Introduced (non-native) Plant Species: Saltcedar, Other Exotic Vegetation	These non-native fauna and flora have been identified by the RWQCB staff in the Creek and are expected to negatively impact native populations through direct competition and predation and indirectly through habitat alteration. Additional study is needed to determine if beneficial uses of water are being significantly impacted.
	Total Dissolved Solids	The 'Final Report of Water Quality Studies and Proposed Watershed Monitoring Program for Portions of San Mateo and Santa Margarita River Watershed' produced by LAW-Crandall in 2001 indicates possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility.

Water Body	Pollutant/Stressor	Rationale
Sandia Creek (was Sandia Canyon)		
	Lead	One-time sampling in 1998 by the Regional Board indicated possible exceedance of the USEPA National Primary Drinking Water Regulations MCL. Additional monitoring is necessary to confirm this possibility.
	Sulfate	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility.
Santa Margarita River (entire and tributaries)		
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Santa Margarita River (Lower)		
	Iron	Quarterly sampling by Camp Pendleton from 1997 to 2000 and one-time sampling by the Regional Board in 1998, indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility. After reviewing available information from the RWQCB, SWRCB staff concludes that the water body should be placed on the Monitoring Priority List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Non-standard methods were used. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.
	Manganese	Quarterly sampling by Camp Pendleton from 1997 to 2000 and one-time sampling by the Regional Board in 1998, indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility. After reviewing available information from the RWQCB, SWRCB staff concludes that the water body should be placed on the Monitoring Priority List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Non-standard methods were used. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.

Water Body	Pollutant/Stressor	Rationale
	Sulfate	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the California Code of Regulations Secondary MCL. Additional monitoring is necessary to confirm this possibility. After reviewing available information from the RWQCB, SWRCB staff concludes that the water body should be placed on the Monitoring Priority List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Non-standard methods were used. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.
	Total Dissolved Solids	Quarterly sampling by Camp Pendleton from 1997 to 2000 and one-time sampling by the Regional Board in 1998, indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility. After reviewing available information from the RWQCB, SWRCB staff concludes that the water body should be placed on the Monitoring Priority List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Non-standard methods were used. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.
Santa Margarita River (Upper)		
	Iron	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility. After reviewing available information from the RWQCB, SWRCB staff concludes that the water body should be placed on the Monitoring Priority List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Non-standard methods were used. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.

Water Body	Pollutant/Stressor	Rationale
	Manganese	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the Basin Plan Objective (Secondary MCL and Table 3.2). Additional monitoring is necessary to confirm this possibility. After reviewing available information from the RWQCB, SWRCB staff concludes that the water body should be placed on the Monitoring Priority List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Non-standard methods were used. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.
	Sulfate	Quarterly sampling by Camp Pendleton from 1997 to 2000 indicated possible exceedance of the California Code of Regulations Secondary MCL. Additional monitoring is necessary to confirm this possibility. After reviewing available information from the RWQCB, SWRCB staff concludes that the water body should be placed on the Monitoring Priority List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Non-standard methods were used. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.
	Total Dissolved Solids	Quarterly sampling by Camp Pendleton from 1997 to 2000 and one-time sampling by the Regional Board in 1998, indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility. After reviewing available information from the RWQCB, SWRCB staff concludes that the water body should be placed on the Monitoring Priority List because the data are inadequate to determine if applicable water quality standards are exceeded. This conclusion is based on the staff findings that: 1. The data is considered to be of inadequate quality. 2. The data exhibited insufficient spatial and temporal coverage. 3. Non-standard methods were used. An inadequate amount of the water quality measurements exceeded the water quality standard. The staff confidence that standards were exceeded is low.
Santa Maria Creek		
	Bacterial Indicators	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Exotic Vegetation (Tamarisk sp.)	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.

Water Body	Pollutant/Stressor	Rationale
Santa Ysabel Creek		
	Exotic Vegetation (Arundo sp. and Tamarisk sp.)	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Scove Creek		
	Bacterial Indicators	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
	Incised Channel	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
	Nutrients	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
Sorrento (Carroll Canyon) Valley Creek		
	Eutrophication	Through direct observation, RWQCB staff believes that a water quality problem exists because of prior experience with the watershed/water body, but data were unavailable to support a Section 303(d) listing. Additional monitoring is required to confirm the possible extent of impacts to beneficial uses.
Sycamore Canyon Creek		
	Eutrophication	Photographic evidence submitted by a concerned citizen suggest that there is a significant water quality problem due to eutrophication. Further monitoring is necessary to confirm this possibility.
	Exotic Vegetation (Arundo donax)	Photographic evidence submitted by a concerned citizen suggest that there is a significant water quality problem due to exotic vegetation. Further monitoring is necessary to confirm this possibility.
	Phosphorus	Sampling conducted by the City of San Diego in 2000 indicates possible exceedance of the Basin Plan Objective for Biostimulatory Substances. Additional monitoring is necessary to confirm this possibility.
	Trash	Photographic evidence submitted by a concerned citizen suggest that there is a significant water quality problem due to trash. Further monitoring is necessary to confirm this possibility.
Tecolote Creek		
	Sedimentation/Siltation	RWQCB staff believes that a significant water quality problem exists because of prior experience with, and personal observations in, the watershed/water body, but no data was readily available to support a Section 303(d) listing.
Tijuana River Estuary		
	Turbidity	Sampling by the TJNERR in 1997 and 1998 indicated possible exceedance of the Basin Plan Objective. Additional monitoring is necessary to confirm this possibility.

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State Water Resources Control Board

P.O. Box 100, Sacramento, CA 95812-0100 • www.swrcb.ca.gov

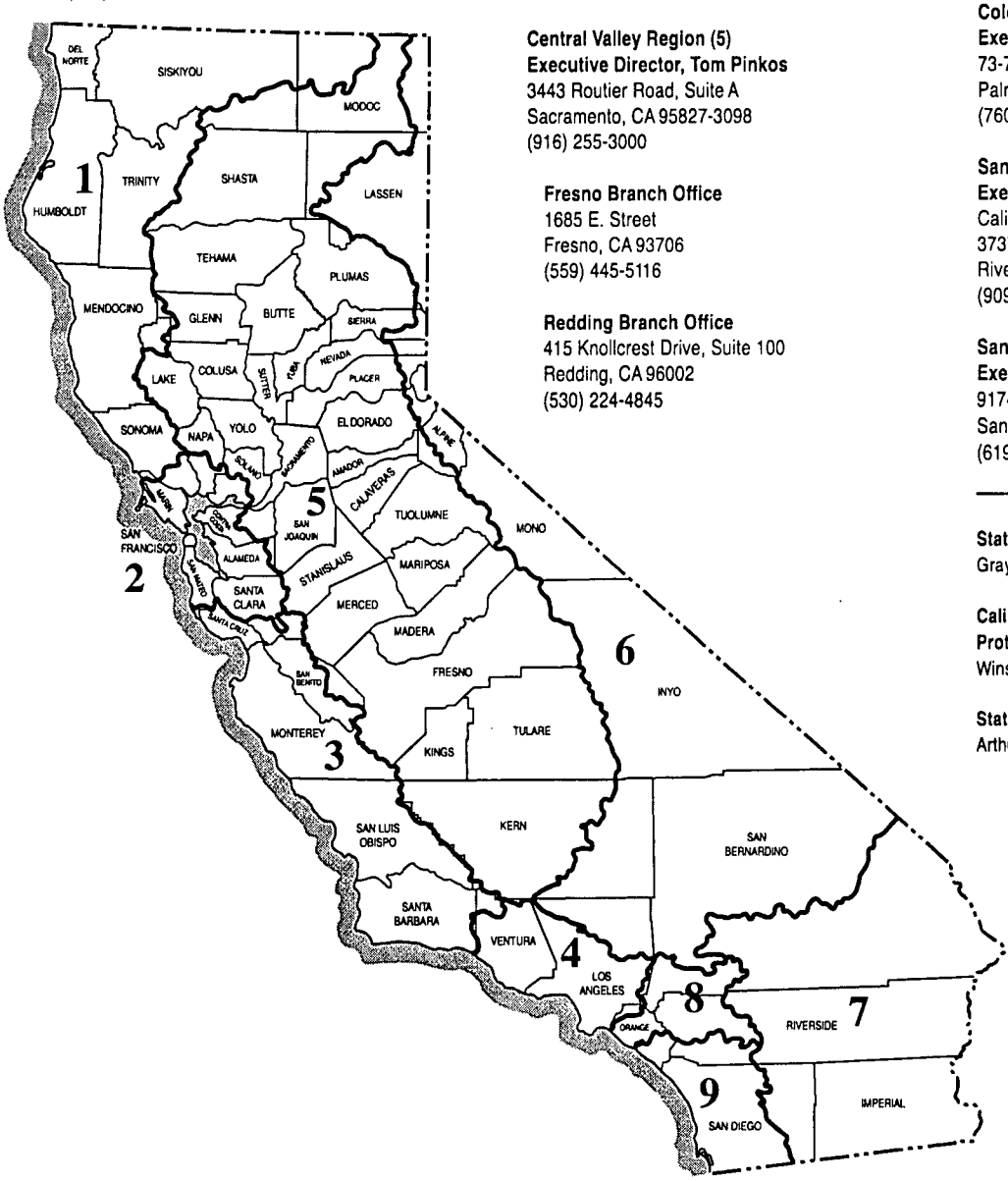
Office of Legislative and Public Affairs:
Office of Legislative Information: (916) 341-5251
Office of Public Affairs Information: (916) 341-5254

Financial Assistance Information: (916) 341-5700
Water Quality Information: (916) 341-5455
Water Rights Information: (916) 341-5300

California Regional Water Quality Control Boards

North Coast Region (1)
Executive Director, Susan A. Warner
5550 Skylane Blvd., Ste. A
Santa Rosa, CA 95403
(707) 576-2220

San Francisco Bay Region (2)
Executive Director, Loretta K. Barsamian
1515 Clay Street, Ste. 1400
Oakland, CA 94612
(510) 622-2300



Central Coast Region (3)
Executive Director, Roger W. Briggs
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401
(805) 549-3147

Los Angeles Region (4)
Executive Director, Dennis A. Dickerson
320 W. 4th Street, Ste. 200
Los Angeles, CA 90013
(213) 576-6600

Central Valley Region (5)
Executive Director, Tom Pinkos
3443 Routier Road, Suite A
Sacramento, CA 95827-3098
(916) 255-3000

Fresno Branch Office
1685 E. Street
Fresno, CA 93706
(559) 445-5116

Redding Branch Office
415 Knollcrest Drive, Suite 100
Redding, CA 96002
(530) 224-4845

Lahontan Region (6)
Executive Director, Harold J. Singer
2501 Lake Tahoe Blvd.
South Lake Tahoe, CA 96150
(530) 542-5400

Victorville Branch Office
15428 Civic Drive, Ste. 100
Victorville, CA 92392-2383
(760) 241-6583

Colorado River Basin Region (7)
Executive Director, Phil Gruenberg
73-720 Fred Waring Dr., Ste. 100
Palm Desert, CA 92260
(760) 346-7491

Santa Ana Region (8)
Executive Director, Gerard J. Thibeault
California Tower
3737 Main Street, Ste. 500
Riverside, CA 92501-3339
(909) 782-4130

San Diego Region (9)
Executive Director, John Robertus
9174 Skypark Ct., Ste. 100
San Diego, CA 92124-1324
(619) 467-2952

State of California
Gray Davis, Governor

California Environmental Protection Agency
Winston H. Hickox, Secretary

State Water Resources Control Board
Arthur G. Baggett, Jr., Chair

2/03